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ALLOCATING GENERAL AND ADMINISTRATIVE EXPENSES TO GOVERNMENT CONTRACTS

THESIS

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AFIT/GCA/LSY/91S-7

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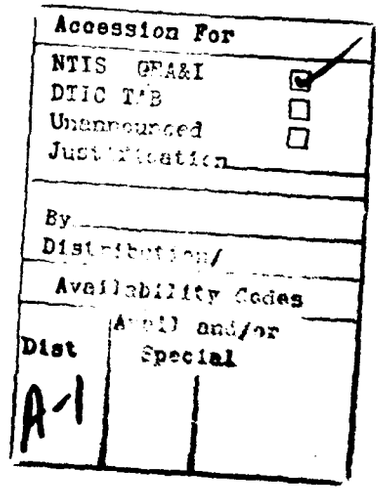

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ALLOCATING GENERAL AND ADMINISTRATIVE EXPENSES TO GOVERNMENT CONTRACTS

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
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Master of Science in Cost Analysis

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Preface

The purpose of this study was to perform research and gather data that would show how defense contractors are currently allocating their general and administrative expenses to government contracts. From the research performed, total cost input is the allocation base that contractors are using most often. Even though it appears that more contractors are starting to use value added and single element bases, there was not enough conclusive evidence to show that there is a gradual move from one allocation base to another. The issue of which cost input allocation base is the most appropriate for contractors to use is still an on-going debate.

Throughout this effort, I had a great deal support and guidance from my thesis advisor, Major Dave Christensen. His words of encouragement and direction really helped me get through this laborious effort. I would also like to thank my technical advisor, Paul Stein for his expertise and insightful suggestions. Most of all, I want to say thanks to my best friend and soon to be husband, Brian, for all his moral support and help which allowed me to devote my time and energy to this study.

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Abstract

This study was performed to determine how defense contractors are allocating their general and administrative (G&A) expenses to government contracts. Cost Accounting Standard 410 outlines three acceptable cost input bases that contractors can use to allocate their G&A expenses to government contracts: total cost input, value added, and single element. The contractors should select the base that best represents the total activity of their business unit. This study examines which allocation bases contractors are using today, what their rationale is, when it is appropriate to use each base, and what kind of dollar impact is involved. A review of 367 disclosure statements from 24 of the top defense contractors indicated that 77% of them use total cost input, 18% use value added, and 5% use a single element base such as direct labor. Telephone interviews were made to those contractors who are using value added and single element to determine their rationale for using that particular base. Most of the contractors using value added have a significant percentage of subcontract and material costs or a large amount of customer-furnished components.

ALLOCATING GENERAL AND ADMINISTRATIVE EXPENSES TO GOVERNMENT CONTRACTS

I. Introduction

General Issue

Cost Accounting Standard (CAS) 410, "Allocation of Business Unit General and Administrative Expense to Final Cost Objectives," requires contractors to allocate general and administrative (G&A) expenses to government contracts by means of a cost input base representing the total activity of the unit (4:17,861-21). General and administrative expenses include all the residual costs of doing business that can not be identified with an overhead pool. They include the salaries and expenses for general management and administration of the business unit as a whole. According to the standard, there are three acceptable cost input bases contractors can use. The purpose of the standard was to provide criteria for the allocation of business G&A expenses to final cost objectives based on their beneficial or causal relationship (4:17,861-21). It was designed to ensure consistency and objectivity when allocating G&A expenses (6:31.001).

Since CAS 410 was implemented in 1976, there has been a great amount of controversy and confusion surrounding this

standard. CAS 410 states that three different allocation bases can be used depending on which one best represents the total activity of the business: total cost input (TCI), value added (VA), and single element (SE). Total cost input includes all costs except for those costs in the G&A pool, for example: material, subcontracts, direct labor, overhead, and other direct costs. Value added (VA) is total cost less material and subcontract costs. Single element (SE) could be just direct labor.

The controversy surrounding the standard appears to be whether the Cost Accounting Standard (CAS) Board intended to give preference to the total cost input base (1:83,619). A court case in 1983 ruled that CAS 410 does not give preference or require the use of total cost input base, but the base that best represents the contractor's total activity should be used (4:83,625). As a result of this court decision, many companies are beginning to rethink their position on how they should be allocating G&A expenses to government contracts. Yet, some government auditors are still making it extremely difficult for contractors to use any other allocation base other than total cost input (11:472).

To illustrate why this issue is important to contractors and the Government, an example is provided in Table 1. If a contractor had three different contracts with the Government, potentially the contractor could shift costs from one contract to another by using a different G&A

TABLE 1

G&A Allocation Example

Category	Total	Contract A	Contract B	Contract C
Material	$500	$100	$100	$300
Subcontracts	400	0	200	200
Direct Labor	300	120	120	60
Overhead	800	280	280	240
Total	$2000	$500	$700	$800
G&A	$200			
GFM*	$200	$200		

* Government Furnished Material

G&A Allocation		Contract A	Contract B	Contract C	Total
TCI	$200/$2000 = 10%	$50	$70	$80	$200
VA	$200/$1100 = 18.2%	$73	$73	$54	$200
DL	$200/$300 = 66.7%	$80	$80	$40	$200

(10:52)

allocation base. The benefit from doing this is it allows contractors to shift costs from a fixed price contract which are typically production oriented to a cost reimbursement contract which are typically development oriented (10:52). This becomes meaningful when the contractor is bidding for a competitive production type contract.

From Table 1, it can be seen that the total cost of $200 for G&A was not changed but rearranged. Suppose Contract C was a firm fixed price production contract and Contract A is a cost reimbursement development contract. Using a total cost input, the contractor would have to allocate $80 to Contract C and $50 to Contract A. However, if value added was the allocation base, then only $40 would be allocated to Contract C and $80 to Contract A. The net result would shift $40 from the fixed price contract to the cost reimbursement contract, thus making the contractor more competitive on the firm fixed price contract.

The purpose of CAS 410 was to provide some consistency to the way contractors made their allocations and to help prevent abuse. CAS 410 does allow three different allocation bases, but government auditors in the past have interpreted CAS 410 to say that only total cost input was acceptable.

Using only total cost input can distort the contract cost if there is a large percentage of subcontract costs or material costs involved. Typically, the percentage of management's time spent on material acquisition is not proportional (per given dollar amount) to other cost elements. In some cases, only a small percentage of the general management's efforts may be devoted to the material intensive contracts (4:83,609). Thus, most of the general management's involvement is focused more heavily on labor related problems and other cost elements. Therefore, if the

contractor has a large percentage of subcontract and material costs, using total cost input base could distort G&A allocations because it would imply that more of management's attention is focussed on the material intensive production contracts rather than labor intensive contracts. In fact, using total cost input would increase the amount of G&A allocated to these material intensive production contracts and decrease the G&A allocated to labor intensive development contracts.

Specific Problem

The objective of this research is determine if there is any evidence to indicate that contractors are using any particular allocation base and if there a general movement towards other allocation bases such as value added. To accomplish this objective, the following research questions will be addressed: which general and administrative allocation bases are acceptable; under what conditions it is appropriate to use them; which G&A allocation bases government contractors are currently using to allocate their G&A expenses to defense contracts; why they selected that base; and what impact, if any, that selection has on government contracts.

This research is important because approximately 20 of the top defense contractors make annual sales to DOD which cumulatively capture around 50 percent of the DOD's budget dollars each year (8:249). A typical defense prime

contractor subcontracts between 40 and 60 percent of its contract to its suppliers (8:249). How many of these contractors who have large subcontract costs are moving away from total cost input and towards one of the other two allocation bases? If there appears to be a shift from TCI to VA, the Government needs to be prepared to provide more indepth training to government employees on what the other allocation bases are, when it is appropriate to use them, and what implications, if any, does this have on government contracts.

The results of this research will be used for various purposes. The Air Force Institute of Technology will use this material in PPM 335, Contractor Overhead Management class to illustrate the current status of CAS 410. HQ DCAA has requested a summary of the statistics to be used for their own internal purposes.

Investigative Questions

1. What are the three acceptable allocation bases under CAS 410 that contractors can use to allocate their G&A expenses to government contracts?

2. When is it appropriate to use each one of the bases?

3. Is there a bottom line difference in using one base over another? If so, what is the impact? If not, why would a contractor use one base over another?

4. Of the three acceptable G&A allocation bases, which

one/ones are contractors using today to allocate their G&A expenses to government contracts?

5. What is their rationale for using the above allocation base?

6. Has the contractor converted from one of the above G&A allocation bases to another within the last five years? Why or why not?

7. Is the contractor planning and/or considering converting to a new allocation base? If yes, when and why?

Scope

The research will be limited to the Department of Defense contractors. The identity of the contractors used for this research is not revealed due to the proprietary data restraints. This effort will not discuss the issues surrounding selling expenses which are sometimes included in the general and administrative cost pool. The research will be more qualitative than quantitative. The main purpose is to determine how and why contractors are currently allocating their G&A expenses to government contracts. The remainder of the thesis contains the following:

1. A review of the current literature which will define some terms, give some background information, discuss the three allowable allocation bases and their appropriate use, and review the current status of CAS 410.

2. A description of the methodology used which will reveal how the data were gathered, examine what sources were

used, discuss what sampling techniques were used, and provide other details on how the thesis was accomplished.

3. A summary of data gathered to include which allocation base contractors are using and what their rationale is for using that base.

4. The conclusions drawn from the thesis research.

II. Literature Search and Review

Introduction

The purpose of this literature review is to identify and discuss the various literature available on general and administrative (G&A) expense allocation methods. More specifically, this review examines the available regulations and other documents providing guidance in the area of how G&A expenses should be allocated, past court decisions which may have a bearing on the subject, and other sources which provide historical and technical information.

Justification

Allocation of costs has been a subject of continuing interest in the accounting field for a number of years (12:1). Indirect cost allocations present the greatest challenge to those unfamiliar with government contracting (7:11). Through acquisition regulations and particularly through Cost Accounting Standards (CAS), the Government has developed very specific rules dealing with the allocability of indirect costs (1:107). In particular, there has been a great amount of controversy and confusion surrounding the issue of how G&A expenses should be allocated to government contracts since the CAS Board implemented CAS 410 (9:58). Cost Accounting Standard 410 requires the contractor to select an allocation base most representative of the business's total activity (6:31.001). The three acceptable

allocation bases and the controversy surrounding them will be described in this chapter.

Organization of Discussion

In order to describe the issue of G&A expense allocation, some common terms such as G&A, cost input, and other related terms must be defined. After defining the terms, CAS 410 will be presented to include the three acceptable G&A bases--total cost input, value added, and single element--that can used to allocate G&A expenses to government contracts. Next, a brief history will be presented in order to provide some background information on the controversy surrounding CAS 410. After a brief history, an examination of a court case that helped clarify some of the controversy surrounding CAS 410 will be presented, followed by a discussion of why a contractor would select one base over another and what, if any, impact it has on the contract's total cost. Finally, the current status of CAS 410 is reviewed.

Discussion of Literature

Definitions. The following definitions are presented to establish some common ground for discussion.

> 1. General and administrative (G&A) expense is any management, financial, and other expense which is incurred by or allocated to a business unit and which is for the general management and administration of the business unit as a whole. G&A expense does not include

those management expenses whose beneficial or causal relationship to cost objectives can be more directly measured by a base other than a cost input base representing the total activity of a business unit during a cost accounting period (6:31.001).

2. Cost input is the cost, except G&A expenses, which for contract costing purposes is allocable to the production of goods and services during a cost accounting period (6:31.001).

3. Total activity refers to the production of goods and services during a cost accounting period (4:83,579).

4. Indirect cost pools means groupings of incurred costs identified with two or more cost objectives but not identified specifically with a final cost objective (6:31.001).

5. Final cost objective means a cost objective that has allocated to it both direct and indirect costs and, in the contractor's accumulation system, is one of the final accumulation points. (6:31.001)

Cost Accounting Standard 410. Cost Accounting Standard (CAS) 410, titled "Allocation of Business Unit General and Administration Expense to Final Cost Objectives," outlines how G&A expenses should be allocated to government contracts (6:31.001). The purpose of CAS 410 was to provide criteria for the allocation of business G&A expenses to final cost objectives based on their beneficial or causal relationship (6:31.001). It was designed to ensure consistency and objectivity when allocating G&A expenses and to allow comparability of cost data among contractors in similar circumstances (9:58).

Cost Accounting Standard 410 requires G&A expenses be allocated by means of a cost input base representing the total activity of the unit (6:31.001). By definition, G&A

is a residual cost which means that any cost that can be identified with an overhead pool or as a direct cost should not be considered G&A (6:31.001). Only the residual G&A costs should be allocated to final cost objectives. The individual circumstances of a given business must be analyzed and the cost input base selected should be the one that best represents the total activity of a typical cost accounting period (4:83,571). Cost Accounting Standard 410 discusses when to use each of the three cost input bases.

> 1. A total cost input base is generally acceptable as an appropriate measure of the total activity of a business unit. (6:31.001)
>
> 2. Value-added cost input shall be used as an allocation base where inclusion of material and subcontract costs would significantly distort the allocation of the G&A expense pool in relation to the benefits received, and where costs other than direct labor are significant measures of total activity. A value-added cost input base is total cost input less material and subcontract costs. (6:31.001)
>
> 3. A single element cost input base; e.g., direct labor hours or direct labor dollars, which represents the total activity of a business unit may be used to allocate the G&A expense pool where it produces equitable results. A single element base may not produce equitable results where other measures of activity are also significant in relation to total activity. A single element base is inappropriate where it is an insignificant part of the total cost of some of the final cost objectives. (6:31.001)

The controversy surrounding this standard appears to be whether the standard intended to give preference to the total cost input base (4:83,619). In order to address this issue, a brief review of the history of CAS 410 may be helpful.

History of Cost Accounting Standard 410. In 1972, the Cost Accounting Standards (CAS) Board began researching the issue of G&A expense allocation (4:83,575). Their research revealed that numerous allocation methods were being utilized. Most companies were using total cost input and cost of sales as bases for allocating G&A expenses (4:83,575). Starting in 1973 through 1976, the CAS Board began an iterative process of sending out draft standards to various representatives of industry, Government, other interested parties, and the Federal Register for comments (4:83,577-83,579). This procedure allowed interested parties to voice their concerns about the proposed standards. The board would then consider their comments and revise the standard as they deemed necessary (4:83,585). Originally, the draft standard stated that total cost input was mandatory, but as a result of comments the board rejected the idea of making a mandatory preference (4:83,619). Many more revisions were made to Cost Standard 410 before it was promulgated in April 1976 (4:83,580). Still, there were many questions and concerns about this standard. Contractors claimed that the use of a cost input base violated generally accepted accounting principles used for financial accounting purposes because G&A expenses are most commonly viewed as a period cost and not allocated to production nor inventoried (4:83,582). Some contractors felt the standard was unduly rigid because it permitted only

one base for the allocation of the G&A expense pool (4:83,582).

Based on these disputes concerning CAS 410, the Department of Defense's (DOD) CAS Steering Committee issued Interim Guidance W.G. 78-21 (4:83,583). This guidance was termed "interim" but was intended to remain in effect until superseded or rescinded. The guidance presented in the paper was not coordinated with industry. Using a question-and-answer format, the guidance specifically stated that total cost input base was preferred (4:83,584). This interim guidance also very specifically gave two examples of circumstances in which significant distortions would likely lead to a decision to use a value-added base. These two examples were government-furnished components and precious metals (4:83,585).

Following issuance of this guidance, the Defense Contract Audit Agency (DCAA) Headquarters issued a directive to DCAA field offices instructing them to require contractors to justify use of a base other than total cost input (4:83,585). In February 1979, the CAS Board received a letter from the director of DCAA which stated "Cost Accounting Standard 410 is generating more controversy than any of the other standards" (4:83,585). DCAA requested the CAS Board to "issue interpretations to avoid prolonged and costly litigation" primarily due to "contractor failure to accept DOD guidance as representing the correct interpretation of the Standard" (4:83,585). In March 1979,

the CASB responded to DCAA's request and reviewed the DOD guidance paper. The Board agreed with the intent of the guidance which stated that total cost input was the preferred allocation base (4:83,585).

This decision caused an uproar in industry. In June and September 1979, letters were received requesting the CAS Board rescind the action taken concerning W.G. 78-21 (4:83,585) Basically, the objections were centered around the fact that this decision was not published in the Federal Register and that parties affected were not afforded the opportunity to submit their views and comments as required by public law (4:83,585).

The CAS Board would not back away from their decision because the action they took was not a promulgation, modification or interpretation. Therefore, there was no basis for its rescission (4:83,586). However, this issue would not go away because in March 1979, the subject was again addressed.

This time one member of CAS Board dissented from the CAS Board's endorsement of W.G. 78-21 on the basis that it did constitute an interpretation that should have been published in the Federal Register (4:83,587). The dissenting board member went on to say that CAS 410 does not specify a preference for total cost input, but only that such a base is generally acceptable. The CAS Board Chairman and the other members did not agree with the dissenting member (4:83,588).

So now there was disagreement among the CAS Board on how G&A should be allocated. In the mean time, a contractor filed an appeal with the Armed Services Board of Contract Appeals (ASBCA) to challenge the requirement to use total cost input (4:83,588). The fact that the Government was going to use the CAS Board's endorsement of W.G. 78-21 to support its position forced CASB to reconsidered its position.

Finally in 1981, the CAS Steering Committee issued Amendment 1 to W.G. 78-21 which revised the prior guidance. The amendment states, "There is no specific statement of preference in the standard" (4:83,589). Further, the two examples of when to use value added were not intended to be all-inclusive. Although the existence of Amendment 1 did not stop the Government from continuing with its appeal, the resulting ASBCA decision together with the amendment did facilitate the resolution of differences of opinion. Next, the appeal case will be presented to illustrate how one contractor used value-added and the difficulties they faced.

Armed Services Board of Contract Appeals Decision. Disagreements have occurred between government and contractor representatives over what circumstances justify the use of a total cost input allocation (1:228). However, more serious disagreements in implementing this standard have related to selecting the appropriate cost input base, particularly the conditions under which including materials and subcontracts in the base distort the allocation of G&A

expenses to final cost objectives (1:228). Since the standard became applicable, DCAA has considered the total cost input base to best represent the total activity of the business unit in most circumstances. Many contractors believe that the inclusion of materials and subcontracts in the base distorts the allocation of G&A expense when there are disparate levels of materials and subcontracts among the various contracts (4:83,615). This is the very issue addressed in the appeal case filed by Ford Aerospace and Communications Corporation, Aeronutronic Division, in August 1983.

Aeronutronic Division of Ford Aerospace and Communications Corporation was awarded a production contract to produce a ground-to-air missile and guidance system (4:83,573). The contract was a fixed price incentive contract in the amount of $40,505,162 (4:83,573). This contractor was involved in research, development and production of missile systems for U.S. Government and commercial customers. The contractor was considered a systems integrator for production type contracts (4:83,574). Aeronutronic Division takes subcontractor furnished subsystems and integrates them into the final product. Therefore, Aeronutronic Division has a disproportionate amount of material and subcontract costs in their contract (4:83,574). Most of the general management activity is focussed on in-house and development type work (4:83,614). The contractor priced the contract using a value added base

approach, but the Government later required them to convert to a total cost input (4:83,628). As a result, Ford Aerospace filed an appeal with the Armed Service Board of Contract Appeals.

In this appeal, the Government argued that the standard mandated the use of total cost input to allocate segment G&A unless it could be shown that by using such a base a distorted allocation resulted (4:83,617). The appellant contended that a value-added base (total cost less materials and subcontracts) was required because including materials and subcontracts destroyed the ability of the base to distribute G&A expenses to final cost objectives based on benefits received (4:83,617). The Board ruled that "In Aeronutronic's circumstances, use of the value-added base was required because inclusion of materials and subcontracts costs significantly distorts the benefits received by appellant's contracts from its G&A expenses" (4:83,625). In their opinion, CAS 410 did not give preference to the total cost input allocation base.

Selection of Allocation Base. As stated earlier, total cost input base is the generally acceptable base because it, in most cases, best measures the total activity of the business unit. However, the other two bases may be used if they best represent the total activity of the business unit. The decision on which base to use is a subjective judgment on part of the contractor (2:19-14). The key consideration is whether using TCI would cause distortions which would

over allocate G&A to some contracts especially those that are material and subcontract intensive (2:19-14).

Government's Perspective. According to the Defense Contract Audit Agency Audit Manual (DCAAM), the following examples are some reasons why a contractor would use value added or single element.

Large subcontracts such as drop shipments that do not require close supervision or participation on the part of the prime contractor, is one reason a contractor may want to consider changing to value added. These subcontracts do not bear the same relationship to G&A as other cost elements and would cause inequitable amounts of G&A to be allocated to the contracts with the large subcontracts (5:849).

If the contractor has large amounts of government furnished materials on some contracts with this same type of material purchased on other contracts, then the contractor may consider changing to value added (5:849).

Labor intensive type contractors who have major purchasing and subcontracting responsibility that are on a "pass through" basis should consider using value added or single element (5:849).

A contractor may also consider using another allocation base if any other circumstances exist that may cause significant distortions in allocating G&A (5:849). The contractor must perform a detailed analysis to show that certain cost elements do not have a causal or beneficial relationship to that G&A expense (5:849). An allocation

base should be selected that best represents the total activity of that business unit.

Finally, what constitutes a significant distortion? Unfortunately there are no real statistics or reliable objective standards to define what a significant distortion is (2:19-19). Each contractor must perform a subjective analysis of its own individual circumstances. Total cost input should be used unless there is an apparent difference between the activity involved in the production of goods and services during the cost accounting period and the costs of that activity. Variations in the production of goods such as material, labor, overhead usually reflects a variation in activity rather than a distortion in the relationship between cost and activity. However, when the activity in cost objectives is similar but the costs vary significantly, a distortion is usually indicated (2:19-19).

Contractor's Perspective. The contractor's viewpoint on which allocation base to use is often more broader than the Government's. Below are some examples of circumstances contractors feel justified in using the three allocation bases.

When the contractor has the responsibility for contract performance and controls all activities associated with it, then total cost input may be more suitable. According to one source, the following circumstances justify the use of total cost input:

(1) When material and subcontract costs are only a minor part of cost input or the proportion of the costs is reasonable the same for all contracts;

(2) When material and subcontract cost do not cause distortion in allocations requiring the frequent use of the special allocation provision of CAS 410;

(3) When production activity is under a single contract and the only final cost objective of the cost accounting period is the contract (for example, remote site locations for construction projects, educational services, etc.); and

(4) When the manufacturing activities represent a process system (lumber mills, mining, petroleum refining, etc.). (2:19-19)

Value added should be used if it would eliminate any material and subcontract costs distortions. Some circumstances where a value added base may be more appropriate is when there are

(1) Mixtures of product lines and/or contracts in the same business unit where some are material intensive and others are labor intensive;

(2) Mixtures involving some contracts with large amounts of material costs and others having large amounts of customer-furnished materials; and

(3) Mixtures involving some contracts with substantial interdivisional (intersegment) transfers and others having little material costs. (2:19-20)

A single element base such as direct labor is appropriate in the following circumstances:

(1) The cost element represents a significant part of the activity of all final cost objectives and is representative of the beneficial relationship between the cost objectives and the G&A activities.

(2) The activity is intensive with respect to the cost element chosen as the base.

(3) The contract mix contains final cost objectives with significant differences in the nature and types of costs incurred, except for the single common cost element.

(4) There is a mix of contracts where some provide for significant amounts of long lead time materials. (2:19-20)

Total Cost Impact. To the casual observer, use of alternate bases may appear to have no real effect. After all, under either method all G&A costs will be allocated. However, use of value added allows a contractor to allocate G&A costs from material intensive production contracts, which may be price sensitive due to competition, to non-competitive research oriented contracts which may be sole-source. For example, in the Ford Aerospace appeal, as a percentage of total cost input, an average of approximately 53 percent of its production contracts consisted of material and subcontract costs versus only 33 percent for its development and engineering contracts (4:83,609). If the value added base was used, approximately 10 percent of general management expenses were related to or benefitted the material and subcontract activity versus 49 percent if total cost input was used as a base (4:83,609). In terms of dollars, approximately $1 million of G&A expenses would be allocated to material and subcontract related activity using value-added base, as opposed to an allocation of approximately $5 million using the total cost input base (4:83,609). Thus, if a contractor is bidding on a

production type contract and it is material-intensive or subcontractor-intensive, using value-added, which excludes direct material and subcontractor costs, may make them more competitive. They can then shift some of the G&A burden to a non-competitive research and development type contract.

As a result of the ASBCA decision, many companies are beginning to rethink their position on how they should be allocating G&A expenses to government contracts (11:470). Even though DCAA has been forced to acknowledge that other allocation methods may be more appropriate in certain circumstances, some still make it extremely difficult for contractors to use any other methods other than total cost input (11:472).

Current Status. According to one author, "there has been more controversy surrounding the implementation of CAS 410 than any other standard" (9:58). Why is this issue a controversy today? "The prevailing views of most accounting researchers vary from the position that the determination of how to allocate costs is essentially an arbitrary decision to the view that cost allocations are so highly firm-specific that no general rule can be determined" (12:504). This may be one reason there is so much controversy surrounding CAS 410. The Government is trying to provide very specific rules on how G&A should be allocated. The purpose of CAS 410 was to achieve reasonable consistency in allocating G&A expenses and have some basis for comparability under like circumstances (9:58). The Cost

Accounting Standards Board is being reassembled and one of the main issues to be addressed will be CAS 410. According to one source,

> The new CASB should review whether implementation of the standard, in light of the ASBCA ruling, has resulted in the stated objective of reasonable consistency in allocating G&A expenses under like circumstances. If this objective has not been reached, the Board will need to clarify or amend CAS 410 so that reasonable consistency can be achieved. (9:58)

Conclusion. Cost Accounting Standard 410, titled "Allocation of Business Unit General and Administration Expense to Final Cost Objectives," outlines how general and administrative expenses should be allocated to government contracts. The contractor may use total cost input, value-added, or single element as a base for allocating G&A. CAS 410 does not require the use of total cost input base. The base chosen must best represent the contractor's total activity and should result in allocations to contracts based on the casual or beneficial relationships. The base should also be consistent with full costing and not distort the actual benefits received by the contracts from G&A expense. This requires each contractor to analyze their particular circumstances very carefully before making a determination. According to ASBCA, "purification of the G&A expense pool is the most viable approach to minimizing any potential inequities which may surface in implementing the standard" (4:83,589).

In summary, this chapter has answered the first investigative questions presented in Chapter 1. The first investigative question dealt with explaining the three acceptable allocation bases contractors can use. The second investigative question addressed when it is appropriated to use each of the bases. Finally, investigative question three dealt with what effect the allocation base can have on the total contract cost.

With this information in mind, the next step is to determine which allocation bases contractors are using now. How many are still using total cost input? Have any contractors changed their allocation base within the last five years? What was their rationale? All of these questions are answered later on in Chapter 4. In Chapter 3, a brief description of the methodology used in gathering this information is provided.

III. Methodology

Introduction

Methods. This thesis relies on evidence gathered through literature review, disclosure statement analysis, and limited telephone interviews to determine how contractors are currently allocating their G&A expenses to defense contracts.

Justification

Methodology Choice. The most effective instrument for gathering the information needed for this thesis was to review the contractors' Form CASB-DS-1, "Cost Accounting Standards Board Disclosure Statement" (6:30.101). Public Law 91-379 requires certain national defense contractors and subcontractors to comply with Cost Accounting Standards (CAS). They must disclose in writing their cost accounting practices and follow consistently throughout the contract (6:30.101). These disclosure statements must reveal what accounting practices they are using to include their G&A allocation base. Approximately 367 disclosure statements were reviewed to determine what G&A allocation bases contractors are currently using. The contractors, who are using other methods other than total cost input, were telephone interviewed to determine their rationale. The interview questions were very similar to the investigative questions presented earlier. The other alternative would

have been to conduct a formal written survey, but this approach was prohibited due to time constraints.

Disclosure Statement. Each of the 367 disclosure statements was examined in order to determine which of the three allowable G&A allocation bases the contractor is using today to allocate their G&A expenses to government contracts. Additionally, an attempt was made to determine if the contractor had converted from one of the above allocation bases to another within the last five years. Lastly, other information, which will be specifically listed below, was gathered for other analytical purposes.

Interview. The interviews were focussed in nature and short in duration. Each interview took approximately 15 to 30 minutes to complete. The interview questions aimed at determining general rationale for selecting one allocation over another. Specifically, the following questions were asked:

(1) What is your rationale for using the above allocation base?

(2) Do you have a lot of government furnished components and subcontract activity?

(3) Do you have a mix of development and production type contracts?

(4) Have you converted from one of the three G&A allocation bases to another within the last five years? If yes, when and why?

(5) Are you planning and/or considering on converting to a new allocation base? If yes, when and why?

While reviewing the disclosure statements, a point of contract and a telephone number for each contractor was recorded. From this information, the interviewer was able to interview an individual within the contractor who had some knowledge about CAS 410.

Data Collection. Approximately 450 disclosure statements from 24 of the top defense contractors and 80 additional contractors were reviewed. Only 367 of these disclosure statements were applicable to the business unit. The other 83 were for the home office which does not apply to CAS 410. A complete analysis of the 367 disclosure statements was made. In the process of analyzing the contractor's disclosure statements, various data were collected, such as:

(1) The name of the contractor.

(2) Their divisions and/or subsidiaries' name.

(3) Contractor's city, state and ZIP code.

(4) Official's name to contact concerning the disclosure statement.

(5) Point of contact's telephone number.

(6) Date of the disclosure statement.

(7) Predominant Type of Government Sales.

(8) Annual Total Sales (Government and Commercial).

(9) Annual Total Government Sales.

(10) Government Sales as Percentage of Total Sales.

(11) Government Subcontract Sales as Percentage of Total Government Sales.

(12) G&A allocation base being used.

Although the above information was gathered, specific contractor's names are not presented in this thesis due to the proprietary nature of this data. From the information gathered, the data were analyzed and summarized. This analysis is presented in Chapter 4 and Appendix A.

Every attempt was made to telephone interview all of those contractors who use some other method other than total cost input. The contractor's responses to the interview questions were documented and included in Chapter 4.

In the next chapter, analysis of the disclosure statements and telephone interviews are presented.

IV. Analysis

Through analysis of the disclosure statements and telephone interviews, some observations can be made on how defense contractors are allocating their G&A expenses to government contracts. The purpose of this chapter is to first present the data which were gathered from reviewing the contractors' disclosure statements which will be displayed in both a table and graph format. Any observations that can be drawn from that data will be given. Next, the responses to the telephone interviews will be shown and any conclusions that can be drawn from their responses will be presented.

Disclosure Statement Analysis

Before discussing how the 367 contractors allocated their G&A expenses, an overview of the general characteristics of the 367 contractors may provide some insight.

The disclosure statements reviewed were from 24 of the top defense contractors and 80 additional contractors. Disclosure statements must be made on each of their divisions and subsidiaries which accumulated to a total of 367 statements. Just to mention a few, the top 20 defense contractors in 1985 included contractors such as McDonnell Douglas, General Dynamics, Rockwell, Boeing, Lockheed, United Technologies, Hughes, Raytheon, Litton, Martin

Marietta, Grumman, Westinghouse, Textron, and others (8:244). Approximately 50 percent of the DOD budget dollars are spent on these top 20 defense contractors each year (8:244). The 367 contractors examined in this thesis ranged from less than $1 million in total annual sales to over $500 million. The predominant type of government sales were manufacturing, research and development, and services.

The next series of tables and graphs will provide some descriptive data about the 367 contractors to determine if there are any general characteristics about the contractor that could indicate any trends on why they use one allocation base over another one. Some of the contractors reviewed did not have all their information completely filled out on their disclosure statements. As a result in the following tables, there will be one category included called "not disclosed."

G&A Allocation Bases Description. The purpose of Table 2 and Figure 1 is to illustrate which G&A allocation input bases defense contractors are currently using to allocate their general and administrative expenses to government contracts. The information presented in this table and graph is really the heart of this thesis research. The research data gathered indicates that out of the 367 defense contractors reviewed, 283 (77 percent) of them use total cost input as their G&A allocation base, 66 (18 percent) use value added, and 18 (5 percent) use single element (e.g., direct labor dollars/hours).

TABLE 2

G&A ALLOCATION INPUT BASES

TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR DOLLARS/HOURS	TOTAL
283	66	18	367
77%	18%	5%	100%

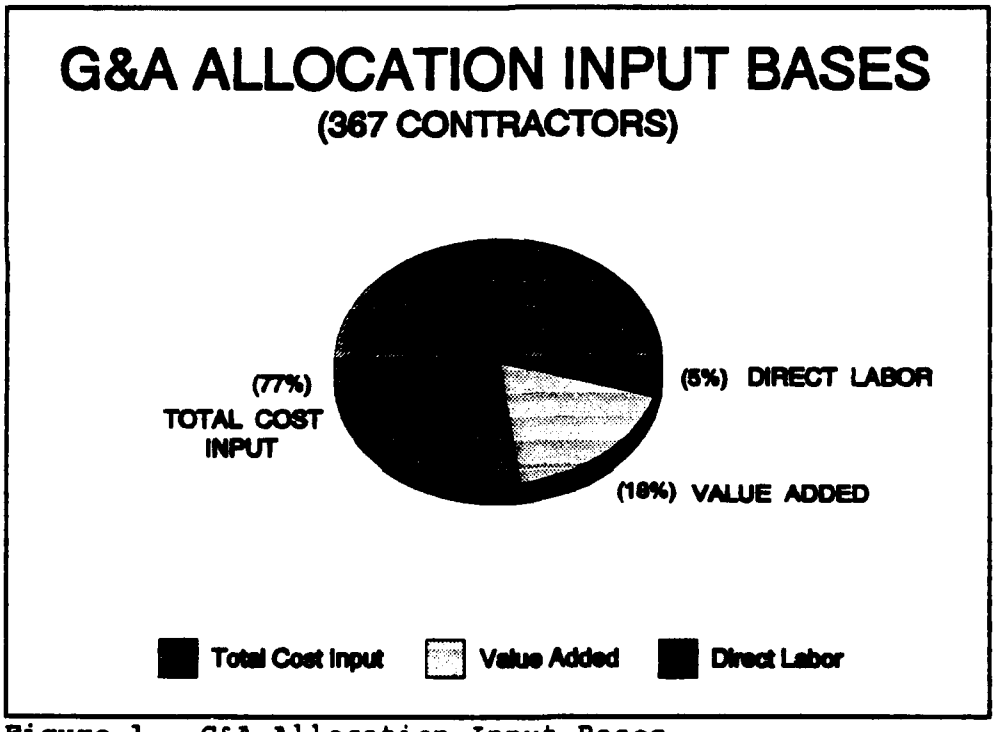

Figure 1. G&A Allocation Input Bases

G&A Allocation Bases Analysis. The primary G&A allocation base being used by CAS covered defense contractors today is total cost input. In fact, approximately 77 percent of them are using total cost input. Eighteen percent are using value added to allocate their G&A expenses and almost 5 percent are using single element. Nearly 23 percent of the contractors today are using an allocation base other than total cost input which is significant especially considering that prior to 1983 government auditors interpreted total cost input as the only acceptable allocation base.

Total Annual Sales Description. Table 3 and Figure 2 give the reader an idea how much annual total sales each of the 367 contractors have and what type of G&A allocation bases they use for each range of sales. The total annual sales includes both government and commercial sales. The first column of the table lists various ranges of annual sales from less than $1 million to over $500 million. The next three columns indicate for each range of total sales, how many of the contractors use total cost input, value added, and single element. The last column shows how many total contractors there were for that particular dollar range. As an example on how to read this table, 57 contractors had over $500 million in total government and commercial annual sales. Fifty seven of the contractors with more than $500 million use total cost input, 16 use

TABLE 3

ANNUAL TOTAL SALES (GOVERNMENT AND COMMERCIAL)

ANNUAL TOTAL SALES (MILLIONS OF DOLLARS)	TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR	TOTAL
LESS THAN 1	7	0	0	7
1 - 10	26	3	6	35
11 - 25	35	1	1	37
26 - 50	40	10	1	51
51 - 100	38	12	1	51
101 - 200	36	9	0	45
201 - 500	54	8	2	64
OVER 500	36	16	5	57
NOT DISCLOSED	11	7	2	20

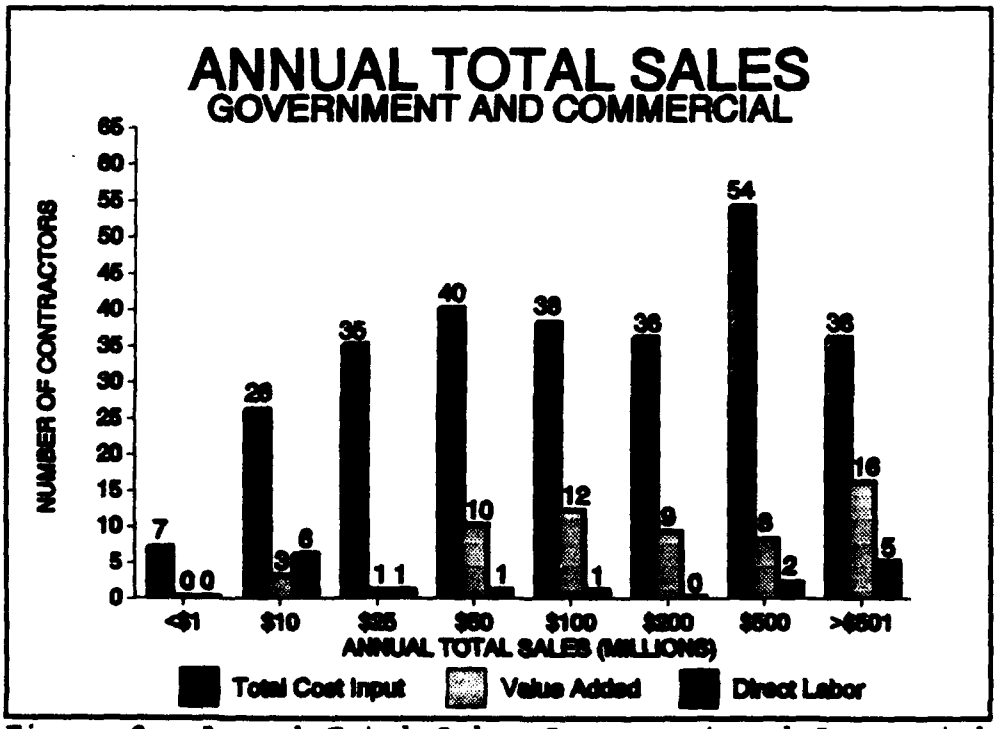

Figure 2. Annual Total Sales Government and Commercial

value added, and 5 use direct labor as their G&A allocation base. The graph conveys this same information with the number of contractors plotted on the Y axis and the total annual sales on the X axis.

Total Annual Sales Analysis. The data presented above provides the reader with some descriptive information about the 367 contractors. Total cost input is the predominant allocation base regardless of the amount of total annual sales. However, there is no indication that the total annual sales affects the contractor's selection of an allocation base.

Total Government Sales Description. The information presented in Table 4 and Figure 3 illustrates the amount of total sales these 367 contractors have each year to the Government and how the three G&A allocation bases were distributed to each category. The first column of the table lists various ranges of total government sales from less than $1 million to over $5 million. The next three columns break out how many of the contractors in each range use total cost input, value added, and single element. The last column gives the reader the total number of contractors for each range of total government sales. An example on how to read this table is given. Forty three of the 367 contractors have annual total government sales over $500 million. Twenty five of these 43 contractors use total cost input, 15 use value added, and 3 use direct labor to

TABLE 4

ANNUAL TOTAL GOVERNMENT SALES

ANNUAL TOTAL GOVERNMENT SALES (MILLIONS OF DOLLARS)	TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR DOLLARS/HOURS	TOTAL
LESS THAN 1	12	0	1	13
1 - 10	39	4	6	49
11 - 25	57	5	2	64
26 - 50	30	14	1	45
51 - 100	32	8	0	40
101 - 200	30	8	1	39
201 - 500	47	6	2	55
OVER 500	25	15	3	43
NOT DISCLOSED	11	6	2	19

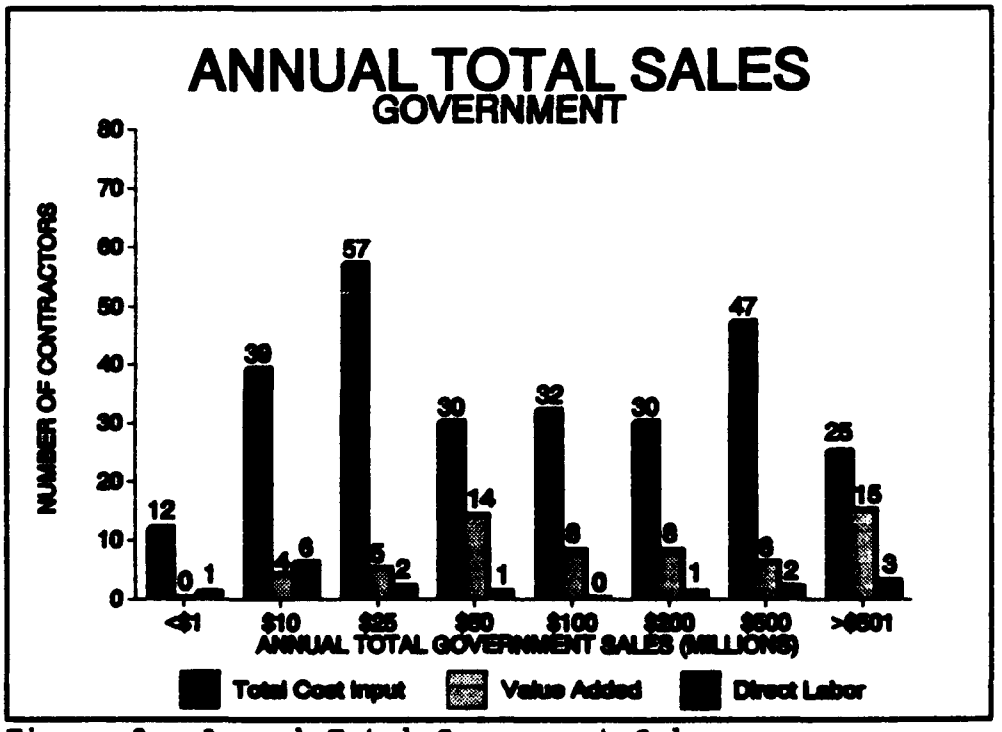

Figure 3. Annual Total Government Sales

allocate their G&A expenses to government contracts. The graph displays this same information with the number of contractors on the Y axis and the range of total government sales on the X axis.

Total Government Sales Analysis. This table and graph provides some descriptive information about the 367 contractors, but does not provide the reader with any indication that the amount of government sales influences the contractor's selection of a G&A allocation bases. Just looking at government sales, total cost input is still the primary allocation base used by contractors.

Government Sales as Percentage of Total Sales Description. Table 5 and Figure 4 give the reader an idea of what percentage of the contractor's total sales is government sales. These percentages are further divided into the G&A allocation base the contractor is using. The first column lists the percentage of government sales to total annual sales by various percentage categories. The next three columns indicate how many contractors for each percentage range are using total cost input, value added, and single element as their G&A allocation base. For instance, there were approximately 135 contractors whose government sales were 95 percent of their total sales. Of these 135 contractors, 96 use total cost input, 30 use value added, and 9 use direct labor as their G&A allocation base. The graph contains this same information with the number of

TABLE 5

GOVERNMENT SALES AS A PERCENTAGE OF TOTAL SALES

GOV'T SALES AS % OF TOTAL SALES	TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR DOLLARS/HOURS	TOTAL
LESS THAN 10	20	3	3	26
10 - 50	40	9	1	50
51 - 80	51	5	2	58
81 - 95	65	13	1	79
OVER 95	96	30	9	135
NOT DISCLOSED	11	6	2	19

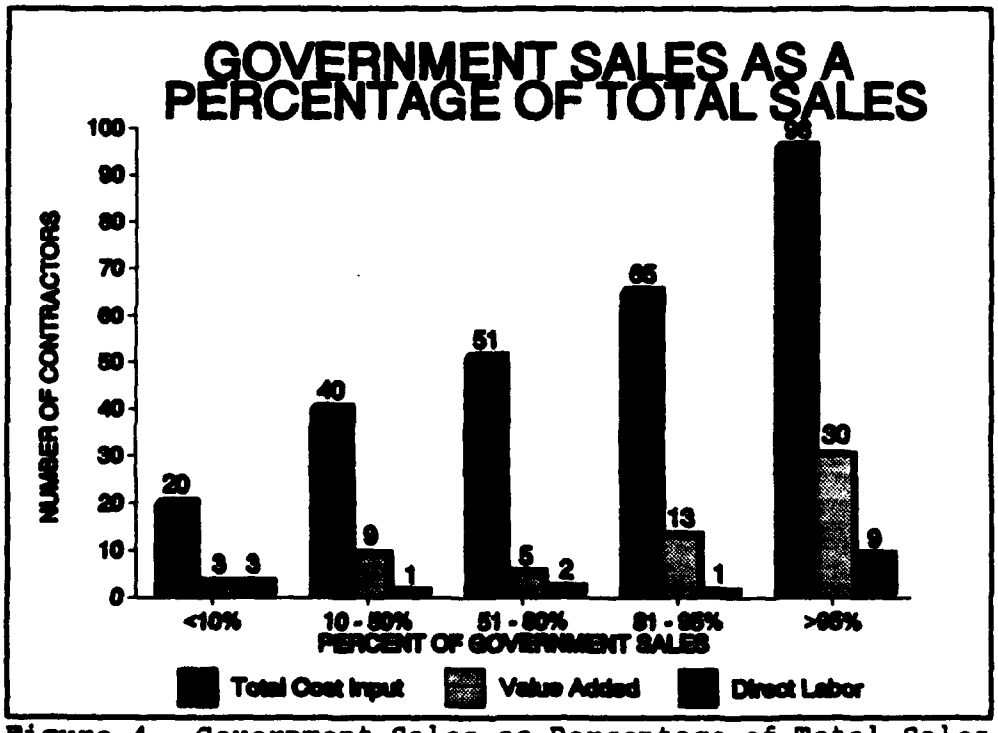

Figure 4. Government Sales as Percentage of Total Sales

contractors on the Y axis and percentage of government sales to total sales on the X axis.

Government Sales as Percentage of Total Sales Analysis. Analysis of this data indicates that more than half of the 367 contractors reviewed have over 80 percent of their total sales from the Government, and more than a third of the contractors have more than 95 percent of their sales from the Government. Contractors, who have over 95 percent of their sales from the Government, use total cost input as their G&A allocation base the majority of the time. Yet they appear to use G&A allocation bases other than total cost input more often. For instance, twenty nine percent of the 135 contractors, who have over 95 percent of sales to government, use value added and direct labor as their allocation base and only 71 percent use total cost input. Whereas those contractors who have less than 10% government sales, only used value added and single element 22 percent of the time and total cost input 77 percent of the time.

Predominant Type of Government Sales Description. The purpose of Table 6 and Figure 5 is to show what type of sales these 367 contractors have with the Government. The first column of the table lists the predominant types of government sales each contractor has with the Government. The next three columns indicate how many contractors for each type of sale uses total cost input, value added, and single element as their allocation base. The last column

TABLE 6

PREDOMINANT TYPE OF GOVERNMENT SALES

TYPE OF GOVERNMENT SALES	TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR DOLLARS/HOURS	TOTAL
MANUFACTURING	156	29	8	193
RESEARCH & DEVELOPMENT	52	15	3	70
CONSTRUCTION	2	0	0	2
SERVICES	54	15	3	72
OTHER	7	2	1	11
NOT DISCLOSED	11	5	3	19

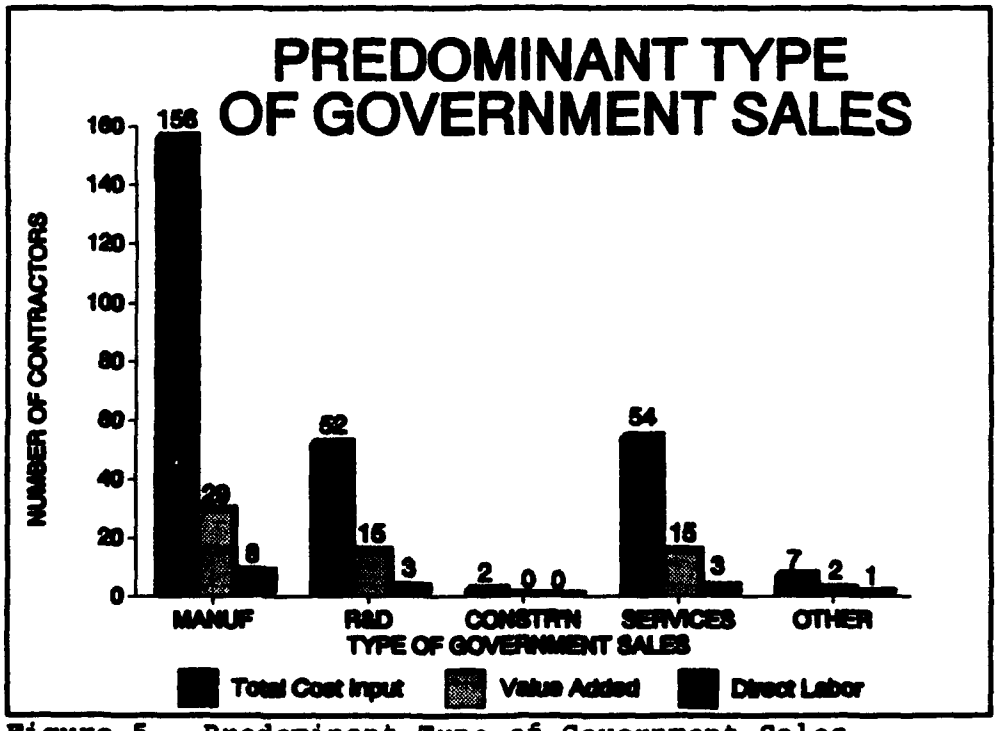

Figure 5. Predominant Type of Government Sales

gives the total number of contractors for each type of government sale. As an example of how to read the table, 193 of the 367 contractors reviewed have manufacturing type contracts with the Government. Out of the 193 contractors who do manufacturing type work, 156 use total cost input, 29 use value added, and 8 use direct labor. The graph conveys this same information with the number of contractors on the Y axis and the type of sales on the Y axis.

Predominant Type of Government Sales Analysis. The predominant type of government sales for these 367 contractors under review is manufacturing. Fifty five percent of the Government sales are for manufacturing type efforts of which 152 out of the 193 contractors or 81 percent use total cost input. Fifteen percent or 29 out of the 193 contractors use value added and only 4 percent or 8 out of the 193 contractors use direct labor. Research and development is the second predominant type of government sales. Twenty percent of the 367 contractors' government sales is for research and development. Surprisingly the percentage of contractors using value added increases in this area. Approximately 21 percent or 15 out of the 70 use value added and 74 percent or 52 out 70 use total cost input. Based on the literature review, it would appear that more contractors would use value added in a manufacturing type environment than in a research and development type environment because there would be more subcontract activity and government furnished components needed in manufacturing.

Services was the third predominant type of government sales. Twenty one percent or 72 out of the 367 contractors's government sales is for services. In this category, 74 percent or 53 out of 72 use total cost input, 21 percent or 15 out of 72 use value added, and 4 percent or 3 out of 72 use single element. Here again it is interesting to note that only 3 contractors use direct labor as their G&A allocation base especially considering that most service contracts are primarily labor.

Disclosure Statement Dates Description. The purpose of Table 7 is to provide the reader with the dates on the disclosure statements that were used for this research. The date of the disclosure statement reflects the accounting procedures being used by the contractor at that point in time. The first column in the table lists the date on the disclosure statements which ranged from 1980 to 1990. The next three columns indicates how many contractors in that year use total cost input, value added or single element. The last column shows the total number of disclosure statements for each year.

Disclosure Statement Dates Analysis. Dates on the disclosure statements ranged from 1980 to 1990 with 70 percent occurring in 1988 and 1989. Those statements documented prior to 1984, which was the year of the Ford Aerospace court case, do not indicate that any contractor was using value added. Only in 1985, did the disclosure

TABLE 7

DISCLOSURE STATEMENT DATES

YEAR OF DISCLOSURE STATEMENT	TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR DOLLARS/HOURS	TOTAL
1980	3	0	1	4
1981	2	0	2	4
1982	0	0	0	0
1983	3	0	1	4
1984	6	0	0	6
1985	10	2	0	12
1986	19	1	2	22
1987	33	10	2	45
1988	86	22	5	113
1989	111	29	5	145
1990	10	2	0	12

statements begin to indicate that value added was being used as an allocation base for G&A. One note of caution, while reviewing the disclosure statements, it was only possible in a few limited cases to determine when the contractor switched from one allocation base to another. Only four cases were identified where the contractor switched from total cost input to value added within the last five years. For the most part, it was not possible to determine what date the contractor changed from total cost input to value added. Therefore, while none of the disclosure statements prior to 1985 showed that value added was being used as an allocation base, it is possible that the contractor could

have being using value added prior to 1985 and then later updated their disclosure statement after 1985.

Distribution of G&A Allocation Bases by DCAA Regions Description. The purpose of Table 8 and Figure 6 is to display the distribution of G&A allocation bases by DCAA regions to determine if there is any noticeable trends. To read this graph and table, 80 different contractors fall under central region. Of these 80 contractors, 56 use total cost input, 17 use value added, and 7 use single element to allocate their G&A expenses to government contracts.

Distribution of G&A Allocation Bases by DCAA Regions Analysis. During the interview portion, one contractor felt that some DCAA regions were more strict in interpreting CAS 410, and they made it very difficult for the contractor to use any other allocation base other than total cost input.

TABLE 8

DISTRIBUTION OF G&A ALLOCATION BASES
BY DCAA REGIONAL OFFICES

DCAA REGIONS	TOTAL COST INPUT	VALUE ADDED	DIRECT LABOR DOLLARS/HOURS	TOTAL
CENTRAL	56	17	7	80
EASTERN	10	9	5	24
MID-ATLANTIC	61	6	3	70
NORTHEASTERN	65	14	0	79
SOUTHWESTERN	74	4	0	78
WESTERN	17	16	3	36

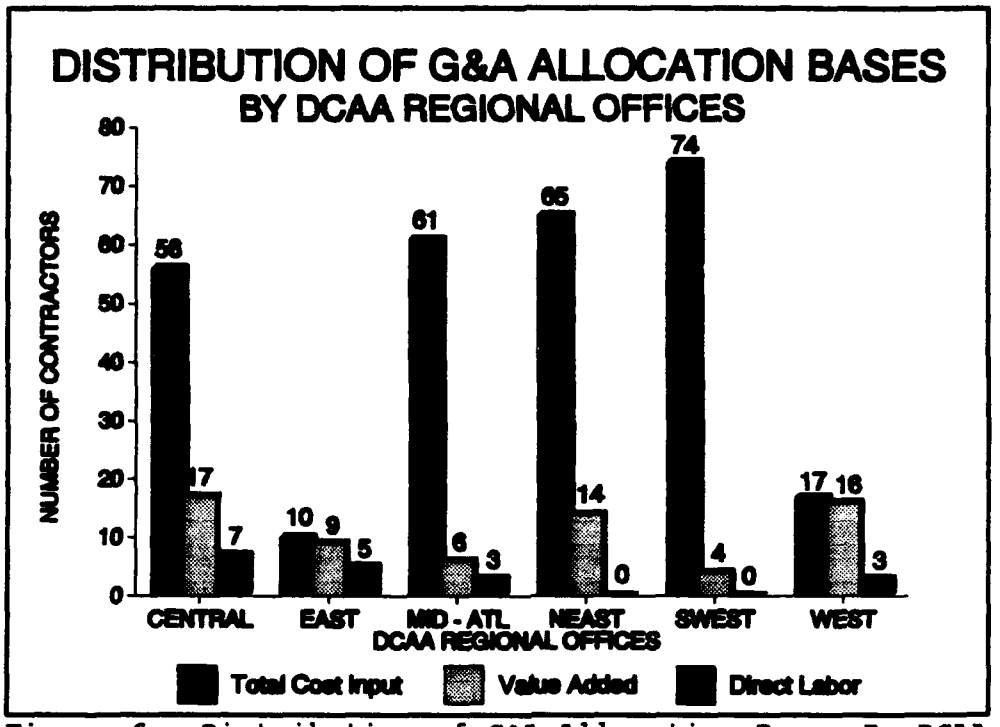

Figure 6. Distribution of G&A Allocation Bases By DCAA Regional Offices

According to the information presented, this allegation may have some merit. The 74 of the 78 contractors, who fall under southwest region, use total cost input which equates to 95 percent. Only five percent or 4 of the 74 contractors use value added and none use single element. While this is most likely due to the contractor's business activity which may be best represented by total cost input, some may be due to pressures from DCAA to use one base over another.

Interview Analysis

Initially the goal was to contact all of the contractors who were using value added or single element as their allocation base. However, due to difficulties such as

wrong telephone numbers, contractor reluctance, and a lack of time, only 10 of the 84 contractors were telephone interviewed to determine their rationale. Eight of the 10 interviewed used value added as their G&A allocation base and 2 out the 10 used single element. The interview questions and responses can be found in Appendix A. The following observations were made after analyzing the results of the interviews.

(1) Analysis of the interviews indicates that the contractors' rationale for using an allocation base other than total cost input is consistent with the literature. Most contractors use value added if they have a large percentage of subcontracts, materials, or government furnished materials. For those contractors who gave a rough percentage of subcontract activity, they estimated from 30 percent to 50 percent of their total costs were subcontracts. One contractor estimated that 50 to 70 percent of their direct materials had less than 5 percentage of the management's involvement. Another contractor had 20 to 25 percent of the total contract which were government furnished components. All of above situations could distort the G&A allocations if total cost input were used. Thus, by using value added, a more equitable G&A allocation is made. For those who use single element or more specifically direct labor as their G&A allocation base, 28 and 31 percent of their costs are for labor. This percentage is consistent with the General Dynamics court

case where 28 percent of the total cost was considered significant (3:64,881). Only one contractor acknowledged that G&A allocation bases were used to shift costs around in order to make them more competitive on contracts.

(2) Value added is used in a variety of different type of contracts. For example, the eight interviewed had R&D contracts, production contracts, service contracts, or a combination of the above. This indicates that selection of an appropriate allocation base is not so much dependent on the type of contract but whether or not the contractor has large amounts of subcontract and material costs.

(3) Out of the ten contractors interviewed, seven have not converted from one allocation base to another within the last five years. Only three of the ten contractors interviewed have changed recently. These three contractors were not able to provide any specific rationale why they changed their allocation base other than value added provided for a more equitable G&A allocation. One contractor converted to value added in 1985 but converted back to total cost input in 1990. The contractor's perception was that the change was made to due outside pressure from government auditors. Since a sample of 10 does not adequately represent the population, it is hard to determine whether or not there is a general movement from a total cost input base to value added or single element base. Further research needs to be done in this area.

(4) None of the 10 contractors interviewed are considering converting to another allocation base in the foreseeable future. This may indicate that contractors using value added or single element bases are satisfied with their selection of allocation bases and therefore have no plans to change. The question of whether the contractors using total cost input are considering converting to a new base is a subject for further research.

In summary, this chapter presented the results from the disclosure statement analysis and the telephone interviews. The next chapter will address each of the investigative questions that were posed in Chapter 1.

V. Conclusions

This chapter examines the investigative questions that have been posed, and recommends some areas for future research.

Investigative Questions

Investigative Question 1. What are the three allowable allocation bases contractors can use to allocate their G&A expenses to government contracts?

The three allowable G&A allocation bases are total cost input, value added, and single element (6:31.001). Total cost input is the generally accepted allocation base because it is appropriate in most circumstances (5:849). It should be used when material, labor, and overhead costs are all significant measures of the business unit's activity and where the proportion of each varies significantly among all cost objectives which receive an allocation of the G&A expense (2:19-17). The value added base is the total cost input base minus the subcontract and material costs. It is used when inclusion of material and subcontract costs would cause significant distortions which would over allocate G&A expenses to some contracts (4:83,625). Single element cost input base is usually direct labor dollars or direct labor hours. This base may be used when it produces equitable results and best represents the total activity of the business unit. The direct labor should be a significant

measure of the total activity and all other measures are less significant (2:19-20).

Investigative Question 2. When is it appropriate to use each one of the bases?

The first step in the selection of an appropriate allocation base is to purify the G&A expense pool to minimize any inequities (4:83,589). The G&A expenses should be grouped in a separate indirect cost pool and allocated only to final cost objectives. To be classified as a G&A expense, the expense must be incurred for managing and administering the whole business unit. The base selected should be the one that best represents the total activity of the business unit (6:31.001). "The total activity refers to the production of goods and services during a cost accounting period" (4:83,579). So, the objective is to select a base that results in allocations of G&A expenses to contracts based on the causal or beneficial relationship and does not distort the actual benefits received by the contracts from G&A expense.

Next in the decision process of selecting the best base involves judgment (4:83,622). Each contractor should review their own individual circumstances and select the base that best represents their business unit. According to the literature, the following circumstances may cause a contractor to select one of three allocation bases.

"A total cost input base is generally acceptable as an appropriate measure of total activity of the business unit"

(6:31.001). Generally accepted does not mean that total cost input is the preferred allocation base. However, it should be used unless the inclusion of material and subcontract costs produces significant distortions in allocations. Then the contractor should consider the other two bases (5:849).

Value added should be considered if a significant distortion exists resulting from the inclusion of material costs and subcontract costs in the total cost input base, or when costs other than direct labor are significant measures of the total activity. Some examples of when value added may be appropriate is if there are government furnished components, precious metals, or a disproportionate material and subcontract content (5:849). Also if the contractor can show that G&A expenses pertain more to the contractor's in-house activities than to material and subcontract efforts or G&A expense provide more benefit to labor-intensive development contracts than material-intensive production contracts, then the contractor may be justified in using value added (4:83,625).

A single element cost input base such as direct labor can be used when labor is significant and when all other measures of activity are less significant related to total activity (2:19-20).

Investigative Question 3. Is there a bottom line difference in using one base over another? If so, what is

the impact? If not, why would a contractor use one base over another?

The contractor's total cost of G&A expenses remain the same regardless of the G&A allocation method the contractor chooses. However, the allocation base does effect the amount of G&A expenses which will be allocated to the various contracts (10:52). The Ford Aerospace case is a good example of how the selection of a G&A allocation base can affect contract costs. If Ford Aerospace had used value added as a cost input base, then $1 million of G&A expense would have been allocated to a contract. However, if total cost input allocation base was used then approximately $5 million would have been allocated to the contract (4:83,609). Therefore, the contractor's selection of an appropriate allocation base can have an effect on the cost of government contracts. Ideally, the selection of a base should be focussed on finding the most appropriate base that will accurately assign G&A expenses to contracts and best approximates the benefits received by final cost objectives.

Investigative Question 4. Of the three acceptable G&A allocation bases, which ones are contractors using today to allocated their G&A expenses to government contracts?

A review of 367 defense contractors indicated that approximately 77 percent use a total cost input base to allocate their G&A expenses. Eighteen percent use a value added cost input base. Five percent use a single element input base.

Investigative Question 5. What is their rationale for using the above allocation base?

From the interviews, most contractors use value added if they have a significant amount of subcontract and material costs or government furnished components. All of above situations could distort the G&A allocations if total cost input were used. Thus, by using value added, a more equitable G&A allocation is made. For those who use single element or more specifically direct labor as their G&A allocation base, 28 and 31 percent of their costs are for labor. Only one contractor acknowledged that G&A allocation bases were used to shuffle costs around in order to make them more competitive on contracts.

Investigative Question 6. Has the contractor converted from one of the above G&A allocation bases to another within the last five years? Why or why not?

From the interviews and the disclosure statement reviews, only six contractors were identified who converted from one G&A allocation base to another within the last five years. Five of the six contractors converted from total cost input to value added. The contractors interviewed were not able to point out any particular reason for changing their allocation base other than value added best represented their total activity. One contractor converted to value added in 1985 but converted back to total cost input in 1990. In the contractor's opinion these changes were due outside pressures from government auditors.

Without further research, it is not possible to determine whether contractors are gradually moving towards allocation bases other than total cost input.

Investigative Question 7. Is the contractor planning and/or considering converting to a new allocation base? If yes, when and why?

None of the 10 contractors interviewed were planning to convert to another allocation base in the foreseeable future. Keep in mind that the only contractors interviewed were using value added and single element cost input bases. Those contractors were satisfied with their selection of allocation bases and therefore have no plans to change. The question of whether the contractors using total cost input are considering converting to a new base is a subject for further research.

Recommendation for Further Research

One area for further research was identified through the course of this thesis. The objective of the future research is to determine whether defense contractors are gradually moving towards allocation bases other than total cost input. In order to accomplish this objective, the researcher should send out a formal survey to all the contractors identified in this thesis. The purpose of the survey is to determine the contractor's rationale for using their selected allocation base, how long have they been using their current allocation base, and are they

considering or planning to convert to a different allocation base in the near future. A formal survey is needed because the contractors contacted in this thesis through the telephone interviews were extremely reluctant to release this type of information over the telephone. To eliminate this problem and to receive a better response, the survey should be confidential where the contractors are assured that their identify will not be disclosed. In Appendix B, a suggested sample survey is presented to aid the future researcher.

Appendix A: Interview Questions and Responses

Below are the interview questions and responses to the interview questions. The responses are not transcribed verbatim, but the major thoughts that each respondent had are accurately represented. The identity of the contractor is not revealed.

Interview Question 1. What is your rationale for using value added?

Contractor 1. A significant percentage of our business activity is subcontractor material costs.

Contractor 2. Approximately 50 percent of our production contracts consists of material and subcontract activity, and 30 percent of our development contracts also consist of material and subcontract activity. Thus value added is the most appropriate allocation base for us.

Contractor 3. We produce twenty different types of this one product during the year. All products require the same amount of labor, the material costs vary. For some types, the material costs twice as much. So we use labor and overhead as our allocation bases rather than using material costs.

Contractor 4. We no longer use value added. In 1989, we converted back to total cost input because the Government auditors questioned our practices. We still feel value added is more appropriate because some of our contracts have

large subcontracts. In my opinion, the change to TCI was due to the DCAA region that they are in, because they are the only one of their subsidiaries who has had to change back to total cost input.

Contractor 5. We use value added because we could have as much as 20 to 25 percent of the total program that is government furnished components. We also have some large subcontracts. The G&A total is the same at the end of the year no matter what allocation you use, but it is a way to shuffle around costs to make some contracts more competitive.

Contractor 6. We have a lot of subcontract volume where 50 to 70 percent of direct material has less than 5 percent of management's involvement. Therefore we use value added to shift G&A from material intensive projects to non-material type projects.

Contractor 7. A few years ago we had a $120 million contract which was heavily weighted with subcontracts. We decided to change over to value added because it provided us with a better allocation of G&A. Today, we have some subcontract activity and decided to stay with value added.

Contractor 8. We have some major subcontracts which are about 50 percent of our total program.

Interview Question 2. For those contractors using single element, what is the percent of direct labor to contract cost?

Contractor 9. Our direct labor is about 31 percent of total sales.

Contractor 10. Our direct labor is approximately 28 percent of the program.

Interview Question 3. Do you have a mix of R&D and Production lines?

Contractor 1. Most we perform research and development.

Contractor 2. Yes, we have do both development and production type work.

Contractor 3. We primarily manufacture and assemble.

Contractor 4. Services type contracts.

Contractor 5. We are a service type company.

Contractor 6. Yes, we do have a mix of R&D and Production.

Contractor 7. Basically we are a service oriented company.

Contractor 8. We mostly have R&D contracts.

Interview Question 4. Have you converted from one allocation bases to another within the last five years?

Contractor 1. We have been using value added for at least the five years. We converted because of the large amounts of subcontractor material costs that we have.

Contractor 2. We have been using value added for at least five years.

Contractor 3. We have used value added since Cost Accounting Standard 410 came out in 1976.

Contractor 4. We changed to value added in 1985 but in Jan 89 we converted back to total cost input.

Contractor 5. We have been using value added since the early 1980s.

Contractor 6. Changed from total cost input to value added in fiscal year 1990, and has had some problems with DCAA for non-compliance. Even though there was no significant dollar impact, we still received a technical non-compliance which means we have to review this every year to make sure there is a significant dollar impact from using value added.

Contractor 7. We converted over to value added about five years ago.

Contractor 8. Converted to value added in 1987 because of the large amounts of subcontracts.

Contractor 9. We have been using direct labor as our allocation base for 12 years.

Contractor 10. No we have not converted bases within the last five years.

Interview Question 5. Are you planning and/or considering on converting to a new allocation base? If yes, when and why?

Contractor 1. We have no plans on converting to a new allocation base. Value added is the most appropriate allocation base for our business unit.

Contractor 2. We do not have any plans to convert at this time.

Contractor 3. We have not even considered switching to another allocation base.

Contractor 4. We are not considering changing back at this time.

Contractor 5. We are not expecting any changes in this area.

Contractor 6. No, we plan to keep on using value added until told otherwise.

Contractor 7. We have no plans to change our allocation base.

Contractor 8. No, we plan to keep on using value added.

Contractor 9. We have no plans to covert to another base.

Contractor 10. We are not going to change bases.

Appendix B: Sample Survey for Future Research

GENERAL INFORMATION

The purpose of this survey is to obtain information on how defense contractors are currently allocating their general and administrative (G&A) expenses to government contracts. Specifically, this information is being collected to determine the contractor's rationale for using their current G&A allocation base (i.e., total cost input, value added, or single element) and to determine whether there is a general move towards G&A allocation bases other than total cost input.

This survey is strictly anonymous. The data will be analyzed and summarized in a manner so that individual contractor responses cannot be identified.

INSTRUCTIONS

The survey is broken into three major sections: Total Cost Input Base, Value Added Input Base, and Single Element Input Base. Depending on the G&A allocation base you are currently using, select the section that applies to your organization. Please answer the series of questions in that section by checking the answer that best describes your situation. Any written comments that you may have can be written into the space provided. Please return your completed survey in the envelope provided. Thank you.

G&A ALLOCATION BASE SURVEY

TOTAL COST INPUT BASE

If you are currently using a total cost input base to allocate your G&A expenses, please answer the following series of questions.

(1) What best describes your rationale for using total cost input as your G&A allocation base?

_____ Total cost input is the allocation base that is most representative of our business's total activity.

_____ There is pressure and/or guidance from the government to use only total cost input. Briefly explain what kind of pressure and/or guidance and by whom. _____

_____

_____ We are not aware that other allocation bases such as value added or single element are acceptable.

_____ Other. _____

_____

(2) If total cost input is the allocation based that is most representative of your business's total activity, which of the following best describes your situation.

_____ Material and subcontract costs are only a minor part of cost input and/or the proportion of the costs is reasonably the same for all contracts.

_____ Your production activity is under a single contract and the only final cost objective of the cost accounting period is the contract.

_____ Your manufacturing activities represent a process system.

_____ Other. _____

_____

_____

(3) What year did you start using total cost input as your G&A allocation base? Please circle the appropriate year.

Prior to 1980	1986
1981	1987
1982	1988
1983	1989
1984	1990
1985	1991

(4) Have you converted from one of the other allocation bases to total cost input base within the last 8 years?

_____ Yes. If yes, briefly explain your rationale for changing.

_____

_____

_____ No.

(5) Are you planning and/or considering on converting to a new allocation base other than total cost input?

_____ Yes. If yes, briefly answer the following:

When do you plan to convert? _____

Which base do you plan to convert to? _____

What is your rationale? _____

_____

_____ No.

Your portion of the survey is now complete. Please return your completed survey in the self-addressed envelope that is provided. Thanks for your time and candid answers.

Value Added Input Base

If you are currently using value added as your cost input base for allocating your G&A expenses, please answer the following series of questions.

(1) Which of the following best describes your rationale for using value added as your allocation base.

_____ Your business unit has a mixture of product lines and/or contracts in the same business unit where some are material intensive and others are labor intensive. If so, could you provide us with a rough percentage of the amount of material intensive contracts and labor intensive contracts you have.

_____

_____ Your business unit has a mixture involving some contracts with large amounts of material costs and others having large amounts of customer-furnished materials. If so, could you provide us with a rough percentage of how much customer-furnished materials you have on a contract.

_____

_____ Your business unit has large amounts of subcontracts such as drop shipments that do not require close supervision or participation on the part of the prime contractor. If so, could you provide us with a rough percentage of the amount of subcontracts you have in a typical contract and what percentage of management's time is devoted to these subcontract activities.

_____

_____ Your business unit has a mixture involving some contracts with substantial interdivisional transfers and others having little material costs. If so, could you provide us with a rough percentage of how much interdivisional transfers you have.

_____

_____ Other. _____

(2) What year did you start using value added as your G&A allocation base? Please circle the appropriate year.

Prior to 1980	1986
1981	1987
1982	1988
1983	1989
1984	1990
1985	1991

(3) Have you converted from one of the other allocation bases to value added within the last 8 years?

_____ Yes. If yes, briefly explain your rationale for changing.

_____

_____

Also, did you prepare a detailed cost impact statement? If so, did the change have a significant impact? _____

_____

_____ No.

(4) Are you planning and/or considering on converting to a new allocation base other than value added?

_____ Yes. If yes, briefly answer the following:

When do you plan to convert? _____

Which base do you plan to convert to? _____

What is your rationale? _____

_____

_____ No.

Your portion of the survey is now complete. Please return your completed survey to us using the self-addressed envelope that is provided. Thank you for your time and candid answers.

Single Element Base

If you are currently using single element as your cost input base for allocating your G&A expenses, please answer the following series of questions.

(1) Which of the following cost elements is used as your single element base?

_____ Direct Labor Dollars

_____ Direct Labor Hours

_____ Other. _____

(2) If your single element base is labor, what is the percentage of direct labor to contract costs? _____

(3) Which of the following best describes why your business unit uses single element as your cost input base for allocating G&A expenses?

_____ A single element base represents a significant part of the activity of all final cost objectives and is representative of the beneficial relationship between the cost objectives and the G&A activities.

_____ Your business activity is intensive with respect to the cost element chosen as the base.

_____ Your contract mix contains final cost objectives with significant differences in the nature and types of costs incurred, except for the single common cost element.

_____ You have a mix of contracts where some provide for significant amounts of long lead time materials.

_____ Other. _____

_____

(4) What year did you start using a single element base as your G&A allocation base? Please circle the appropriate year.

Prior to 1980	1986
1981	1987
1982	1988
1983	1989
1984	1990
1985	1991

(5) Have you converted from one of the other allocation bases to a single element base within the last 8 years?

_____ Yes. If yes, briefly explain your rationale for changing.

_____

_____

_____ No.

(6) Are you planning and/or considering on converting to a new allocation base other than single element?

_____ Yes. If yes, briefly answer the following:

When do you plan to convert? _____

Which base do you plan to convert to? _____

What is your rationale? _____

_____

_____ No.

Your portion of the survey is now complete. Please return your completed survey to us using the self-addressed envelope that is provided. Thank you for your time and candid answers.

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Vita

Captain Diane M. Metzler [redacted] and attended Midwestern State University, graduating with a Bachelor of Business Administration (major: Accounting) in December 1981. In 1982, she entered the Air Force as a Financial Management Specialist at Dyess AFB, Texas. She was commissioned through the Officer Training School in September 1984. Upon commissioning, she was stationed at Carswell AFB, Texas as an auditor for the Air Force Audit Agency. In April 1986, she entered the Comptroller career field as a base-level cost analyst. After a one year remote tour at Florennes AB, Belgium as branch chief, she was assigned to the Electronic Combat and Reconnaissance System Program Office at Wright-Patterson AFB, Ohio. As an acquisition cost analyst, she performed detailed cost estimates for various programs. She continued in this position until May 1990, when she entered the School of Systems and Logistics, Air Force Institute of Technology.

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REPORT DOCUMENTATION PAGE

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13. ABSTRACT *(Maximum 200 words)* This study was performed to determine how defense contractors are allocating their general and administrative (G&A) expenses to government contracts. Cost Accounting Standard 410 outlines three acceptable cost input bases that contractors can use to allocate their G&A expenses to government contracts: total cost input, value added, and single element. The contractors should select the base that best represents the total activity of their business unit. This study examines which allocation bases contractors are using today, what their rationale is, when it is appropriate to use each base, and what kind of dollar impact is involved. A review of 367 contractor disclosure statements from 24 of the top defense contractors indicated that 77% of them use total cost input, 18% use value added, and 5% use a single element base such as direct labor. Telephone interviews were made to those contractors who were using value added and single element to determine their rationale for using that particular base. Most of the contractors using value added have a significant percentage of subcontract and material costs or a large amount of customer-furnished components.

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AFIT RESEARCH ASSESSMENT

The purpose of this questionnaire is to determine the potential for current and future applications of AFIT thesis research. Please return completed questionnaires to: AFIT/LSC, Wright-Patterson AFB OH 45433-6583.

1. Did this research contribute to a current research project?

   a. Yes b. No

2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not researched it?

   a. Yes b. No

3. The benefits of AFIT research can often be expressed by the equivalent value that your agency received by virtue of AFIT performing the research. Please estimate what this research would have cost in terms of manpower and/or dollars if it had been accomplished under contract or if it had been done in-house.

   Man Years _____ $_____

4. Often it is not possible to attach equivalent dollar values to research, although the results of the research may, in fact, be important. Whether or not you were able to establish an equivalent value for this research (3 above), what is your estimate of its significance?

   a. Highly Significant b. Significant c. Slightly Significant d. Of No Significance

5. Comments

_____ _____

Name and Grade Organization

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