NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

THE IMPACT OF SUBSISTENCE PRIME VENDOR ON THE SUBSISTENCE SUPPLIER BASE

by

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December 2000

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE December 2000	3. REPORT TYPE AND DATES COVERED Master's Thesis

4. TITLE AND SUBTITLE: The Impact of Subsistence Prime Vendor on the Subsistence Supplier Base	**5. FUNDING NUMBERS**
6. AUTHOR (S) Sanders, David D.	
7. PERFORMING ORGANIZATION NAME (S) AND ADDRESS (ES) Naval Postgraduate School Monterey, CA 93943-5000	**8. PERFORMING ORGANIZATION REPORT NUMBER**
9. SPONSORING / MONITORING AGENCY NAME (S) AND ADDRESS (ES) N/A	**10. SPONSORING / MONITORING AGENCY REPORT NUMBER**

11. SUPPLEMENTARY NOTES
The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.	**12b. DISTRIBUTION CODE**

13. ABSTRACT *(maximum 200 words)*

Acquisition Reform has brought rapid change within the acquisition community. The streamlining of the acquisition process has led to a number of innovations within the contracting discipline. This research will focus on one of these innovations, the Subsistence Prime Vendor (SPV) Program. The SPV program was implemented to reduce the inventories and to improve the quality of food products purchased to support military dining facilities. Under the traditional subsistence inventory system, the Government procured food items directly from manufacturers. The contracting process centered on filling a space in a warehouse. Prime vendor contracting is centered on the end-user. The customer communicates his requirements directly to the assigned prime vendor, and the prime vendor delivers in accordance with terms of the contract and the customer's request. The prime vendor assumes the role as the food distributor with subsistence no longer being procured from food manufacturers and stored in warehouses. As a result, the subsistence supplier base has undergone radical change. The purpose of this thesis is to analyze the impact that the prime vendor concept has had on the subsistence supplier base.

14. SUBJECT TERMS Subsistence Prime Vendor	**15. NUMBER OF PAGES** 112
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	**18. SECURITY CLASSIFICATION OF THIS PAGE**	**19. SECURITY CLASSIFICATION OF ABSTRACT**	**20. LIMITATION OF ABSTRACT**
Unclassified	Unclassified	Unclassified	UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18

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THE IMPACT OF SUBSISTENCE PRIME VENDOR ON THE SUBSISTENCE SUPPLIER BASE

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

Acquisition Reform has brought rapid change within the acquisition community. The streamlining of the acquisition process has led to a number of innovations within the contracting discipline. This research will focus on one of these innovations, the Subsistence Prime Vendor (SPV) Program. The SPV program was implemented to reduce the inventories and to improve the quality of food products purchased to support military dining facilities. Under the traditional subsistence inventory system, the Government procured food items directly from manufacturers. The contracting process centered on filling a space in a warehouse. Prime vendor contracting is centered on the end-user. The customer communicates his requirements directly to the assigned prime vendor, and the prime vendor delivers in accordance with terms of the contract and the customer's request. The prime vendor assumes the role as the food distributor with subsistence no longer being procured from food manufacturers and stored in warehouses. As a result, the subsistence supplier base has undergone radical change. The purpose of this thesis is to analyze the impact that the prime vendor concept has had on the subsistence supplier base.

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TABLE OF CONTENTS

LIST OF FIGURES

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LIST OF TABLES

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I. INTRODUCTION

A. BACKGROUND

Acquisition Reform has brought rapid change within the acquisition community. The resulting new streamlined process eliminates unnecessary regulations, delegates decision authority to the lowest possible organizational level, eliminates non-essential military specifications, and encourages maximum use of commercial-off-the-shelf (COTS) products. [Ref. 1] The streamlining of the acquisition process has led to a number of innovations within the contracting discipline. This research will focus on one of these innovations, the Subsistence Prime Vendor (SPV) Program. The SPV program was implemented to reduce the costs associated with subsistence inventories and to improve the quality of food products purchased to support military dining facilities.

Under the prime vendor program managed by the Defense Supply Center Philadelphia (DSCP), an Inventory Control Point within the Defense Logistics Agency (DLA), the military dining facilities order food items directly from a local food distributor, as opposed to ordering from a Department of Defense (DoD) warehouse. In total, DSCP annually provides over $4.85 billion in food, clothing, textiles, medicines, medical equipment, general and industrial supplies and services to US military forces, their eligible dependents, and other non-Defense Department customers worldwide. [Ref. 2]

Prior to implementation of the SPV program, DSCP performed the inventory and distribution functions for subsistence. Millions of dollars in subsistence were purchased from suppliers and placed in warehouse inventory for secondary shipment to DSCP's military customers. The implementation of the prime vendor concept represents a drastic change in this subsistence inventory management policy. Under SPV, inventory custody and management is shifted from the Government to the private sector. As a result, the prime vendor program has enabled the Department of Defense (DoD) to reduce infrastructure and inventory carrying cost.

Under the traditional subsistence inventory system, the Government procured food items directly from manufacturers. The contracting process centered on filling a space in a warehouse. Prime vendor contracting is centered on the end-user. The customer communicates his requirements directly to the assigned prime vendor, and the prime vendor delivers in accordance with terms of the contract and the customer's request. The prime vendor assumes the role as the food distributor with subsistence no longer being procured from food manufacturers and stored in warehouses. As a result, the subsistence supplier base has undergone radical change. The purpose of this thesis is to analyze the impact that the prime vendor concept has had on the subsistence supplier base.

B. PURPOSE

This research will examine the impact that the Subsistence Prime Vendor (SPV) Program has had on the subsistence supplier base. It will examine how the prime vendor concept has affected small business, and will analyze the program's compliance with DOD's socio-economic goals. In the process, the research will also examine the prime vendor source selection process and compare it with the traditional subsistence procurement source selection methods.

C. RESEARCH QUESTIONS

The primary research question that this thesis addresses is:

What impact has the Subsistence Prime Vendor (SPV) Program had on the subsistence supplier base?

The secondary research questions are:

1. What is the prime vendor concept?
2. How did the DoD buy subsistence prior to prime vendor and what was the composition of the supplier base?
3. How does the DoD buy subsistence using the prime vendor concept and what is the composition of the supplier base?
4. What is the impact of the SPV program on small businesses?
5. How has the source selection process changed under prime vendor?
6. Does the prime vendor concept support full and open competition?

7. What actions can be taken during acquisition planning to minimize the risk of not conforming to the DoD's socio-economic goals?

D. LITERATURE REVIEW AND METHODOLOGY

The primary approach in this thesis is to compare and contrast the Prime Vendor Program with the traditional DoD subsistence model. A systematic review of publications, instructions, and other library information resources relating to the prime vendor concept is conducted. Data provided by DSCP are analyzed to gain insight into the composition of the subsistence supplier base before and after prime vendor. This thesis provides an in-depth analysis of the food service industry. Interviews are conducted with DSCP contracting personnel, Prime Vendor Contractors, and Prime Vendor customers.

In addition to reviewing the overall impact that the SPV program has had on the subsistence supplier base, this research also looks at the impact on small business. The SPV acquisition planning process is examined to determine what mechanisms are in place to ensure that prime vendor contracts comply with DoD's socio-economic goals. Data from DSCP are used to measure small and minority-owned business participation in the SPV program. The Prime Vendors' subcontracting plans are also reviewed.

E. THESIS ORGANIZATION

The thesis is divided into five chapters:

- Chapter I provides the thesis objective and research approach.

- Chapter II provides an overview of the SPV program. It compares and contrasts the traditional subsistence model and SPV program.
- Chapter III presents an analysis of the traditional and SPV supplier bases using the Porter Model.
- Chapter IV presents a tradeoff analysis of the Prime Vendor Program. The benefits of the program are highlighted versus supplier base concerns.
- Chapter V contains conclusions and recommendations for further research.

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II. SUBSISTENCE PRIME VENDOR OVERVIEW

A. INTRODUCTION

This chapter provides an overview of the SPV program. It presents a comparative analysis of the traditional subsistence model and the SPV program. The discussion centers on the mission and organizational structure at DSCP before and after prime vendor. It also compares and contrasts the traditional and prime vendor subsistence supplier base characteristics, and it reviews the source selection process for the two models.

B. PRIME VENDOR CONCEPT

Prime Vendor is a concept of support whereby a single commercial distributor serves as the major provider of products to various Federal customers within a geographical region or zone. [Ref. 3] Prime Vendor enables the Military and Federal communities to take advantage of the commercial vendors' distribution systems and removes inventory management responsibilities from the DoD. The first Prime Vendor contract, awarded in 1993, supported three military hospitals in the Washington, DC area. The contract covered a variety of pharmaceutical and medical/surgical items. Given the evaluation by DSCP and their customers that the project was successful and resulted in significant cost savings [Ref. 3]; other areas were then explored for implementation of the prime vendor concept.

In June 1993, the General Accounting Office (GAO) issued a report recommending that DLA adopt commercial distribution practices for subsistence. Food logistics was chosen because of the large amount of inventory invested in food and the similarities between military peacetime feeding operations and civilian institutional feeding operations. [Ref. 4:p. 12] A Joint Task Force, consisting of representatives from each military Service, was formed to study the issue.

The Task Force initiated the DoD Food Inventory Demonstration (FID) Project. Under this project, a one-year pilot program was instituted to test the prime vendor concept in the area of subsistence. The original pilot was done in Virginia's Tidewater area. One customer from each of the Services participated. Based on successful preliminary results, the pilot program was expanded.

The pilot program resulted in the award of contracts to support all military installations in Georgia, South Carolina, Alabama, and Florida. This area encompassed dining facilities from each of the Services in both metropolitan and remote locations. With each Service retaining their unique food service information systems, automation was a key ingredient of the test program.

DSCP developed a software interface, Subsistence Prime Vendor Interpreter (SPVI), which gave its customers the ability to communicate with the vendor's commercial software while continuing to operate their Service unique software. This allowed the electronic transfer of purchase orders. For example, in the initial pilot program Navy customers in the Tidewater Virginia area maintained their Service unique information system called Food Service Management System (FSM). Navy food orders were generated and routed electronically to the Fleet and Industrial Supply Center (FISC), Norfolk, which maintained a SPVI workstation. FISC Norfolk then passed the electronic purchase order to the assigned prime vendor, which in turn filled the customer's order. Customers were required to give the prime vendor 48 hours to fill their orders.

The ultimate goal is to connect the end user directly to the prime vendor. However, because of a digital divide between smaller and larger units, activities such as the FISC serve as a relay between the prime vendor and end user. Since the inception of the Prime Vendor Program, the Subsistence Total Order and Receipt Electronic System (STORES) has replaced SPVI.

Services still create orders in their unique food service information system. The orders are then transferred to STORES. STORES interprets and reformats the data, and upon customer's action, the order is electronically transmitted to the vendor and DSCP via the Defense Automatic Addressing System Center (DAASC). DAASC acts simply as a mail sorter for the vendor and DSCP. Upon receipt of the customer order, the vendor takes action to fill the order. DSCP archives the purchase order to monitor delivery performance. End users are required to send receipt notification to DSCP within 5 days of receiving an order. Figure 1 illustrates the prime vendor concept.

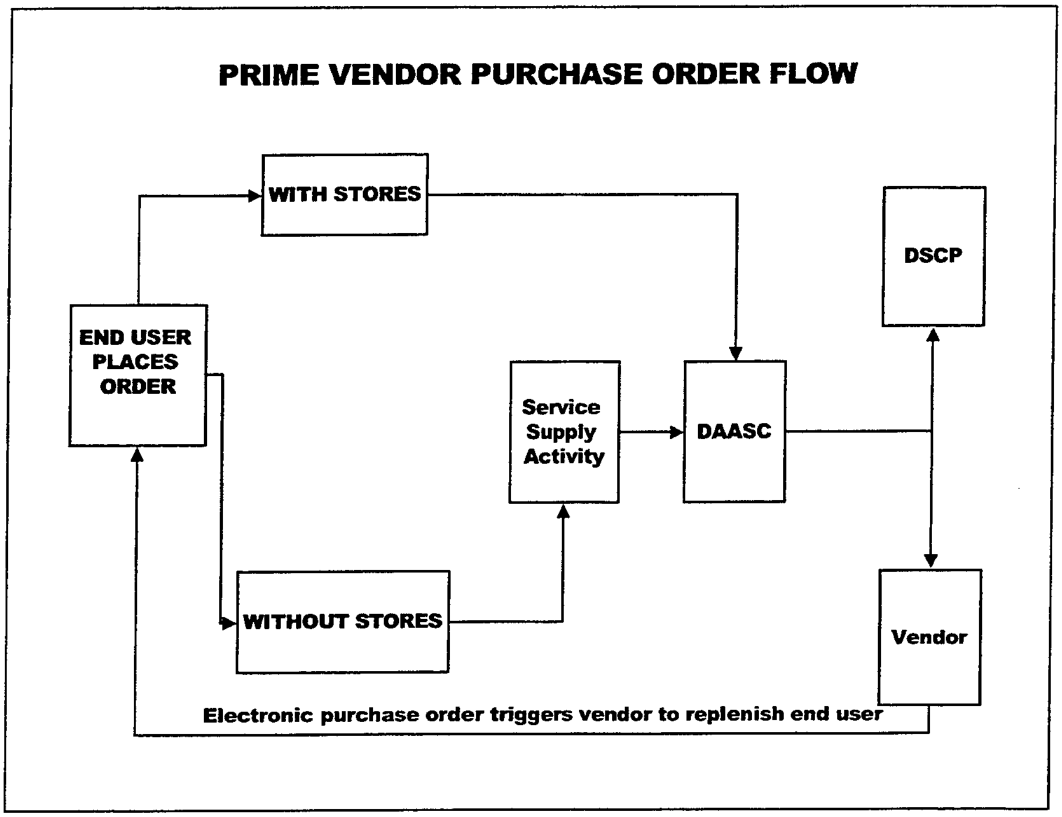

Figure 1. Prime Vendor Concept. Source: Developed by researcher.

The overall result during the test was higher food quality and lower DOD operating expenses. [Ref. 5] In a letter to Congress, John Phillips, Deputy Under Secretary of Defense for Logistics, forwarded a report that concluded that the prime vendor concept was demonstrated as a feasible and viable method of providing high quality food for DoD activities. The report went further to state, "With the lessons learned during the demonstration, the potential for optimizing the use of commercial food distribution systems will continue to be realized."

[Ref. 5] The report cited three considerations in determining that prime vendor was ready for full implementation. The considerations were process improvement, customer empowerment, and quality of life improvement.

One process improvement was in the area of stock turnover for semi-perishable food. In the old DoD system, stock was acquired in very large economic order quantities to leverage DoD's buying power. However, low turnover rate often resulted in customers receiving aged food items. Often stock required self-life extension by the Veterinary Service. The International Foodservice Distributors Association estimated that the average commercial vendor turned over their comparable semi-perishable inventory thirteen times a year, while DoD turned its comparable inventory once a year. [Ref. 5]

The Prime Vendor Program also gave customers control over the process. Customers were given the right to refuse items that were not ordered. When DoD maintained inventories, customers had to receive all items that were delivered, regardless of quality. In addition to process improvements and customer empowerment, the Prime Vendor Program received high marks in quality of life surveys. Customers expressed a high degree of satisfaction with prime vendor products. The Prime Vendor Subsistence Program is now expanding worldwide, and the concept has revolutionized subsistence inventory management. The Prime Vendor concept represents a paradigm shift within the DoD.

C. TRADITIONAL SUBSISTENCE MODEL

The DoD reported that it spent about $800 million in Fiscal Year 1992 to feed US troops worldwide. [Ref. 4:p. 8] Most of the food it purchased was stored in a network of warehouses managed by DLA or by DLA contractors. DSCP acquired subsistence items via purchases from a variety of suppliers that included manufacturers, growers, packers and processors. The suppliers in turn delivered their goods to 25 DLA facilities across the United States.

These facilities included four depots for semi-perishable items, such as canned goods, and 21 Defense Subsistence Offices (DSO) for perishable items such as fresh and frozen fruits, vegetables, and meats. Depots are large Government-owned warehouses where a variety of items are stored to support military requirements. DSOs are owned and operated by DLA contractors.

Each Service submitted their requisitions to DPSC for food requirements. All of the Services operated their own base warehouse operations and referred to them by various names. The Army operated troop subsistence activities; the Air Force has troop issue or troop support activities; the Marine Corps ran direct supply stock; and the Navy operated warehouses at Fleet and Industrial Supply Centers (FISCs). Base warehouse activities stored both perishable and semi-perishable food items. They served end-users that varied in size from large to small. For example, in the Navy, the FISC customer base included small ships and large base galleys. In order to obtain subsistence, end users submitted requisitions to the base warehouse. The goods were then transported to the requesting unit. DLA and the Services maintained a transportation network for delivery of customer orders.

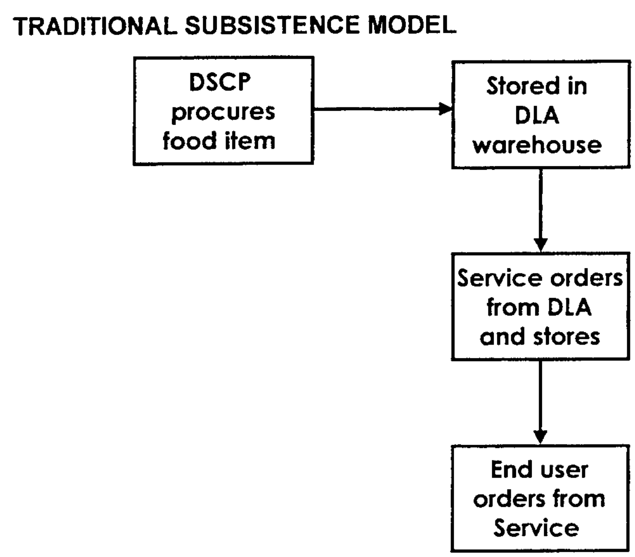

Figure 2. Food Procurement Flow. Source: Developed by researcher.

Figure 2 illustrates the multilayered supply system. The DoD was storing goods at three different levels: DLA, Service, and end-user. Large food inventories were routine throughout the military supply system. Prior to Prime Vendor, as of the end of Fiscal Year 1992, DLA's total food inventory, excluding Operational Rations, was $159 million: $82 million in semi-perishable items and $77 million in perishable items. The $82 million in semi-perishable items represented an 82-day supply. Service level base warehouse activities also maintained large inventories. As of September 30, 1991 these activities held

$200 million in inventories. Finally, end-users maintained substantial inventories. For example, prior to prime vendor, Navy shore activities maintained an average inventory level of 32 days. [Ref. 4 pp. 15-16]

D. DSCP ORGANIZATION STRUCTURE AND MISSION

The mission of DSCP is to provide food, clothing and textiles, medical supplies and equipment, and general and industrial items in support of the DoD military Services, Federal & civil agencies, and foreign countries. [Ref. 2] DSCP employs 2,986 civilian employees and 77 military personnel. Employees work under 152 different job classifications, with 64% of their workforce specialized in acquisition and supply chain management. The remaining 36% are in support fields. DSCP has a fairly diverse employee base. Table 1 illustrates the demographics at DSCP.

Gender	**Male** **44 %**	**Female** **56 %**		
Race	**White** **70 %**	**Black** **26 %**	**Hispanic** **2 %**	**Asian** **2 %**
Education	**High School & Less** **34 %**	**Less than Bachelor's** **26 %**	**Bachelor's Degree** **31%**	**Master's or Better** **9 %**

Table 1. Demographics at DSCP "From Ref. [6]."

DSCP is organized into four core divisions along customer market segments and product lines. The core divisions are Medical, Clothing and Textiles, Subsistence, and General/Industrial. Each division is composed of

Commodity Business Units (CBU). CBUs are multidisciplinary units that provide the customer with "one stop shopping." There are a total of 16 CBUs. These units are staffed to meet the customer's needs in terms of Supply Management, Contracting, Technical Services and Quality Assurance. Figure 3 illustrates the DSCP divisional structure, with subsistence branch broken down to a lower level.

DSCP ORGANIZATION STRUCTURE

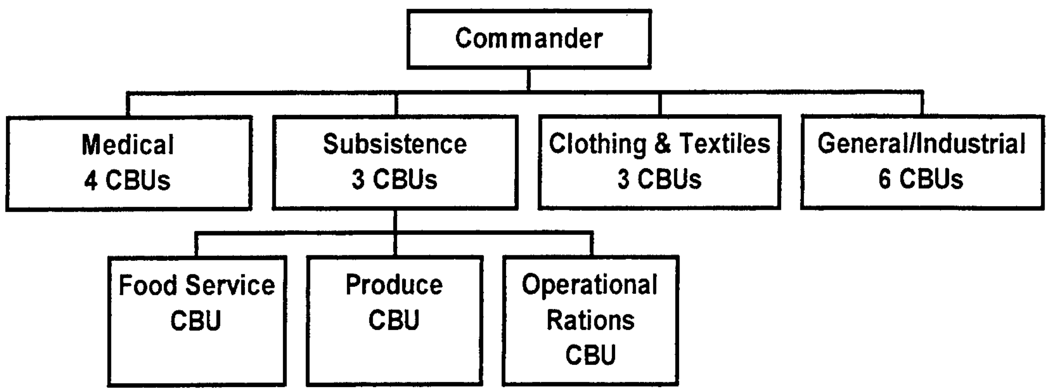

Figure 3. DSCP Core Functions Illustrated "After Ref. [6]"

The customer is the primary focus in the DSCP organization. Each CBU works as a functionally integrated team to determine the expectations, needs and preferences of both existing and potential customers. [Ref. 6] The process is highly decentralized. The multifunctional teams are empowered to manage a group of items throughout the process from acquisition to delivery. The CBUs are organized geographically around the customer. For example, the Food Service CBU is divided regionally worldwide. Integrated teams are assigned to regions and track customer requirements from cradle to grave. Figure 4 shows how the Food Service CBU is organized.

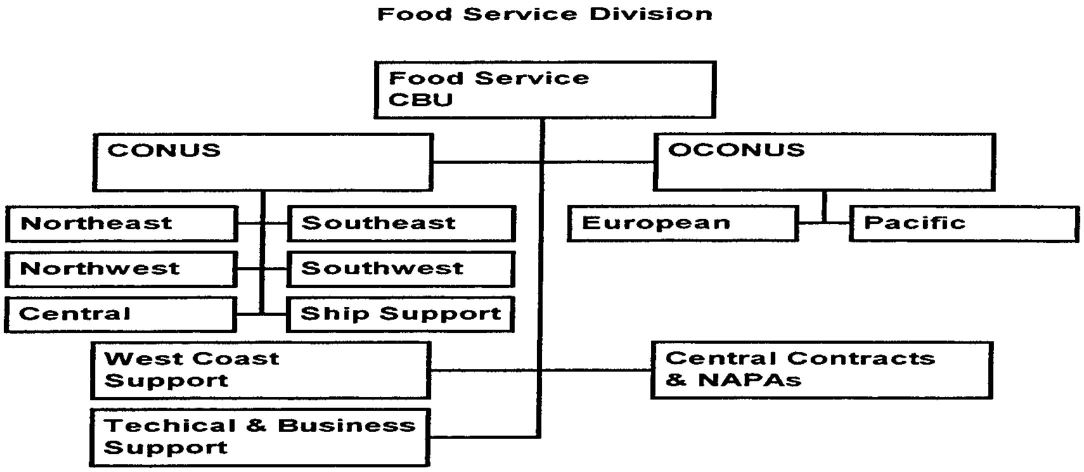

Figure 4. Organizational structure for Food Service CBU "After Ref. [6]."

Each CBU functions as a separate entity, however there is interaction with other units to ensure that actions fit into the DSCP vision. The CBUs primarily focus on developing the most efficient method of meeting their customer requirements.

The organizational structure that has been implemented at DSCP is especially conducive to the Prime Vendor Initiative. [Ref. 6] Prior to creating multidisciplinary units, DSCP was organized along functional lines. The major functions were Supply Management, Contracting, Technical Services and Quality Assurance. The functional approach was slower in addressing customer concerns. As DSCP began to move away from the traditional inventory model, the old processes were no longer effective. For example, the prime vendor concept has changed role of the contract specialist.

Under the old system, buyers were primarily commodity managers. Buyers became highly specialized in procuring a basket of similar food items. One key advantage of specialization is corporate knowledge. The buyer was a critical source for market research. Their responsibility was to meet the DSCP subsistence inventory demands. Buyers had little or no interaction with the end user. After the contract was awarded, it became the Supply Division's responsibility to ensure that the customer received his goods or service. Under DSCP's current organization the functions are integrated into single units that are assigned geographically. The organizational changes also were needed to support the strategy of buying from distributors vice manufacturers. Distributors carry a large range of food products; hence, buyers no longer can specialize in a particular segment of the food market. Buyers are now involved throughout the supply chain management.

E. PRIME VENDOR SUPPLIER BASE CHARACTERISTICS

1. Industry Dynamics

The supplier base for the Subsistence Prime Vendor Program is made up of food distributors. Food distributors purchase food from manufacturers and sell to establishments that prepare and sell food. The customer base includes restaurants, hospitals, colleges, and hotels. The food service industry has become more efficient as a result of the increased reliance on food distributors, because the end users and food service companies do not incur direct cost for inventory and transportation functions. While distributors bare these cost, they have financial incentives to control cost. The food distribution market is very competitive. Competition within the food distribution market forces industry participants to maximize efficiency.

Sales by food distributors reached $147 billion in 1998, and the market outlook is positive. [Ref. 7] Distributors are positioned to capitalize on the growing popularity of foodservice outside the home market. It is expected that growth of foodservice outside the home will continue to outpace traditional grocery store growth. [Ref. 7] A number of factors bare well for food distributors. They include: favorable demographics, favorable economic outlook, and consolidation.

a. ***Favorable Demographics***

Demographic trends favor more eating away from home. The rise in single parent and double-income households leaves less time for traditionally prepared meals. The unemployment rate is at historic lows and Americans are working longer hours, so the trend of eating-out is likely to continue. According to National Eating Trends, the average American purchased 139 meals in restaurants during 1999, up from 121 meals per person in 1991. Restaurants and bars, which make up the largest customer segment for food distributors, continue to grow more rapidly than the grocery industry. The restaurant segment accounted for 55% of total food distributor sales. [Ref. 7]

b. ***Favorable Market Outlook***

Eating-out growth is also supported by the continued economic expansion. The Gross Domestic Product is expected to remain strong. Historically, another important indicator of eating-out sales has been disposable income. Deposable income has risen steadily since 1993 and is expected to continue rising. [Ref. 7] Economic downturns reduce disposable income, so consumers eat out less and become more discriminating. However, a slowing US economy has had minimal impact on the sales of food outside the home market. Since 1975, inflation adjusted sales fell during only three years (1980,1981 and 1991). The declines in those years were less than 1%. [Ref. 7]

c. ***Consolidation***

Consolidation has been widespread in the food distribution market. The number of food distributors has declined from 3,500 in 1992 to 2,700 in 1999. [Ref. 7] However, the market is still very fragmented, making the industry very competitive. Sysco, the largest food distributor only has 11% market share, while the next largest distributor has only 4%. The top 500 food distributors account for 50% of the industry's sales. [Ref. 7] Acquisitions will offer scale in existing markets, diversification of product lines and geographic expansion. The trend of consolidation is expected to continue. More details will be provided in Chapter III. The types of mergers that will take place will most likely be larger companies embracing small companies. Small companies will likely continue to experience reduced profit margin due to competition with large companies.

2. Small Participation

The food distribution market is favoring distributors that supply a wide range of products over distributors that specialize in particular items. [Ref. 8:p. 2] Hence, large companies with adequate resources have a competitive advantage. In determining which food distributor to use as a supplier, customers typically apply some combination of the following factors: 1. Reliability; 2. Overall service; 3. Wide product assortment; 4. Cost; and 5. Reputation, with customers often preferring non-cost factors to price. When these factors are applied in a procurement decision, small companies are forced to lower their prices in order to be competitive. As a result, profit margins are squeezed. The industry will likely continue to consolidate because the customer wants the distributor to provide "one stop shopping."

Small business participation is of interest to the DoD. Prior to the Prime Vendor Program, between 60-70% of all subsistence dollars went to small business. Currently, under prime vendor, small business performance stands at 55%. [Ref. 9] The drop off in small business participation can be linked to foodservice industry trends. DSCP has taken a number of steps to ensure that small companies remain competitive. One such step is regionalization. Regionalization allows DSCP to break its total subsistence requirements into smaller segments. Smaller companies are then in a better position to compete, because smaller segments require less resources. Figure 5 shows the prime vendor regions.

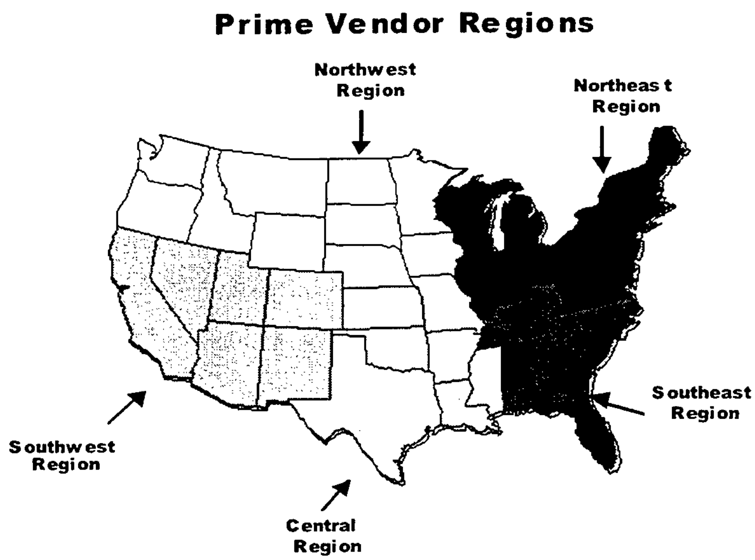

Figure 5. CONUS Prime Vendor Regions "After Ref. [2]."

Another manner in which DSCP encourages small business participation is through the prime vendor's subcontract management plan. In the food service area, there has been a major shift from prime to subcontract business opportunities for the traditional small business vendor base. Small business subcontract dollars reported under Prime Vendor contracts for the first half of FY 2000 totaled over $35 million. [Ref. 2]

F. TRADITIONAL SUPPLIER BASE CHARACTERISTICS

Prior to prime vendor, DSCP purchased subsistence directly from companies that manufactured or processed food. According to the Department of Commerce, combined 1999 sales in the food producer market were $487 billion. The top 10 publicly traded food producer companies generated $155 billion of the total sales. Although the biggest firms account for more than 32% of industry sales, the market remains extremely competitive. The US Bureau of census estimates that approximately 25,500 companies participate in the food manufacturing industry.

1. Industry Profile

Domestic companies are generally divided into two groups: early and late stage producers. Companies engaged in early stages are referred to as agribusinesses. They tend to engage in harvesting, milling or processing of raw agricultural commodities. Agribusinesses sell their end product to food processors and packagers, which use the ingredients to make finished food products. Companies classified as agribusinesses include such companies as Archer Daniels-Midland Co., Corn Products International, and Cargill Inc. Archer Daniels-Midland Co., for example processes and merchandizes agricultural commodities and products such as corn, wheat and soybeans. These items are used in end products that include oils, syrups and starches.

Companies engaged in the late stages produce end products and sell to food retailers, which in turn sell finished products to the consumer. Companies that participate in late stage production include companies such as Kellogg Co., Heinz, Hershey Foods, and Nabisco. For example, Nabisco transforms agribusiness products into a variety of snack food items that are sold globally. In the traditional model, DSCP bought subsistence primarily from the late stage food producers. Items were purchased and stored in a DLA warehouse and then sold to the Services.

2. Consolidation

The food producer market, like the food distribution market, is highly fragmented. Consolidation is expected. [Ref. 8] The typical food company is small and produces a limited number of products for regional or specialized markets. A few large companies are increasingly dominating the customer base for food manufacturers. According to the Food Institute, the five largest food retailers in the United States now account for 40% of industry wide sales. Food manufacturers are being forced to become bigger in order to provide support for their customers. Standard & Poor's predicts that mergers will be executed between equals.

G. PRIME VENDOR CONTRACT AND SOURCE SELECTION PROCESS

1. SPV Contract

DLA establishes Indefinite Quantity Contracts for the Prime Vendor Program. An Indefinite Quantity Contract (IQC) provides for an indefinite quantity, within stated limits, of specific supplies or services to be furnished during a fixed period, with deliveries to be scheduled by placing orders with the contractor. As stated earlier, the Prime Vendor concept requires that a single commercial distributor serve as the major provider of products to various Federal customers within a geographical region or zone. The Government commits to buying between low and high limits. The guaranteed minimum and maximum values are 25% and 125% respectively, of the estimated award dollar value per contract period.

The estimated value of first time prime vendor contracts was determined by using historical demand from the traditional subsistence model and taking into account changes in force structure, which affects product demand. In the event of emergencies, the Government reserves the right to unilaterally raise the upper limits of the contract from the 100% predicted value to the 125% ceiling. The prime vendor must be able to meet these surge readiness requirements. Maximum ceilings are not negotiable. [Ref. 10:p. 11]

Pricing of items ordered under the contract is based on the following formula: Unit Price = Delivered Price + Distribution Price. The delivered price is defined as the actual last invoice price of a product that the prime vendor has paid a manufacturer or supplier for that product delivered to their distribution point. [Ref. 10:p. 9] The Government agrees to reimburse the prime vendor his cost of acquiring the food items. The delivered price reflects current market conditions. For example, if the cost that the prime vendor pays for coffee increases, then the prime vendor's delivery price will increase. A decrease in the cost of coffee would result in decrease of prime vendor's delivery price. The prime vendor is required to hold the unit price constant between time of order and delivery to the end-user. DSCP monitors the prime vendor's price performance by taking a random sample of the prices from an order and comparing it with the marketplace.

The distribution price is a firm-fixed price, offered as a dollar amount, which represents all elements of the contract other than the delivered price. [Ref. 10:p. 9] This segment of the unit price is constant throughout the length of the contract. The distribution price typically consists of the prime vendor's projected general and administrative costs, overhead, packaging costs, transportation costs, other expenses associated with prime vendor function and anticipated profit. Evaluation of the distribution price is done by comparing the proposed prices received in response to the solicitation.

In order to build long-term relationships with the prime vendor, contracts are awarded for one year, with four one-year options. The Prime Vendor must agree to accept the options if they are exercised. The distribution price for each option year is negotiated as a percentage increase or decrease from the base year using the consumer price index (CPI). Other factors affecting contract price include rebates and discounts. Rebates and discounts are required to be returned to DSCP when they are directly attributable to sales resulting from orders submitted by DSCP or its customers. [Ref. 10:p. 14]

DSCP has entered into National Allowance Pricing Agreements (NAPA) with suppliers and manufacturers to identify rebates and discounts. National Allowance Pricing was implemented by DSCP to maximize the leverage of DSCP's buying power and reduce the overall delivered price under Prime Vendor Contacts. Suppliers and manufacturers report the discounts and rebates that they are offering the prime vendors. Discounts and rebates are subtracted from the Prime Vendor's delivery price; hence, reducing overall cost to the end-user. The Prime Vendor's distribution price is not affected by rebates or discounts from NAPA.

2. Source Selection

The Prime Vendor Program uses best value contracting to select regional prime vendors. Best value contracting allows the Government to use factors other than cost in making a contract award. According to FAR Part 15, in considering best value the Government may use a tradeoff process or the lowest price technically acceptable (LPTA) source selection process. It states that a tradeoff process is appropriate when it may be in the best interest of the Government to consider award to other than the lowest priced offeror or other than the highest technically rated offeror. When DSCP purchased subsistence under the traditional model it used the LPTA source selection process. The contractor that submitted the lowest technically acceptable bid was awarded the contract.

In contrast, DSCP now employs a tradeoff process to determine contract awards for the SPV Program. Currently there are 59 prime vendor contracts worldwide. Each of the prime vendors responded to a Government solicitation by submitting technical and business proposals as outlined in the solicitation. A team of subject matter experts including representatives from each military Service reviewed the technical and business proposals separately. Best value allows the Government to use some of the same criteria often used by private industry to make a prime vendor selection. As stated earlier, key factors that influence a distributor's selection in the private sector include: 1. Reliability; 2. Overall service; 3. Wide product assortment; 4. Cost; and 5. Reputation.

A recent prime vendor solicitation for the San Antonio area illustrates the Government's source selection criteria for full food service distribution. The evaluation criteria outlined in the solicitation for the Prime Vendor's Technical Proposal, in descending order of importance, were as follows:

A. Corporate Experience/ Past Performance: The offeror is evaluated based on his experience in fulfilling requirements of similar dollars and volume. Past performance is considered for both the offeror's commercial and Government contracts. Emphasis is being placed on a history of conforming to contracts, commitment to customer service, timely delivery of quality products, and ability to fill customer demand.

B. Distribution system: The offeror's inventory, delivery and ordering systems are evaluated. Inventory and delivery system must be capable of supporting the customer's requirements. The Offeror's ordering system is tested to show compatibility with DLA's software.

C. Quality Assurance: The following areas are evaluated: Supplier Selection Program, Quality Control and Assurance Procedures, Inspection and Sanitation Procedures, Recall Procedures and Technical Descriptions.

D. Socioeconomic Considerations: The offeror is evaluated on his plan to use small, small disadvantage, and women-owned small business as both suppliers and subcontractors in support of the Prime Vendor contract.

E. Procurement Pricing Plan: The offeror's purchasing procedures are evaluated to assess its effective use of price economies. The Government also evaluates the offeror's policies for pursuing, managing and collecting rebates.

F. DLA Mentoring Business Agreement (MBA): The Government evaluates the offeror's response to participating in the DLA MBA Program and its ability to mentor firms. The response from offerors on the MBA program is evaluated by comparing the submission of offerors. [Ref. 10:p. 113]

After scoring a contractor's proposal, using the factors above, the competitive range is determined. The competitive range is made up of only the most highly rated offerors. Establishing the competitive range narrows the field, hence reducing administrative burdens associated with Government contracting. DSCP then enters into discussions with remaining contractors prior to making contract award.

The major difference between DSCP and private industry's selection process is the Government's emphasis on socioeconomic considerations. During the prime vendor source selection process potential contractors are required to present a plan that outlines how small, small disadvantaged, and women-owned businesses will be used as suppliers and subcontractors in support of the contract. Small companies that submit proposals are given additional credit under the socioeconomic factor. Another factor that shows the Government's commitment to small business in the prime vendor contracting process is evaluation of a contractor's willingness to mentor small business concerns. The contractor offering the most comprehensive plan receives the highest rating in this category.

H. CHAPTER SUMMARY

Prime vendor represents a paradigm shift within the DoD. The goal is to reduce cost, while improving the quality of products provided to Service members. Subsistence inventory management responsibility is shifted from the DoD to the private sector, and the DoD buys food from distributors vice manufacturers. The DoD is following food industry trends.

The market outlook for full service food distributors is positive. Food distributors operate in a highly competitive market, which forces companies to maximize efficiency. The DoD selects prime vendors by using a tradeoff process in the context of best value contracting. Best value contracting allows the DoD to use factors other than cost in making contract award. Also, the Government uses the prime vendor source selection process to promote small business participation.

The prime vendor program is customer-centric and highly decentralized. DSCP changed its structure to fit the prime vendor concept. DSCP buyers now belong to multi-disciplinary units, which meet the customer's requirements from requisition to delivery.

III. SUBSISTENCE SUPPLIER BASE COMPETITION

A. INTRODUCTION

This chapter provides an analysis, using Michael Porter's Model, of the market structure and competition in the food service industry. The discussion examines the business models of both food manufacturers and distributors in order to provide insight into market dynamics. It also examines why food distributors aggressively compete for Government contracts despite the existence of lower profit margins in this business sector.

B. PORTER MODEL

Michael Porter of the Harvard Business School has developed a widely used framework that lays the foundation for understanding industry competition. An industry can be defined as a collection of firms with a common interest. The common interest may be derived from demand or supply conditions. On the demand side, firms produce products, which are considered by consumers to be substitutes for each other. For example, the consumer may see a Dell computer as an acceptable substitute for a Compaq computer. On the supply side, firms produce products, which use similar technologies. Take, for example, the computer industry; all firms rely on semiconductor technology to manufacture personal computers.

According to Porter, the five principal forces that influence the intensity of competition in an industry include:

1. Bargaining power of buyers
2. Bargaining power of suppliers
3. Availability of substitutes
4. Threat of potential entrants
5. Rivalry among industry competitors.

Porter placed each of the four external forces in a quadrant around the industry competitors. Figure 6 shows the Porter Model.

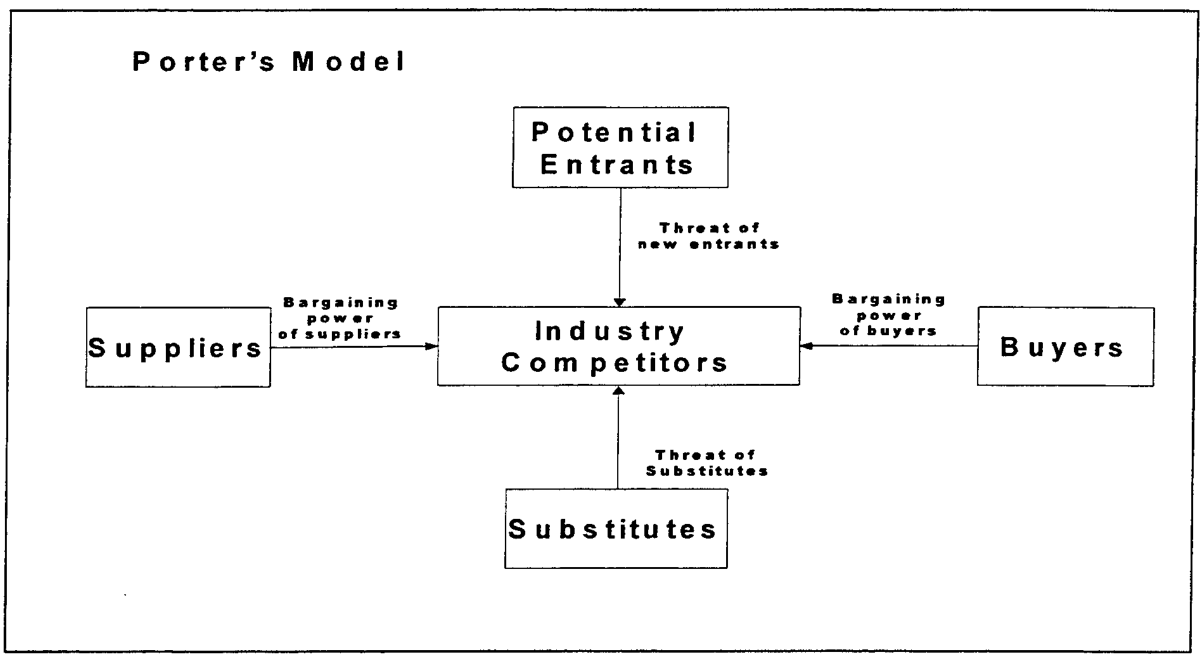

Figure 6. Forces Driving Industry Competition "After Ref. [11]"

The figure is a visual representation of firms competing against each other for market share while external forces are pushing in on the industry affecting the size of the slice of pie available for each industry participant.

1. Bargaining Power of Buyers

Buying power can be defined as the impact that customers have on a producing industry. Buyers compete with the industry by demanding price concessions, bargaining for higher quality and playing competitors against each other. The net result of these actions is lower industry profits. [Ref. 12:p. 3] According to Porter, buying power is strong when the following conditions exist:

a. Market with many suppliers and few buyers: This market condition is called a monopsony. The buyer sets the price. An example is several defense industry contractors selling their products primarily to the DoD.

b. Low switching cost: Switching cost is defined as the one time cost of switching products. Low switching cost gives the buyer an advantage. These costs include such items as employee retraining and down time as a result of testing or qualifying a new source. Conversely, high switching cost lock buyers to sellers. For example, switching from a Microsoft operating system can be cost prohibitive for a small business.

c. Products are undifferentiated: Undifferentiated products are products that are not identified by brand and whose characteristics provide no strategic advantages in the marketplace. Buyers with opportunities to find an alternative supplier may play one company against another

d. High possibility of backwards integration: If buyers possess the ability to manufacture the product being purchased in-house, then buyers are in a position to demand concessions.

2. Bargaining Power of Suppliers

The relationship between the supplier and buying firm is critical to industry profitability. The buying firm is dependent upon the supplier to deliver quality products within a specified time parameter. Delays in receipt of material could result in an idle workforce and failure of the buying firm to meet its customers' demands. For example, Apple Computer announced that its September 1999 quarter was adversely affected by a shortage of semiconductor chips from Motorola. [Ref. 13] The Motorola chips were for a new line of Apple computers. Apple was only able to meet a fraction of its customer demands. As a result, the company's earnings fell by 15%.

Powerful suppliers can exert influence on the producing industry by raising prices or reducing quality of purchased goods. Some markets have few suppliers, and substitutes are not a major factor. This kind of market is called an oligopoly. There is little competition, so suppliers have no incentive to keep prices low, posing a threat to industry profitability.

Suppliers are also powerful if there is a credible threat of forward integration. In this case the supplier can supplant the buyer by acquiring the buyer's distribution capacity. High switching cost is another factor that contributes to a supplier's bargaining position because any increase in the cost of doing business is a threat to industry profitability.

3. Availability of Substitutes

Substitutes are products or services that are able to perform the function of the original product or service at a considerable cost reduction. [Ref. 12:p. 2] The Porter model focuses on substitutes outside of the selected industry. An example is the maker of aluminum cans used in soft drink and beer beverages. Acceptable substitutes for aluminum cans include glass bottles, steel cans and plastic containers. These outside substitutes have the affect of placing a price ceiling on aluminum cans. Any attempt to raise prices would encourage beer and soft drink makers to use substitute containers made from a product other than aluminum. This example shows that substitutes can pose a real threat to incumbent firms.

4. Threat of Potential Entrants

New entrants to an industry will impact competition. These new industry participants bring additional capacity, the desire to gain market share and often substantial resources. [Ref. 14:p. 7] As a result, new entrants can bid prices down and increase the cost to compete. The net result is lower industry profits. If firms are free to enter and exit a market, then profits should be normal. However, some industries possess characteristics that protect high profit levels of the incumbent firms and inhibit additional rivals from entering the market. [Ref. 15:p. 5] These characteristics are called barriers to entry.

Market equilibrium is the point at which supply and demand curves intersect. At the equilibrium price, the quantity of the goods that buyers are willing and able to buy exactly balances the quantity that sellers are willing and able to sell. [Ref. 16:p. 76] The marketplace naturally moves toward equilibrium. For example, when industry profits are high, this attracts firms to the industry. Over time, increased industry competition drives down profits and falling profits, or the expectation that profits will fall, deters potential new entrants.

Barriers to entry are unique to each industry. Barriers reduce the rate of entry of new firms and maintain a level of profits for those in the industry. According to Porter there are six major sources of barriers to entry:

a. Economy of Scale. Economy of scale refers to the declines in unit cost as the volume of purchases increases. Economy of scale deters entry by forcing new participants to come in at large scale and risk strong reaction from existing firms or to come in at a small scale and accept a cost disadvantage.

b. Product Differentiation. Product differentiation means that established firms have brand identification and customer loyalties, which stem from past advertising, customer service, or simply being first into the industry. Differentiation creates a barrier to entry by forcing potential entrants to spend heavily to overcome existing customer loyalties.

c. Capital Requirements. The need to invest large financial resources in order to compete creates a barrier to entry. Heavy upfront spending may be required for such items as: production facilities, inventories, customer credit, advertising, and product development.

d. Access to Distribution Channels. A barrier to entry can be created by the new entrant's need to secure distribution for its product. The new entrant has to aggressively compete with incumbent firms to gain access to the logistical distribution channels. For example, the manufacturer of a new food product must persuade retailers to give up space on the competitive supermarket shelf. The more limited the wholesale or retail channels are, the more likely that existing competitors have them tied up, hence making entry difficult.

e. Cost Disadvantages Independent of Scale. Established firms may have cost advantages not replicable by potential entrants no matter what their size and attained economy of scale. Examples of critical advantages include the following: proprietary product technology, favorable access to raw material, favorable locations, government subsidies, and established learning curve progression.

f. Government Policy. Government can limit or even foreclose entry into industries with such controls as licensing requirements and limits on access to raw materials. Examples of regulated industries are trucking, railroads, and airlines

5. Rivalry Among Industry Competitors

Rivalry among incumbent firms in a market is one of the principal determinants of industry growth and success. [Ref. 12:p. 3] Rivalry can be thought of as jockeying for position. It occurs because one or more competitors feels pressure or sees an opportunity to improve their industry position. An industry can be thought of as an integrated system. Firms are mutually dependent. Competitive actions by one firm have an express impact on competitors and thus may incite retaliation or efforts to counter the move.

These competitive moves can include predatory pricing, active promotion, and new product introductions. The action of one firm directly affects its competitors. For example, Compaq Computers drastically changed the PC industry through competitive pricing. Industry participants were forced to respond by introducing low cost computers.

C. APPLYING THE PORTER MODEL TO THE TRADITIONAL SUBSISTENCE SUPPLIER BASE

As stated earlier, the traditional subsistence supplier base is made up of food manufacturers. The U.S. Bureau of Census estimated that 25,500 establishments manufactured food, beverage and kindred products as of the end of 1997. The typical food manufacturer is small and produces a limited number of products for regional or specialized markets. [Ref. 17:p. 7] At the end of 1997, the domestic food processing industry employed 1.7 million people in the United States. The top 10 companies in the industry accounted for approximately 25% of the industry's employment. The market is highly fragmented and competitive. The following is an analysis of the food manufacturer industry using Porter's Model.

1. Bargaining Power of Buyers

Food processors deliver their products through various distribution channels using either a direct-delivery system or a warehouse system. In the direct delivery system, a company delivers the product to a store, stocks the store's shelves, and supplies additional product when needed by the store. In the warehouse system the company delivers the product to a warehouse, and the retailer or a third party vendor delivers the product to a store. The customer base is made up big and small food outlets. Major outlets such as Walmart have significant buying power, while smaller outlets such as Vons Supermart have less influence. Walmart is a global company whereas Vons Supermart serves only the California area. A clear example of the dynamics at work in the food industry is the relationship between Monterey Pasta and Costco.

Monterey Pasta is a small food manufacturer that produces and markets premium quality gourmet pasta and pasta sauces. Monterey Pasta sells its products through more than 5,700 traditional and natural foods grocery stores and in club stores throughout the US and in parts of Canada and Latin America. Costco accounts for almost 50% of the firm's sales. [Ref. 18] Monterey Pasta's financial stability would be jeopardized if it were to lose Costco's business; hence Costco holds a significant bargaining advantage. Costco can use this advantage to gain price concessions, more favorable payment terms, and better service. The net result is lower profit margins for Monterey Pasta.

The buyer's power is also enhanced by its ability to choose from a range of undifferentiated products. In the food industry many buyers of the goods see all goods as being similar if not exactly the same. For example, Monterey Pasta and American Italian Pasta produce Italian sauce. If neither company has developed brand recognition for their sauce, the products are undifferentiated. This in turn gives buyers the ability to use an alternative supplier for pasta. Buyers can use this fact to play one company against the other. Again the buyer has a clear bargaining advantage.

However, the buyer's power is diminished with product branding. Food companies create brand loyalty by advertising directly to the end user. Branding establishes the product in the minds of the consumer; hence this drives demand for the particular food item. The supplier is then positioned to sell its products at a premium. Branded food products sell on an average of 8 to10 percent higher than generic food items. [Ref. 19]

2. Bargaining Power of Suppliers

The food manufacturing industry is an important user of many U.S. resources such as farm and fishery commodities, chemicals, packaging materials energy, advertising, and many other inputs. According to the USDA, labor is the largest component of food production cost, representing nearly 40% of every consumer dollar spent for food [Ref. 17:p. 14]. Labor costs include wages and employee benefits for which the food manufacturing industry has to compete against other industries in a tight labor market. With the unemployment rate at historic lows, the pool of available workers is shrinking. Hence, potential workers can demand better pay and benefits for their services. In this case the limited available pool of workers in the U.S. economy impacts the food manufacturer by increasing costs, resulting in lower industry profits.

The food processing industry's second largest expense is agricultural commodities, which account for 20% of total costs. [Ref. 17:p. 14]. Food manufacturers use various raw materials, which include commodities generally available from several different sources. These commodities are subject to price fluctuations that may create price risk. In order to manage the price risk, food manufacturers often hedge commodities in order to mitigate this price risk. While this approach may tend to limit a manufacturer's ability to participate in profit gains resulting from falling commodity prices, it also tends to reduce the risk of profit loss from rising commodity prices.

Large food manufacturers also use their size to gain favorable supply arrangements. Take for example ConAgra. ConAgra has implemented a strategic sourcing initiative to leverage its vast scale and to more efficiently procure $18 billion annually in commodity inputs, raw materials, packaging, and other basic goods and services. [Ref. 17:p. 3] ConAgra is presently implementing strategic sourcing actions in more than a dozen procurement categories, ranging from packaging to ocean freight, involving purchasing from external sources.

ConAgra also intends to source internally an additional $1 billion of goods and services previously procured outside ConAgra. They anticipate that internal sourcing will keep more profits inside ConAgra and enable the company to use its capacity more efficiently. The company estimates that changes in procurement policy will result in at least $250 million per year in sustainable savings and profit leverage within three years. [Ref. 20] The combination of large-scale influence and threat of continued backward integration gives ConAgra major advantages when negotiating with suppliers. Hence, in this case the supplier's bargaining power is curtailed.

3. Availability of Substitutes

Although the food manufacturing industry does not face a threat of substitution from outside of the industry, the American food industry is being reshaped by demographic changes. The U.S. population is aging and more ethnically diverse. In order to achieve success in the highly competitive food industry, companies must develop a keen understanding of the changing dietary needs of the American consumer, which in turn drive the demand for their products. Although these changing needs will not displace the existing industry, they will impact the make-up of the industry's product mix.

4. Threat of Potential Entrants

On the local level, barriers to entry into the food industry are relatively low. The technological skills and financial resources are not substantial. [Ref. 17:p. 16] Marketing and distribution costs can be significant, however these expenses are minimized when there are enough neighboring food establishments where products are sold. The food industry is its own best customer. Neighboring food establishments provide a ready market for the new industry participant.

In order to succeed on a larger scale, barriers to entry are very high. [Ref. 17:p. 16] The capital requirements needed for manufacturing facilities, marketing, and distribution are cost prohibitive. In particular, the evidence shows that advertising–created product differentiation is a major barrier to entry in the food manufacturing industry. [Ref. 21:p. 92] Product differentiation primarily affects potential entrants that desire to sell their own brand. As stated earlier branded items demand a higher premium as a result of their established customer loyalty. The advertising expenditures required to persuade consumers to switch appear to be greater than those required to maintain loyalty. [Ref. 17: p. 95] It has been shown that there is a correlation between increased sales and advertising up a point of diminishing returns. [Ref. 17: p. 95] New entrants and smaller firms have to devote a larger percentage of revenues to advertising than large, incumbent firms to get the same affect. Hence, any new entrant to the food manufacturing industry must devote a significant portion of their available resources to building a brand name. Advertising expenses coupled with facility cost and distribution requirements form a formidable barrier for firms desiring to compete on a large scale in the food manufacturing industry.

5. Rivalry Among Industry Competitors

As mentioned earlier, the U.S. Bureau of Census estimates that 25,500 firms participate in the food manufacturing industry. The industry is competitive and fairly fragmented. The top 10 publicly traded companies generated $155 billion of the industry's total food and beverage sales of approximately $487 billion. [Ref. 17:p. 7] Table 2 shows sales and market share for the top 10 companies.

Company	Sales ($millions)	Market Share
Phillip Morris	26,797	5.5%
ConAgra	24,594	5.1%
Coca-Cola	19,805	4.1%
PepsiCo	18,666	3.8%
Coca-Cola Enterprises	14,406	2.9%
IBP	14,075	2.9%
Sara Lee	10,618	2.2%
H.J. Heinz	9,300	1.9%
Bestfoods	8,637	1.8%
Nabisco	8,268	1.6%

Table 2: Top 10 food manufacturing companies "After Ref. [17:p. 7]."

Table 2 supports the premise that the food manufacturing industry is fairly fragmented. It shows that there is no one company with significant market share in the overall food and beverage marketplace. Individual companies continuously jockey to improve their position in the industry. Food manufacturers are being pressured to become bigger and more diverse in order to support their retail customers. [Ref. 8:p. 2] The industry is also undergoing a period of consolidation. Recently, Philip Morris, owner of Kraft Foods, agreed to buy Nabisco for about $18.9 billion. The company was attracted by sales of Nabisco's Wheat Thins, Planter's nuts, and other snack foods, which are rising faster than the industry's 2 percent annual growth rate. Sales in Nabisco's biscuit unit rose 4 percent, helped by a 3 percent rise in cookie and cracker sales volumes. It is anticipated that this consolidation activity will continue in the foreseeable future.

Although there is no one dominate player in the industry, companies are highly concentrated in particular segments of the market. For example, Tyson Foods has significant market share in the poultry-processing segment. [Ref. 22] Tyson is seen as an industry leader, and its branded products demand a premium price. Tyson Foods competes vigorously with the other industry leader, Perdue Chicken; with both companies enjoy significant brand recognition.

Tyson has also made moves to become bigger as evidenced by their merger with Hudson Foods. The acquisition increased Tyson's domination of the chicken industry, raising its market share to 26% of weekly chicken production. The merger also gave Tyson an important presence in turkey production, a presence that the company has long sought. [Ref. 22]

The overall theme in the food manufacturing industry is consolidation and diversification. Companies compete fiercely against each other along product lines, making it difficult to raise prices. Strategies for growth include acquiring other food companies, expanding distribution channels and gaining international market share. Smaller industry participants survive by specializing in particular market segments and local areas. Though the industry is consolidating, the barriers for entry into a local market remain relatively low.

D. APPLYING PORTER MODEL TO THE PRIME VENDOR SUBSISTENCE SUPPLIER BASE

As stated earlier, the prime vendor subsistence supplier base is made up entirely of food distributors. These foodservice distributors purchase food and nonfood items from manufacturers and sell them to establishments that sell and prepare food. Examples of nonfood items include foodservice equipment, napkins, flatware and tablecloths. Food Distribution is a $147 billion industry populated by 2,700 companies as of the end of 1998. [Ref. 7:p. 5]

The food distribution market includes broadline, specialized and system distributors. Broadline distributors have the ability to provide a wide range of food and related products to the food service industry. Broadline distributors offer one-stop shopping for their customers by providing an array of product selections. Specialized distributors focus upon a specific product category or segment of the food market, while system distributors exclusively serve chain restaurants and other multi-tenant operators. The top 10 broadline distributors accounted for 25% of industry sales in 1998. [Ref. 7:p. 5] Although the market favors broadline distributors in general, the food distribution industry is highly competitive. The following is an analysis of the food distribution industry using Porter's Model.

1. Bargaining Power of Buyers

Food distributors sell their products to restaurants, hospitals, colleges, hotels, military dinning facilities and other outlets that prepare and sell food. Accounts are generally broken down into two categories: street accounts and chain accounts. Street accounts are composed of non-chain food outlets. Examples of these accounts are independent, full-service restaurants and small "mom and pop" food outlets. Chain accounts include major customers such as Wendy's or MacDonald's. Food distributors typically have greater bargaining leverage over street account customers and thus realize a higher profit margin from this market segment. In addition, the distributor's influence over the street account customers often allows distributors to sell their own brands, which usually provide them a higher profit margin than the sale of national brands. [Ref. 7: p. 9]

Food distributors have less clout when dealing with chain accounts. Major chains such as Wendy's usually demand price concessions. As a result, chain accounts produce a lower profit margin. However, chain accounts are critically important to distributors. These accounts provide stability, especially during economic downturns. As mentioned earlier, demographic changes in America are currently leading to more people eating away from home. However, in the event of an economic downturn, chain restaurants provide quick and low cost meals that are less susceptible to the volatility of the economy.

US Foodservice, a major food distributor, classifies the afloat prime vendor program as a chain account. However, individual ships can be compared to a street customer. Because of the volume of sales created by the Prime Vendor Program, DoD was able to negotiate a competitive contract price, as well as, gain unique service arrangements. [Ref. 23] For example, US Foodservice was required to provide additional case labeling for products sold to ships in order to make it easier for the shipboard personnel to classify and inventory subsistence items. Although US Foodservice earns a lower profit margin with the prime vendor contract, its gross profit is higher due to the increased sales volume. The average sales per delivery for an afloat customer is $8500, where as the average sales per delivery for street customer is $1100. Gross profit per delivery for an afloat customer is $580, where as the gross profit per street account is $146. [Ref. 23]

In addition to higher gross profits, US Foodservice also receives favorable payment terms from DoD. Payment is received 14 to 21 days after each delivery to an afloat customer whereas the average commercial customer pays US foodservice 30 days after delivery of goods. The DoD payment arrangement, in some cases allows US Foodservice to deliver goods to the Navy and receive payment prior to paying suppliers. This improves the company's cash flow position. These benefits that are derived by the industry from the DoD Prime Vendor program in turn increase the bargaining power of the DoD as a buyer.

2. Bargaining Power of Suppliers

Food distributors buy their products primarily from manufacturers. These distributors offer manufacturers a pipeline and a proven supply channel for their goods. In fact, 90% of new product information comes from the distributor's sales representative. [Ref. 8:p. 2] The large distributors possess considerable buying power due to their ability to leverage their size to gain price concessions. Additionally, extensive geographic networks allow them to seek out more favorable trade terms in various parts of the country. [Ref. 24:p. 3] The net result is higher gross margins, which can be passed on to customers to improve their competitive position within the industry.

However, food distributors do face a direct marketing threat from manufacturers who can choose to sell their goods directly to the food distributor's customer base. Recently, the Internet is making this direct selling easier and more efficient. Profit margins in food manufacturing are low, and leading food manufacturers are only expected to grow earnings between 6% and 8% in 2000. [Ref. 17:p. 5] With food distributors adding to the end cost structure for the manufacturer's products, the threat of direct selling is clearly a bargaining tool for the supplier.

3. Availability of Substitutes

Food distributors do face a threat of substitution. As stated above, manufacturers can sell their products directly to the distributors' customer base, often via the Internet. These Internet exchanges give consumers the opportunity to order a range of products online, thus by-passing the food distributors. Food manufacturers can form electronic exchanges and offer a full range of goods online. However, the efficiencies that food distributors have brought to the food industry cannot be ignored. Food distributors offer the food service industry "one stop shopping" and other value added services. Additional services that food distributors provide include: new product sampling, food cost analysis, and wait staff training. [Ref. 8: p. 1] These services provide manufactures with an avenue for product promotion, as well as a method to improve operations.

Overall the threat of substitution is moderate. Food manufacturers can use the threat of direct selling in negotiations with food distributors. However, this tactic must be balanced against the added benefits that distributors bring to the food industry.

4. Threat of Potential Entrants

The barriers for entry into the food distribution area are increasing. Capital requirements, economy of scale, and customer loyalty create challenges for potential new entrants.

a. Capital Requirements

In order to compete on a large-scale, capital requirements can be extremely high. The food distributor's customer base is practicing better cost control and they are demanding greater efficiencies from their suppliers. Food distributors are being forced to build capital in order to increase automation, hold larger inventory of a wide range of products and facilitate geographic expansion.

Improved automation is reducing labor cost and increasing productivity. Larger inventories allow food distributors to quickly respond to the customer's needs. For example, in the prime vendor contract the food distributor has to be able to quickly load out deploying afloat units on short notice. Geographic expansion allows the distributor to grow with its customer base.

The major distributors that are winning chain accounts are offering better service and a wider selection of products at lower prices. [Ref. 24:p. 1] The cost of entry into the food distribution market is rising and it has become difficult for smaller firms to survive. [Ref. 24:p. 1] The customer base is expanding, so distributors have to invest heavily in order to be competitive.

b. Economy Of Scale

The major food distributors have enormous buying power because of their ability to purchase large volumes. They offer scale, which implies favorable costs. Scale gives the major food distributors the ability to demand a decrease in unit price as size of an order increases.

Businesses have three types of cost, variable, fixed, and semi-variable cost. Variable costs vary directly and proportionally with the production quantity of a particular item. Examples of variable costs include items such as direct labor wages and cost of materials. Fixed costs do not vary with volume. These costs are cost that the firm must pay simply because they are in business. Examples of fixed cost include rent and some advertising. Semi-variable costs fall between fixed and variable costs. An example of semi-variable costs is electric utilities. Electric utilities can be proportioned across products and general operations. If a distributor increases the size of an order, then the food manufacturer's fixed cost is spread over a larger quantity. In this case, the food manufacturer's cost of doing business remains the same while the volume of goods sold increases. The food manufacturer's cost per item decreases, enabling the firm to sell the product to a distributor at a lower price.

New industry participants are forced to dedicate a significant amount of resources to achieve scale in order to obtain price concessions. Failure to gain economy of scale results in a competitive disadvantage. Incumbent firms in the distribution industry are positioned to provide products at a lower cost, hence making them a more attractive to chain restaurants and other food outlets. The customer base operates in a very competitive environment and cost savings that result from scale of their suppliers is passed on the consumer or invested back into the business.

c. Customer Loyalty

New industry participants also have to overcome customer loyalty issues. As with any industry, the relationship between the buyer and seller in the food service industry is critical. The food distributor's customer base places quality and timeliness of delivery as key factors when selecting a supplier. The buyer's success is directly tied to the success of the food distributor.

It can be concluded that food outlets want to build long-term relationships with individual distributors. If a distributor consistently performs well, then it will maintain its customer base. New industry participants have to find ways to entice the buyer to switch from a reliable supplier. Hence, customer loyalty becomes a barrier to entry.

5. Rivalry Among Industry Competitors

The food distribution market is highly competitive. As in the food manufacturer's market, the food distribution industry is consolidating. Firms within the industry are positioning themselves to become bigger. The customer base is looking for partners who can provide a wide range of products. Consolidation has been rampant over the last decade. [Ref. 7:p. 8] As shown in Table 3, the number of food distributors has decreased by 23% between 1992 and 1999. Companies are getting bigger by acquiring other food distributors.

Distributors	1992	1999	% Change
Broadline	1600	1350	-15.6%
Systems	100	50	-50%
Specialist	1800	1300	-27.8%
Total	3,500	2700	-23%

Table 3. Industry Consolidation: Number of Food Distributors "From Ref. [8:p. 6]."

In addition to capacity increases, acquisitions provide greater geographic reach and broader product selections. The biggest deceases in the number of distributors come from the smaller distributors. As Table 3 indicates, 69% of firms that were acquired or went out of business between 1992 and 1999 were system and specialist distributors. Increasingly, smaller firms find it difficult to compete. However, these firms employ a number of strategies to fend off the big distributors. They include outsourcing of non-core businesses such as accounting, delivery and inventory management. This allows the smaller firms to focus on their food-brokering competency. In addition, the smaller companies form buying groups that enable them to achieve economy of scale.

Though the broadline distributors clearly have a competitive advantage, the food distribution industry has a low concentration ratio. Concentration ratio is the percent of domestic output produced by the four largest firms in a particular industry. [Ref. 15:p. 1] A low concentration ratio indicates that many rivals, none of whom have significant market share, characterize the industry. [Ref. 15:p. 1] Table 4 shows the market share for the top four food distributors from 1996-98.

Company	**1998 Market Share**	**1997 Market Share**	**1996 Market Share**
Sysco Corp	11%	10.5%	10.5%
Alliant Foodservice	4.1%	3.7%	3.9%
US Foodservice	3.9%	3.8%	3.9%
PYA Monarch	1.8%	1.8%	1.7%
Total	20.8%	19.8%	20%

Table 4. Market share for Top 4 Companies in Food Distribution Industry "After Ref. [7:p. 8]."

As shown in Table 4, the top four companies only controlled 20.8% of the market output as the end of 1998. This is a clear indication of the competitiveness that exists within the food distribution market. However, the market is consolidating and small companies are operating in a challenging environment. In 1998, sales for the top 50 broadline distributors grew by 10.4%, while the rest of the industry gained only 4.9%. [Ref. 7:p. 5] The largest distributors are taking share from the smaller players who comprise the bulk of the industry. The food distributors are aggressively competing against each other, with acquisitions being used to expand geographically and broaden product lines.

E. CHAPTER SUMMARY

The Food Distribution Industry and Food Manufacturing Industry are highly competitive and fragmented. Both industries are characterized by rampant consolidation. Food companies are being forced to get bigger in order to meet the customers' needs. In the case of food manufacturers, profit margins are low, and companies are looking for ways to control cost.

Barriers to entry into food manufacturing industry are low on the local level. Smaller companies thrive in local markets and leverage other food outlets to be competitive. For example, Monterey Pasta uses the powerful distribution channel of Costo to market its product line. However, to operate on a large scale the barriers are high. Large scale operations are capital intensive. A few large players and many smaller firms characterize the market. Small companies are less competitive because they lack bargaining power with their suppliers and customers.

As for food distributors, they need scale and geographic reach in order to be competitive. Larger distributors are acquiring smaller distributors. The larger distributors have the competitive advantage. They are in better position to meet the needs of the customer base because of their product selection and reduced cost. Size enables them to leverage their buying power with customers and suppliers. However, distributors do face a direct selling threat from food manufacturers who are utilizing the internet to improve supply distribution.

Smaller distribution industry players find it difficult to compete. Though the market is highly fragmented the big companies are getting bigger. The customer base wants to limit their number of suppliers, so the big distributors are positioning themselves to offer a wider selection of products. The goal is to provide the customer with one stop shopping. Small industry participants are unable to achieve economy of scale, which makes their cost higher.

IV. TRADEOFF ANALYSIS OF THE PRIME VENDOR PROGRAM

A. INTRODUCTION

The use of Prime Vendors to provide subsistence is becoming the primary means of feeding our military. The program has led to higher food quality and greater efficiency. However, there is no free lunch. This chapter presents the benefits and explores the unintended consequences of buying from food distributors vice food manufacturers. In doing so, this chapter presents the current status of small business participation in the Subsistence Prime Vendor Program and provides a tradeoff analysis between the benefits of the Prime Vendor program and supplier base concerns.

B. CURRENT STATUS OF SMALL BUSINESS PARTICIPATION IN PRIME VENDOR PROGRAM

Currently there are 59 Subsistence Prime Vendor contracts in place worldwide. As stated earlier, Subsistence Prime Vendor is a regionalized program. The Regionalization strategy divides the United States into five zones and presents the opportunity for greater small business participation. The program also is expanding globally with contracts in Europe and the Pacific. The Prime Vendor supplier base is made up of small, medium, and large firms. A company the size of Sysco Corporation could more than likely meet the entire DoD requirement. Sysco's total sales for its FY 2000 were $19.3 billion, while total sales in the Prime Vendor program were approximately $647.6 million, representing only 3.4% of Sysco's business.

Separating the world into regions allows small companies that lack the resources of Sysco to compete for smaller chunks of the Subsistence Prime Vendor Program. Table 5 provides a summary of how the current Prime Vendor multi-year contracts are divided between small business (SB) and large business (LB) in the Prime Vendor regions.

Regions	#SB contracts	SB contract value ($M)	Number of LB contracts	LB contract value ($M)	Total # Contracts	Total Values ($M)
Southwest	0	0	10	279.75	10	279.75
Central	5	263.2	3	98.7	8	361.9
Southeast	4	27.5	7	557.2	11	584.7
Northeast	4	68.7	4	201.85	8	270.55
Northwest	2	180.065	8	144.9	10	324.97
Europe	0	0	2	281.4	2	281.4
Pacific	4	397	0	0	4	397
Ship	1	10	5	525	6	535
Total	**20**	**946.465**	**39**	**2088.8**	**59**	**3035.2**

Table 5. Prime Vendor Contracts "After Ref. [27]"

Table 5 also indicates that the total value of all Subsistence Prime Vendor, multi-year contracts is over $3 billion. Small businesses were awarded contracts representing 31.1% of this amount. DSCP sets goals for small business participation. The small business goal for subsistence in Fiscal Year 99 was 67.98%. DSCP achieved 59.1% for all categories of subsistence. Table 6 shows small business results for FY 97 through FY 99. Additional size classifications in Table 6 are Woman-Owned Small Business (WOSB), Small Disadvantage Business (SDB), and Javits-Wagner-O'Day (JWOD) program participants. The JWOD program seeks to provide meaningful employment opportunities to blind and severely disabled Americans.

	FY 97 DSCP Goal	Accomplish	FY 98 DSCP Goal	Accomplish	FY 99 DSCP Goal	Accomplish
Total Small Business	69.8%	71.9% ($491M)	70.3%	69.5% ($705.4M)	67.98%	59.1% ($548.8M)
SB	33.1%	30.3% ($206.7M)	32.5%	31.0% ($315.2M)	31.52%	20.4% ($189.4M)
SDB	3.3%	7.4% ($50.7)	2.6%	3.9% ($40.2M)	2.86%	3.70%
WOSB	4.5%	7.1% ($48.8)	4.75%	3.8% ($38.9M)	.58%	($34.3M)
JWOD	N/A	N/A	$7M	3.7M	3.8M	$5.5M

Table 6. DSCP Socio-Economic Program Statistics "After Ref. [9]."

In FY 2000, the Prime Vendor program made up approximately 52% of the total subsistence sold by DSCP. [Ref. 26] The remaining 48% came from fresh bakery products, produce, dairy items, rations and beverages. Small companies are better able to compete in the areas outside of Prime Vendor. For example, in FY 2000, the produce category, which represented 29% of total subsistence sales, achieved 90% small business participation. [Ref. 28] Figure 7 shows a breakdown of total subsistence sales at DSCP for FY 2000.

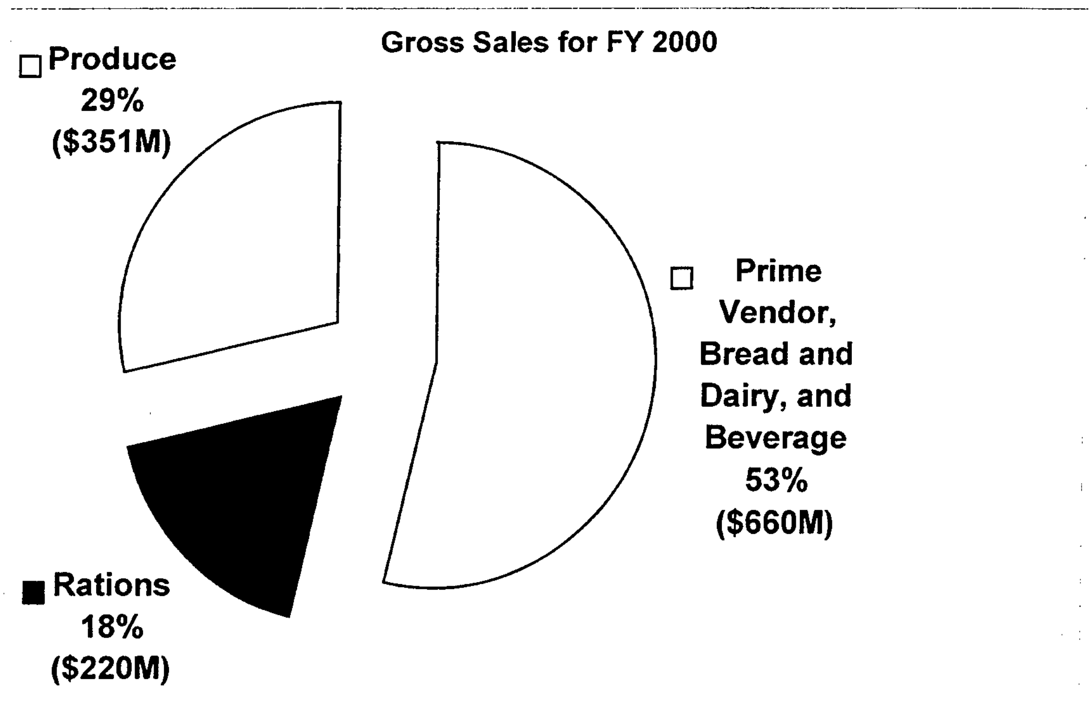

Figure 7. Subsistence Sales Breakdown For FY 2000 "After Ref. [26]"

As the Prime Vendor's share of the pie increases, small business participation as prime contractors will most likely decrease. This is due to the competitive advantage that large companies enjoy in the Prime Vendor source selection process. Table 6 shows that small business participation fell by more than 12% between 1997 and 1999. The Subsistence Prime Vendor Program is continuing to expand each year. In accordance with the Federal Acquisition Regulation, Governmental organizations must use small business to the maximum extent possible.

Table 7 shows breakdown of small firms that participate in the Prime Vendor subsistence supplier base.

Prime Vendor	Contract Number	Contract Value ($M)	Contract Length	Firm Size	Regions
LaBatt Food Service	SP0300-00-D-2903	53.5	Base year+4	SB	Central
LaBatt Food Service	SP0300-00-D-2986	84	Base year+4	SB	Central
LaBatt Food Service	SP0300-00-D-2923	9	Base year+4	SB	Central
LaBatt Food Service	SP0300-00-D-2925	68.5	Base year+4	SB	Central
The Merchant's Co. Food Service	SP0300-00-D-2913	48.2	Base year+4	SB	Central
Better Brands (MOCOS)	SP0300-00-D-2915	28.6	Base year+3	SB	NE
North Center (MOCOS)	SP0300-00-D-2916	1.7	Base year+3	SB	NE
Pocono Produce Co., Inc.	SP0300-00-D-2917	23.24	Base year+3	SBWO	NE
Pocono Produce Co., Inc.	SP0300-00-D-2918	15.16	Base year+3	SBWO	NE
GFG Food Service, Inc.	SP0300-00-D-2941	6	Base year+4	SB	NW
Sunshine Dairy, Inc.	SP0300-00-D-2937	7.065	Base year+4	SB	NW
Y Hata	SP0300-00-D-2981	68	Base year+4	SDB	NW
Y. Hata Company	SP0300-00-D-2948	99	Base year+4	SDB	NW
Mutual Distributors, Inc.	SP0300-01-D-2954	4.8	Base year+3	SB	SE
Provisiones Legrand, Inc.	SP0300-01-D-2953	22.7	Base year+3	SDB	SE
LaBatt Food Service	SP0300-00-D-2910	10	Base year+4	SB	Ship
Total		**549.465**			

Table 7. Small Business Participation "After Ref. [28]."

Table 8 shows the large firms that participate in the program.

Prime Vendor	Contract Number	Contract Value ($M)	Contract Length	Business Classification	Regions
Alliant Food Service	SP0300-00-D-2926	7.7	Base year+4	Large Business	Central
Alliant Food Service	SP0300-00-D-2927	34.5	Base year+4	Large Business	Central
Alliant Food Service	SP0300-00-D-2928	56.5	Base year+4	Large Business	Central
Ebrex Food Services	SP0300-00-D-2949	150	Base year+4	Large Business	Europe
Theodor Wille Intertrade	SP0300-00-D-2950	131.4	Base year+4	Large Business	Europe
Contential	SP0300-00-D-2976	37	Base year+3	Large Business	NE
Doughties Foods	SP0300-00-D-2990	77.6	Base year+3	Large Business	NE
Gordon Food Service	SP0300-00-D-2924	7.25	Base year+4	Large Business	NE
Reinhart Institutional Foods	SP0300-00-D-2906	80	Base year+4	Large Business	NE
Food Services of America	SP0300-00-D-2938	4	Base year+4	Large Business	NW
Food Services of America	SP0300-00-D-2939	4	Base year+4	Large Business	NW
Food Services of America	SP0300-00-D-2959	4.4	Base year+4	Large Business	NW
Food Services of America	SP0300-00-D-2989	5.25	Base year+4	Large Business	NW
Reinhart Institutional Foods	SP0300-00-D-2940	1.3	Base year+4	Large Business	NW
Reinhart Institutional Foods	SP0300-00-D-2932	12.1	Base year+4	Large Business	NW
SYSCO Food Services	SP0300-00-D-2958	52.4	Base year+4	Large Business	NW
SYSCO of Seattle	SP0300-00-D-2956	61.45	Base year+4	Large Business	NW
Institutional Distributors, Inc.	SP0300-01-D-2911	69.2	Base year+3	Large Business	SE
Lankford SYSCO	SP0300-01-D-2978	125.5	Base year+4	Large Business	SE
PYA Monarch	SP0300-01-D-2966	91.2	Base year+4	Large Business	SE
PYA Monarch Lexington/Walterboro	SP0300-01-D-2964	137.5	Base year+3	Large Business	SE
PYA Monarch/Montgomery	SP0300-01-D-2965	54.8	Base year+4	Large Business	SE
SYSCO Food Services - Jacksonville	SP0300-01-D-2967	58.5	Base year+4	Large Business	SE
SYSCO Food Services of Central FL	SP0300-01-D-2968	20.5	Base year+4	Large Business	SE
Alliant Food Service	SP0300-00-D-2922	27	Base year+4	Large Business	SW
Alliant Foodservice	SP0300-00-D-2979	9	Base year+4	Large Business	SW
Alliant Foodservice	SP0300-00-D-2931	3.2	Base year+4	Large Business	SW
Alliant Foodservice	SP0300-00-D-2933	4.4	Base year+3	Large Business	SW
Joseph Webb Foods	SP0300-00-D-2912	104.4	Base year+3	Large Business	SW
Joseph Webb Foods	SP0300-00-D-2914	47.2	Base year+3	Large Business	SW
Shamrock Foods Co.	SP0300-00-D-2934	18.3	Base year+3	Large Business	SW
Shamrock Foods Co.	SP0300-00-D-2942	36.5	Base year+3	Large Business	SW
Smart and Final Foods	SP0300-00-D-2943	20	Base year+3	Large Business	SW
Sysco Foods	SP0300-00-D-2944	9.75	Base year+4	Large Business	SW
MDV/Nash Finch	SP0300-00-D-2960	105	Base year+4	Large Business	Ship
PYA Monarch	SP0300-00-D-2919	220	Base year+4	Large Business	Ship
Rhykoff/US Foodservice	SP0300-00-D-2945	100	Base year+4	Large Business	Ship
Sysco Foods-Seattle	SP0300-00-D-2951	50	Base year+4	Large Business	Ship
Sysco Foods-Seattle	SP0300-00-D-2952	50	Base year+4	Large Business	Ship
Total		2088.8			

Table 8. Large Business Prime Vendors "After Ref. [27]"

As part of the transition to the Prime Vendor program, DSCP has taken actions to improve small business participation in the program. Socioeconomic factors are imbedded in the Prime Vendor source selection process. Two evaluation factors found in all Prime Vendor solicitations are Socioeconomic (SE) Program Support and DLA Mentoring Business Agreement (MBA). Under Socioeconomic considerations, Prime Vendors, both large and small firms, describe the extent to which they will subcontract with small, small disadvantaged and women-owned small business concerns.

As a follow on action, during contract performance, prime contractors are required to report subcontractor small business participation. This reporting is used in the administration of the multiple year subsistence Prime Vendor contracts. These contracts typically involve a base year contract with four option years. DSCP establishes a goal under the contracts that 30% of all subcontracting dollars will go to small businesses and that 5% will go to small disadvantage businesses. [Ref. 28] The degree to which prime contractors use small firms as suppliers is then used as an evaluation factor in determining whether option years will be exercised. In this program, DSCP tracks subcontractor small business participation on a monthly basis, with Prime contractors who fall short of the subcontracting goals being required to give a reason for not reaching the goals. In FY 00, Prime Vendors reported to DSCP that 31% of all prime contracting dollars went to small businesses. [Ref. 29]

The intent of the DLA Mentoring Business Agreements (MBA) Program is to foster a business relationship between a Prime Vendor and small, small disadvantaged, or women-owned small business. This program is meant to ensure a viable small business base exists in the food industry. Ideally, both firms in the program bring to the relationship a distinctive capability, which supports business objectives and produces mutually beneficial results. The assistance that mentors provide may involve any of the following business disciplines - product marketing, warehousing & distribution; management assistance; reengineering; business networks; technical support; financial management and electronic commerce. [Ref. 30] These MBA agreements are structured as flexible working agreements between the two parties as opposed to binding contracts.

Mentors under the MBA program may be large or small business concerns, and participation is voluntary. Some of the Prime Vendor contractors are hesitant to participate in the program, believing they would be developing future competitors for their same line of work. [Ref. 30] However, since the MBA Program covers a variety of business disciplines, this may be a misconception. As a result, vendors responding with meaningful MBA proposals receive credit under the factor during source selection evaluation.

C. BENEFITS OF PRIME VENDOR

The Subsistence Prime Vendor Program leverages commercial food distribution practices and greatly improves the way DSCP buys food. Benefits of Prime Vendor include, but are not limited to, the following: inventory reduction, decreased infrastructure spending, enhanced customer service, and improved buyer/seller relationships.

1. Inventory Reduction

As noted earlier, prior to the Prime Vendor concept, the DoD maintained large food inventories at various levels of distribution sites. Under the Prime Vendor concept inventory management responsibility is shifted to the private sector, recognizing that the Prime Vendor's core competency is food distribution. As a result of this shift in the DoD's food distribution philosophy, inventory levels have dropped significantly throughout the DoD. Figure 8 shows that subsistence inventory levels at the DLA decreased by 50% between 1995 and 1999.

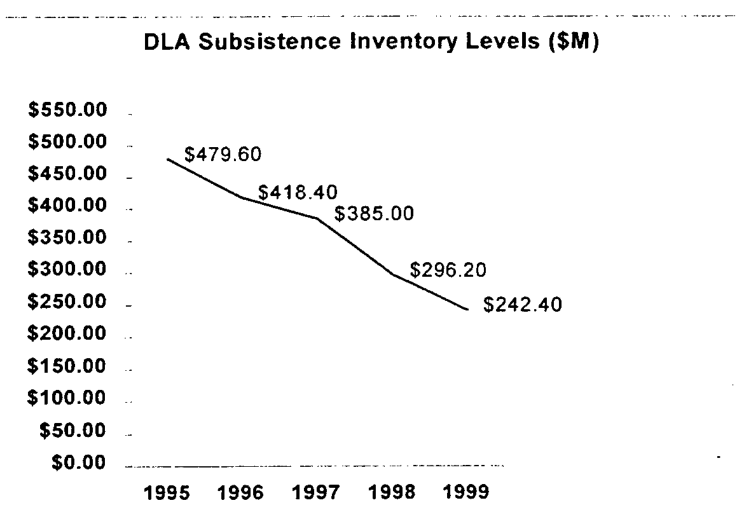

Figure 8. Declining Wholesale Subsistence Inventory "After Ref. [30]"

Total Direct Vendor Delivery (DVD) sales continue to increase, and at the end of FY 99, constituted over 76% of DSCP's total subsistence sales. [Ref. 30] The DVD category includes consolidated deliveries under the Subsistence Prime Vendor program and the individual commodity deliveries directly from the vendors supplying bread, dairy, and produce items. Under all of these categories, the fundamental concept is that customers order directly from the commercial vendor, and the vendor delivers directly to the customer. This DVD concept has helped to either eliminate or greatly reduce the traditional multi-layered inventory systems that were historically maintained in the DoD food distribution network.

As noted earlier, prior to programs like Prime Vendor, inventory was maintained at three different levels: depot, intermediate, and end-user. The Prime Vendor program allows great reductions of those inventories previously held at the depot and intermediate levels, with the preponderance of savings coming at the intermediate levels. For example, the following intermediate facilities have reported inventory reductions as a result of the Subsistence Prime Vendor Program:

- Fort Lee, VA - $500,000
- Camp LeJuene - $751,862
- Walter Reed - $68,000
- Pensacola - $1,000,000
- Mayport FSC - $760,000
- Parris Island - $1,000,000 [Ref. 31]

In addition, as a result of Prime Vendor, inventory is also reduced at the end user level. Under the Prime Vendor program, deliveries are made within 48 hours of the customer's request, as opposed to as much 10 days under the traditional distribution system. This improved delivery time enables end-users to decrease the amount of inventory held on hand.

With this dramatic change brought about by the DVD concepts, including Prime Vendor, almost all of the DoD's depot and intermediate level requirements have been eliminated. The sole requirement for any food items at these reserve levels comes in the area of operational rations. This category of food items consists of the Meals, Ready to Eat (MRE) and other contingency type food products. The MREs are used by the Services to sustain individuals during military operations that preclude organized food service facilities.

2. Decreased Infrastructure Spending

Since 1993, DLA has made impressive progress in implementing the Prime Vendor program for both medical and food supplies. This success has led to significant savings in the area of DoD infrastructure. GAO estimates that subsistence Prime Vendor, along with DLA's other inventory reduction efforts in the medical area, allowed DLA to save over $700 million between Fiscal Years 1991 and 1996. [Ref. 31] In addition, DLA believes that Prime Vendor will save, as much as, $1 billion in the food supply area over the next 5 years. [Ref.

31] This projection, made in 1997, includes savings from inventory and infrastructure cost reductions.

In the area of infrastructure spending, the bulk of the prime vendor savings come from costs related to inventory reduction. These inventory related infrastructure costs are made up of holding and ordering costs. Holding costs include the cost of acquiring and maintaining inventory, while ordering costs include the cost associated with actually placing the order. The equation for total inventory cost is developed as follows:

Total Inventory Cost (TIC) = (Average Inventory)(Holding cost per unit) +

(Number of orders per year)(Ordering cost per order)

The Prime Vendor program allows DoD to decrease both of these cost elements. The element of holding cost that DoD avoids in the Prime Vendor Program is inventory maintenance. The inventory maintenance function requires the following resources: warehousing, distribution network, and trained personnel. Under the Prime Vendor concept, these costs are passed to the Prime Vendor. While some critics may say that this is just a shifting of the cost within the same bill to the customer analysis of the DLA surcharge, which is done below, shows that the Prime Vendor contractors actually perform these functions at a lower cost than previously experienced within the DoD. This increased efficiency from the Prime Vendors is most likely a result of the highly competitive environment they operate in which requires them to control inventory carrying costs in order to survive.

Another element of inventory cost that declines under the Prime Vendor concept is ordering cost. Prior to Prime Vendor, contract specialists ordered products from individual food manufacturers. Under the previous food distribution concept, these contract specialists were forced to manage many suppliers, with the focus of filling a warehouse space. Under the Prime Vendor program, the contract specialist now manages a single supplier who provides numerous food items. As a result, the number of contracting actions is greatly reduced.

The infrastructure related costs discussed above that are incurred by DLA, are reflected in a surcharge that DLA passes on to its customers. Under this accounting practice, a customer pays the price DLA paid for an item plus a surcharge to cover DLA's related costs. In 1993, prior to the implementation of Prime Vendor, the subsistence surcharge was 16.6%. [Ref. 4] However, the surcharge during this time did not reflect all costs of supplying food to the end-user. Because DLA did not own the intermediate warehouses at this time, they were owned by the individual military services, the surcharge did not cover the costs of operating the intermediate base warehouses or costs to transport food from the intermediate site to end-user. [Ref. 4] Under Subsistence Prime Vendor, the subsistence surcharge in FY 2001 is 5.6%, and this reflects the total cost of delivering food to the end-user. [Ref. 32] This dramatic decrease reflects the significant infrastructure related cost reductions that DLA has been able to achieve as a result of the success of the Prime Vendor concept.

3. ENHANCED CUSTOMER SERVICE

Another feature of the Prime Vendor Program is enhanced customer service. The Prime Vendor program empowers the end-user by leveraging technology to improve the vendor's ability to meet customer demand. As discussed earlier, the software that connects the Prime Vendor and DoD customers is called Subsistence Total Order and Receipt Electronic System (STORES). The STORES software application supports a paperless ordering process. By using the software, orders are placed electronically. This tremendous acceleration of the ordering process allows the Prime Vendor contractors to make deliveries within 48 hours of transmission of the order.

The STORES system also improves customer service via its support of several electronic catalogs: i.e. Prime Vendor, bread, dairy and produce. As a result of this catalog functionality, the end-user now has a single place to shop for subsistence. Under the program, the catalogs are updated on a weekly basis to reflect the newest food choices available to the customer. In this one-stop-shop, the customer has greatly enhanced choice from a broad product selection that is continuously tailored to meet the needs of end-users.

The Prime Vendor program provides the DoD customer with the same products that are being provided to the hotel and restaurant industries. As opposed to DoD's prior food distribution concept, where contract awards were made to the lowest bidder for a given commodity, Prime Vendor allows the customer to select from a vast array of name brand products. As a result of all of these program improvements, DSCP customer service surveys have revealed a great deal of satisfaction with the Prime Vendor Program. [Ref. 32]

4. IMPROVED BUYER/SELLER RELATIONSHIP

The Prime Vendor Program can best be characterized as a partnership between the DoD and private industry. The program is innovative and represents a paradigm shift within the DoD. A key tenet of the program is building a long term, "win-win," relationship with the Prime Vendor. As part of this "win-win" strategy, DoD has shifted away from yearly contracts that forced a valuable supplier to compete every twelve months to maintain their business with the DoD to the concept of multiple year option contracts that allow for a long-term relationship if the contractor performs successfully. This contracting change has decreased contracting related costs for both parties and also provided the Prime Vendor with greater workload stability, while still giving the Government an opportunity to eliminate marginal performers. The researcher conducted interviews with a small and large Prime Vendor in order to gain insight into the relationship between the buyer/seller relationships.

a. Y. Hata Company

The researcher conducted a phone interview with Glen Lum who is the Prime Vendor Administrator for Y. Hata Company. The interview lasted for 30 minutes and the following is a summary of the conversation. Y. Hata is a small full-service food distributor with two Prime Vendor contracts, serving Hawaii land based facilities and all Navy ships in Hawaii. The two contracts are valued at $167 million over a 5-year period. Sales at the company last year were approximately $70 million, with sales to the DoD representing approximately 28% of the company's total sales. In order to meet the Prime Vendor requirements, the company has made major investments in Electronic Data Interchange (EDI) that, among other improvements, allows the company to receive orders and process payments electronically.

Mr. Lum stated that Y. Hata's commercial business is more profitable than the Prime Vendor arrangement. However, because of the volume of business associated with Prime Vendor, the company is able to lower its cost of acquiring products. The Prime Vendor business allows the company to negotiate more favorable pricing arrangements, which results in a net effect of increased profit margins in their commercial business. As a business strategy, the company can also choose to pass these savings on to its customers, giving the company a competitive advantage in a highly competitive environment.

Y. Hata faces high inventory cost because it operates on an Island where suppliers are not readily accessible. In addition to normal transportation cost on the Island, the company also incurs the high cost of getting supplies from the mainland suppliers they must rely on. Due to this increased inventory and shipping cost, proper management of cash flow is critical to the company's survival. In support of the company's cash flow concerns, the Government can be relied upon to always make payment for goods Y. Hata provides. However, Y. Hata has found that the Government's payments are not always timely, and any late payments by the Government could have a crippling affect on the company's operations. Fortunately for Y. Hata, both parties have found that most of the payment issues center on invoicing. In order to solve this problem, the Government has implemented an electronic invoicing program that has a goal of paying the Prime Vendor within 14 days of deliveries.

Y. Hata sees the Prime Vendor contract as an excellent opportunity for growth. The Prime Vendor Program gives the company the revenues it needs in order to expand its product line and also provides the company with experience in supplying a large customer. Success in the Prime Vendor Prime also provides the company with a strong marketing tool when trying to capture more commercial business. The relationship between the Government and Y.

Hata is clearly a "win-win" situation with Y. Hata serving as a prime example of the Government's commitment to small business.

b. US Foodservice

The researcher conducted an in person interview with Paul Aiello and Rick Uddenberg of U.S. Foodservice. Paul Aiello is the Senior Account Executive for US Foodservice's Afloat Prime Vendor Program, and Rick Uddenberg is US Foodservice's Customer Service Representative at FISC, San Diego. The interview lasted for 1 hour, and the following is a summary of the conversation. U.S. Foodservice is one of the largest full-service food distributors in the United States, distributing food and related products to restaurants and institutional foodservice establishments across the entire country.

U.S. Foodservice gained access to the Prime Vendor Program by acquiring three companies that were already providing services under existing Prime Vendor contracts: Joseph Webb, PYA Monarch, and Centennial Foods Division. These acquisitions have allowed US Foodservice to expand its national reach and to achieve a presence in major population centers. Although the Prime Vendor program makes up a small percentage of the company's overall sales, the company sees the Prime Vendor business as important because it allows the company to increase buying power, broaden product line and adopt practices that are beneficial to their commercial segment.

As in the case with Y. Hata, increased buying power is a direct consequence of increasing volume brought about by the large Prime Vendor contracts. The increased volume gives US Foodservice more leverage with its suppliers, enabling it to gain more favorable pricing terms. The Prime Vendor contracts also allow US Foodservice to broaden its offerings by presenting the company with another venue for marketing new products. The company also benefits from new DoD initiatives that are aimed at reducing food preparation time on ships. As result, the company began offering a line of pre-cooked meals under their Advanced Food Technology (AFT) program. The company has also presented other options to help DoD achieve its goal of making the food service process more efficient onboard ships.

The Prime Vendor Program is also testing US Foodservice's capacity to provide a large amount of products in a short period of time. For example, the afloat customer operates in a very dynamic environment that requires US Foodservice to be able to quickly supply a deploying ship. The company has been tested in this demanding environment and maintains a fill rate of 99%. This means that US Foodservice meets its customers' demands 99% of the time. Prior to Prime Vendor, DSCP customers received less that 85% of items ordered. [Ref. 32] The relationship between the Government and US Foodservice is mutually beneficial to both parties.

D. TRADE-OFF ANALYSIS

The Prime Vendor Program was implemented to reduce inventory and make the way DoD buys food more efficient. The program has been successful by many measures. Inventory has been reduced and food quality has improved. Prime Vendors operate in a hyper-competitive environment and are driven to provide good service. Failure to provide good service presents an opening to their competitors. Hence, the Government benefits from the competitive nature of the market.

An economic truism is that, "There ain't no such thing as a free lunch." This principle can be applied to the Prime Vendor Program. In exchange for adoption of commercial practices in the area of subsistence, the Government has had to accept radical change. The changes began during acquisition planning where DoD has moved from selecting vendors that provided Lowest Price Technically Acceptable (LPTA) proposals to applying trade-offs where cost was not the most important factor.

Under this concept, known as Best Value Procurement, the Government uses the same selection factors that big restaurant chains apply when selecting suppliers. This source selection process is centered on the end-user with evaluation factors focused on the Prime Vendor's ability to create a good working relationship with its customers. In particular, emphasis is placed on automated links for ordering and reporting and delivery of quality products on schedule, as the primary considerations for winning a Prime Vendor contract.

In selection of Prime Vendors, the DoD has to be realistic about small business participation. Prime Vendors tend to be large firms because the barriers to entry into broad line food distribution are high. In this area the Government is simply following industry practice where commercial vendors in the food industry are moving to big food distributors that can provide an array of products. In addition, there has been consolidation within the Prime Vendor supplier base, making it even more challenging to reach small business goals. Table 9 shows consolidation that has taken place among Prime Vendors. In this table, all of the companies that were acquired, with exception of PYA Monarch, were formerly classified as small businesses.

Prime Vendor	**Acquiring Company**
Continental Foods Division	U.S. Foodservice
Doughties Foods	Sysco
Atlantic Food Service	Alliant
Beaner Street Foods	Sysco
Joseph Webb Foods	U.S. Foodservice
PYA Monarch	U.S. Foodservice

Table 9. Prime Vendor Supplier Base Consolidation

As discussed previously, small firms were awarded only 31% of the Prime Vendor contract dollars. However, the DSCP has implemented a successful subcontracting program where Prime Vendors are encouraged to use small firms as a percentage of their suppliers. While supporting the goal of engaging small businesses in Federal Government acquisitions, this program does have an unintended consequence. Because small firms are less likely to have the buying power of large firms, it is more difficult for them to offer competitive pricing to the Prime Vendor. As a result, Prime Vendors could end up paying more for products supplied by small business and passing the increased cost back to the Government.

In addition to changes in the acquisition process, the role of a Government buyer has changed under the Prime Vendor program. Government buyers have now become supply chain managers. They are tasked with managing the Prime Vendor process from acquisition to delivery of the products to the end-user. The buyers not only have to be proficient in the contracting procedures, but also have to be well versed at managing suppliers. This change in contracting focus presents new challenges for the Government buyers. They are now directly responsible for ensuring that the end-user's requirements are met with the award of the contract as only the beginning of the process.

In the old system a typical buyer was very narrowly focused. For example, a buyer could have been assigned to work specifically in the coffee market where they served as the subject matter expert on coffee and developed highly specialized skills in commodity buying. This developed specialization can be a disadvantage in the Prime Vendor process. Under the Prime Vendor program the buyer is responsible for managing a contractor that provides a full range of food products. As a result buyer retraining is essential to realizing the full benefits of Prime Vendor. In addition to basic contract training, training programs must now include quality control, supply management and market analysis. The benefits of Prime Vendor cannot become fully optimized, until buyers acquire skills required to manage a process vice a limited basket of goods.

Another challenge confronting buyers is managing competition. While the award process is competitive, the Prime Vendor program seeks to build a long-term business alliance with a single source in a region. In the old system, contracts were generally re-competed on an annual basis. Under Prime Vendor if a contractor meets performance requirements, options will more than likely be exercised. Now the buyer has to balance the benefits of building long-term relationships against the benefits of fostering competition.

However, the argument can be made that when other companies see an effective business alliance between DLA and the Prime Vendor, this alliance will encourage competition and companies will be encouraged to enter the market; hence, the Prime Vendor will become motivated to improve his performance to ensure that Government exercises its contract option.

After weighing both the benefits and deterrents of the Prime Vendor program, the researcher believes that the benefits of the Subsistence Prime Vendor Program outweigh the concerns. Prior to the Prime Vendor Program, DLA's subsistence small business participation was between 60-70%. [Ref. 28] As of the end of 1999, DLA is operating at the lower end of this range. However, this does not take into account Prime Vendor subcontracting dollars that go to small firms. While a high percentage of Prime Vendor contracts go to large companies, this has had minimal impact on small business participation in the subsistence supplier base as a whole.

E. CHAPTER SUMMARY

The Prime Vendor Program has a strong and viable supplier base where large companies dominate. This is a consequence of adopting commercial practices for subsistence. The benefits of the program are far greater than the drawbacks. Inventory has been reduced and service members are getting better quality food. The goal of the federal acquisition system is to satisfy the customer terms of quality, cost, and timeliness of delivery. The Prime Vendor Program appears to be meeting this goal.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The Subsistence Prime Vendor Program represents a paradigm shift within the DoD. The goal of the program is to reduce cost and improve the quality of products provided to our Sailors, Soldiers, Airmen and Marines by creating a partnership between the Government and the private sector. The Prime Vendor program has been successfully implemented nationally and is expanding worldwide. Under this program subsistence inventory management has been shifted to commercial food distributors with a net result of reduced inventory, decreased infrastructure spending, enhanced customer service, and improved buyer/ seller relationships.

Adopting commercial practices in the area of food distribution does present challenges. Government activities are required use small businesses to the maximum extent possible, but the commercial food industry is moving to the use of big food distributors that can provide an array of items. As a result food distributors are getting bigger to meet their customer's needs, as evidenced by the rampant consolidation that's taking place in the industry. Therefore there are fewer small distributors who can meet the requirements of a Prime Vendor contract.

DSCP's remedy is to encourage Prime Vendors to use small firms as suppliers both as a consideration for winning a basic contract and a consideration for being awarded follow-on options under the contract. This remedy has been successful. As stated earlier, close to one-third of all subcontracted prime vendor dollars go to small business.

B. ANSWERS TO RESEARCH QUESTIONS

The secondary research questions are:

1. What is the prime vendor concept?

Prime Vendor is a concept of support whereby a single commercial distributor serves as the major provider of products to various Federal customers within a geographical region or zone. Prime Vendor enables the Military and Federal communities to take advantage of the commercial vendors' distribution systems and removes inventory management responsibilities away from the DoD.

2. How did the DoD buy subsistence prior to prime vendor and what was the composition of the supplier base?

Prior to the implementation of the Prime Vendor program the DoD award single year contracts to the suppliers of individual commodities based upon a Lowest Price Technically Acceptable source selection process. These acquisitions bought subsistence items from a variety of suppliers that included manufacturers, growers, packers and processors. The suppliers in turn delivered their goods to 25 DLA facilities across the United States. The supplier base at that time consisted largely, although not entirely, of companies classified as small business firms.

3. How does the DoD buy subsistence using the prime vendor concept and what is the composition of the supplier base?

Under the Prime Vendor concept DoD awards multiple year, option based contracts based upon a Best Value source selection process. The supplier base for the Subsistence Prime Vendor Program is made up of large food distributors who purchase food from manufacturers and sell it to various establishments that either prepare or sell food. These food distributors consist largely, although not entirely, of companies classified as large business firms.

4. What is the impact of the SPV program on small businesses?

Prior to the implementation of the Prime Vendor program the DoD contracted directly with the producers and manufacturers of food products, who were often small business firms. The SPV program has shifted the DoD's contracts to food distributors who are predominantly large businesses. However, these food distributors, with helpful incentives in the Prime Vendor acquisition process, in turn subcontract with a great number of small business firms who produce or manufacture the product the distributors deliver. The net result has been little or no substantial effect on the small businesses in the subsistence marketplace.

5. How has source selection process changed under prime vendor?

When DSCP purchased subsistence under its traditional subsistence model, they used the Lowest Price Technically Acceptable source selection strategy. Once an offeror's proposal was deemed technically acceptable in accordance with the terms and conditions of the solicitation, the source selection decision came down to choosing the offeror who submitted the lowest priced proposal.

Under the Prime Vendor program the Government has elected to exercise its value judgment under the Best Value source selection concept. The Government now conducts a trade off process to select the proposal that offers the best solution to the Government's needs when taking into account customer service, support of socioeconomic programs, and price. As a result, no longer is lowest price the deciding factor.

6. Does the prime vendor concept support full and open competition?

Although the Prime Vendor concept has changed the complexion of the industry that now contracts directly with the Government to provide subsistence, the competition remains full and open to any and all potential suppliers.

7. **What actions can be taken during acquisition planning to minimize the risk of not conforming to the DoD's socio-economic goals?**

When a new logistics approach that will potentially affect an activity's existing supplier base is considered, thoughtful planning and astute contracting knowledge can help to minimize the risk of not conforming to the DoD's socio-economic goals. In the case of the Prime Vendor program, DSCP could have just as easily stayed with their existing LPTA source selection strategy and simply changed the description of their requirement. This approach would have still satisfied the customer's needs, but would have left DSCP's former small business suppliers fending for themselves with no help from their former business partner. By exercising proper acquisition planning DSCP was able to incorporate small business utilization incentives into both their source selection approach and contract administration plans that have done an admirable job of allowing the DoD to continue to meet its socioeconomic goals.

The primary research question is:

What impact has the Subsistence Prime Vendor (SPV) Program had on the subsistence supplier base?

The subsistence supplier base has undergone radical change under the SPV program. Traditionally, the DoD bought food directly from food manufacturers. Under the SPV program, the DoD now buys food primarily from distributors. As a result, at the prime contract level, the DoD supplier base has seen a significant shift from one dominated by small businesses to one increasingly dominated by large businesses. However, DPSC's use of contract incentives that reward the use of small businesses as subcontractors under the Prime Vendor program has resulted in a net effect of little if any harm to the small business producers who historically contracted directly with the Government. As a result, the SPV program has had little effect on the total subsistence supplier base.

C. RECOMMENDATIONS

In order to fully realize the benefits of the prime vendor process DOD should consider the following:

1. Allow teaming arrangements between small businesses, and award joint prime vendor contracts. These partnerships can help to strengthen the ability of small businesses to compete.

2. Enhance the use of electronic commerce DOD wide to ensure that the Prime Vendor process is automated from inception of requirement to payment of bills. This effort will help all of DoD's contractors, but is imperative to the survivability of some small business subsistence suppliers.

3. To the extent that Prime Vendor regional requirements are divisible, implement partial small business set-asides. These reduced requirements would allow small business distributors to successfully compete in the Prime Vendor arena.

D. AREAS FOR FURTHER RESEARCH

The following are recommendations for further research:

1. Analyze the impact that uniform bar coding would have on the SPV Program.

2. Analyze the prime vendor payment procedures and determine how the process can be improved to ensure vendors are paid in timely manner.

3. Determine effectiveness of the DLA Mentoring Program.

4. Determine the impact on food cost of DoD's push to have prime Vendors use small firms as suppliers.

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