

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

**AN EXAMINATION OF MARFORRES PURCHASE
CARDHOLDER AND APPROVING OFFICIAL
SELF-MOTIVATION**

by

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December 2000

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**AN EXAMINATION OF MARFORRES PURCHASE CARDHOLDER
AND APPROVING OFFICIAL SELF-MOTIVATION**

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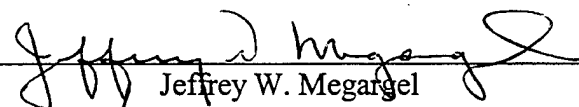
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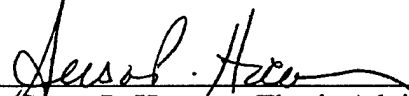
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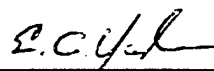
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ABSTRACT

The focus of this research was to evaluate the intrinsic task motivation or “the positively valued experiences” (Thomas & Velthouse, 1990) that cardholders and approving officials within the Marine Forces Reserve obtain from performance of the duties associated with the purchase card program. The researcher sought to determine the prevalence of several contributors to intrinsic task motivation and how they affect performance and task satisfaction. The research includes an examination of Government, DoD, and DoN micropurchase program background and procedures with particular emphasis on the purchase card program at MARFORRES. This program background combined with a review of intrinsic motivation literature was used to devise and test a model of cardholder and approving official intrinsic task motivation. A survey was designed to evaluate this model and data were gathered from a sample of 114 cardholders and approving officials from MARFORRES. The results of the research indicate that task criticality, task competence, feedback, and autonomy were contributors to intrinsic task motivation. Autonomy was found to have the strongest relationship with motivation as well as quality of task performance and individual task satisfaction. Recommendations regarding training and streamlining purchase card activities are provided as an aid to decisionmaking in purchase card program management.

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I. INTRODUCTION

The purpose of the Navy/Marine Corps Governmentwide Commercial Purchase Card Program (GWCPC) is to make goods and services readily available to end-users in the most efficient way possible (NAVSUP, 1999). The program provides purchase cards directly to the end user enabling them to obtain commercially available goods and services. It streamlines financial management and the procurement process, especially for purchases under the micropurchase single purchase limit of \$2,500 for supplies and services, and under \$2,000 for facility maintenance and construction (Citibank, 1998).

Since its adoption in March 1989, the purchase card program has expanded quickly throughout Government activities. By 1996, the General Accounting Office (GAO) determined that the purchase card was superior to traditional methods of procurement of goods and services. Purchase card programs reduced mission support, labor, and payment processing costs by 50%. These savings were a direct result of moving the purchases from procurement offices to end users (GAO, 1996).

The purchase card program at Marine Forces Reserve was established in October 1993 with the Rocky Mountain Bank System VISA card (Bates, 2000). For the first time, users in Marine Forces Reserve units were able to effect simple purchases without submitting a purchase request to a contract office. This delegation of contracting authority is particularly important to the Marine Forces Reserve (MARFORRES), which has units in 47 of 50 states and Puerto Rico and where the contract office is geographically separated from the user.

Despite the delegation of contracting authority to the user level at MARFORRES and within other Government activities, abuse of the purchase card program rarely occurs (GAO, 1996; Moore, 2000; Bates, 2000). At the same time, the Government continues to save millions of dollars in administrative costs once associated with contract offices (Burk, 1999; Hoover, 2000). The basis for the success of the Governmentwide Commercial Purchase Card lies ultimately with the individual cardholders and approving officials. They alone are faced with deciding what to buy, how to buy it, whom to buy it from, and what represents best value procurement.

The focus of this research was to evaluate the Intrinsic Task Motivation or “the positively valued experiences” (Thomas & Velthouse, 1990) that cardholders and approving officials obtain from performance of the duties associated with the purchase card program. Specifically, the researcher sought to determine the prevalence of several contributors to Intrinsic Task Motivation and how they affect performance and task satisfaction. The research began with an examination of Government, DoD, and DoN micropurchase program background and procedures with particular emphasis on the purchase card program at MARFORRES. This program background combined with a review of intrinsic motivation literature was used to devise and test a model of cardholder and approving official Intrinsic Task Motivation. A survey was designed to evaluate this model and data were gathered from a sample of cardholders and approving officials from MARFORRES. The results of the research will be provided to the MARFORRES Contract Office and others as an aid to decisionmaking in purchase card program management.

A. RESEARCH QUESTIONS

1. Primary Research Question

What are the common characteristics and sources of self-motivation for Governmentwide Commercial Purchase Card Program cardholders and approving officials within the Marine Forces Reserve?

2. Subsidiary Research Questions

- What are the unique aspects of the Governmentwide Commercial Purchase Card Program within the Marine Forces Reserve?
- What are the background and experience characteristics of the cardholders and approving officials within the Marine Forces Reserve?
- What are the sources and amounts of initial training for cardholders and approving officials within the Marine Forces Reserve?
- How confident were MARFORRES cardholders and approving officials in performing their duties upon receiving initial training and how confident they are today?
- How important do the MARFORRES cardholders and approving officials perceive the GWPCP program to be in their section, unit, and within their own duties?
- How much autonomy do the MARFORRES cardholders and approving officials perceive they have concerning how they manage their portion of the program?
- What are the main sources of feedback related to performance and how important are they for MARFORRES cardholders and approving officials?
- How satisfied are the MARFORRES cardholders and approving officials with the performance of their duties?
- How do cardholders and approving officials perceive the satisfaction of MARFORRES customers (including end users, supervisors, and organizations) with cardholder and approving official performance?

B. SCOPE OF THE THESIS

This thesis begins with an examination of the background of the Governmentwide Commercial Purchase Card Program including the history of pilot programs, agency comments, and adoption of the program within the Department of the Navy. After outlining highlights of the early program, it examines aspects of the program at the Marine Forces Reserve. It continues with results from a survey of cardholder and approving official Intrinsic Task Motivation, the factors that contribute to that motivation and satisfaction, and performance that results from the motivation. The thesis concludes with a summary of key findings and recommendations for MARFORRES.

C. RESEARCH METHOD

The researcher examined available literature on the history of the implementation and growth of the Governmentwide Commercial Purchase Card Program focusing on pilot programs, cost effective analyses, and usage data with DoD and DoN. This information was used to present the background and context for the current MARFORRES program. In addition, the researcher used the works of many intrinsic motivation researchers to propose a model for the sources of Intrinsic Task Motivation as adapted from the work of Thomas, *et al.* (1990, 1997, 2000). In order to capture background information and perceptions of those contributors to Intrinsic Task Motivation, a survey was made available to all MARFORRES cardholders and approving officials. The researcher entered their responses into a statistical database for analysis of various trends and distinguishing characteristics.

D. ORGANIZATION OF THE STUDY

This thesis progresses from the macro level of a Governmentwide program to the perceptions of individual cardholders and approving officials within the Marine Forces Reserve. Chapter I has provided an introduction, research questions, scope, definitions and terms, as well as an overview of the research method. Chapter II provides background of the program common to all Government agencies and DoN specific management information. Chapter III focuses on the program at the Marine Forces Reserve, characteristics of traditional methods of Marine Corps procurement, and the affects of reduction in the acquisition workforce. This chapter also includes a theoretical discussion of cardholder and approving official self-management, including the introduction of a Model for Cardholder/Approving Official Intrinsic Task Motivation. Chapter IV discusses the research methods used in the conduct of the research. Chapter V presents the results and analysis of the research. Chapter VI provides conclusions and recommendations with regard to the MARFORRES Governmentwide Commercial Purchase Card Program.

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II. BACKGROUND

A. BACKGROUND OF THE GOVERNMENTWIDE COMMERCIAL PURCHASE CARD PROGRAM

Before the Second World War, most Government purchasing functions were centralized in Washington D.C. The war increased demand so greatly that centralized purchasing became impractical, and by 1942, most U.S. Navy activities were granted small purchase authority for purchases up to \$500 (Tisak, undated). Since then, the Department of Navy has delegated purchasing authority to increasingly lower levels within the chain of command. However, purchasing was still largely a centralized process until 1995, with most of the authority residing within several regional procurement offices. That type of centralized purchasing provided the following advantages:

- Professional purchasing agents who were experts in procurement regulations and methods
- Volume purchasing that capitalized on discounts and market timing
- Prioritization of purchases based upon command requirements and budget constraints

However, customers had little or no control over the procurement process. Routine procurement of simple, low usage, and low dollar value items often took months. If a unit wanted to expedite the procurement process, it could intervene with the purchasing office or use imprest funds. At the beginning of deployment periods and at the end of the Fiscal Year, however, everything became a priority. As a result, readiness, administration, safety, sanitation, and morale were all affected by the cumbersome nature of purchasing in the Department of the Navy.

Recognizing the inefficiency of the existing purchasing system, the Government examined methods for reducing the cost of buying goods and services in the early 1980s. The obvious solution was to adopt commercial practices such as use of credit cards to link the customer directly with the vendor, and thus reduce the contracting office's role in the small purchase process to oversight only. To that end, the Department of Commerce served as the lead test agency for the program from 1986 to 1989. During the test program, the Colorado National Bank issued MasterCard credit cards through its Rocky Mountain BankCard System (RMBS). A total of 24 Government agencies used the cards on a limited basis to effect purchases (Zayas, 1995).

Following the success of the pilot program, the General Services Administration awarded a contract to RMBS to establish and administer a Government wide program. RMBS began services in March 1989 using the VISA credit card. Within the first year of the program, 30 different agencies participated and approximately 12,000 Government employees were issued cards. By 1994, 66 Government agencies were participating in the program with 89,000 cardholders (Zayas, 1995)

The 1993 National Performance Review (NPR) recognized the purchase card as a major step in acquisition reform and predicted that expansion of the program would result in significant reduction of procurement costs (National Performance Review, 1993). The NPR recommended that Government executive agencies fully adopt the purchase card initiative and that the Federal Acquisition Regulation (FAR) be amended to promote its usage (GAO, 1996). Concurrently, the Federal Acquisition Streamlining Act (FASA) created the "micropurchase" category for goods and services valued at less than \$2,500 and reduced or eliminated many of the restrictions on those purchases. By July 1995, the

FAR contained language identifying the purchase card as the preferred method for micropurchases and an acceptable method for payment of invoice amounts above the micropurchase threshold.

According to a 1996 General Accounting Office (GAO) report, the purchase card was superior to traditional methods of procurement of goods and services. The GAO found that the use of purchase card programs at 12 civilian and military activities reduced mission support, labor, and payment processing costs by 50%. The savings were a direct result of moving the purchases from procurement offices to program offices and by consolidating payments. Additionally, several agencies reported greater ability to absorb staff reductions and increased service delivery (GAO, 1996). Yet, the program was hampered by inefficiencies associated with reconciling and paying the invoices on time. Interest charges resulting from late payment were a significant problem (Alba, 1999; Burk, 1999).

The Naval Supply Systems Command began its participation in the RMBS contract with the General Services Administration in 1995. The purchase card became known as the International Merchant Procurement Authorization Card or IMPAC card. The Navy contract utilized the VISA credit card and its usage spread rapidly throughout Navy and Marine Corps activities.

The chart in Figure 1 portrays the growth in the percentage of micropurchases effected by use of the purchase card as compared with other procurement means such as purchase orders. In the first year of the program, DoN users turned to the purchase card 22% of the time. By Fiscal Year 1999, that number grew to over 96%.

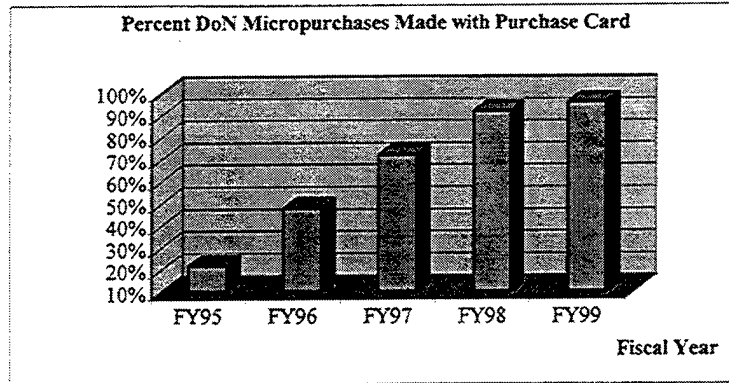


Figure 1. The Percentage of DoN Micropurchases Made Compared with Other Procurement Methods from FY 95 to FY 99 (Hoover, 2000).

Use of the Governmentwide Commercial Purchase Card became mandatory for micropurchases of commercial items in 1997 (OUSD (A&T), 1997; NAVSUP, 1997). Exceptions were granted for payment of vendors that did not accept the purchase card and for other extraordinary circumstances, but it became increasingly difficult to effect procurements using the traditional methods. As the purchase card became the standard procurement tool for purchases at \$2,500 and below, the dollar value of purchase card transactions increased significantly. As seen in Figure 2, the dollar value of purchase card transactions increased from almost \$325 million in Fiscal Year 1995 to \$1.77 billion in Fiscal Year 1999 (Thomas, 2000).

From February 1998 to November 1998, the MARFORRES purchase card provider changed from RMBS to the USBank Corporate Payment System known as CPS USBank (Bates, 2000). In November 1998, the DoN contract transferred again to Citibank Corporation. The credit card also changed from VISA to MasterCard. The new program provided an Internet based administration system that significantly enhanced management capability. Both administrators and cardholders could now access online

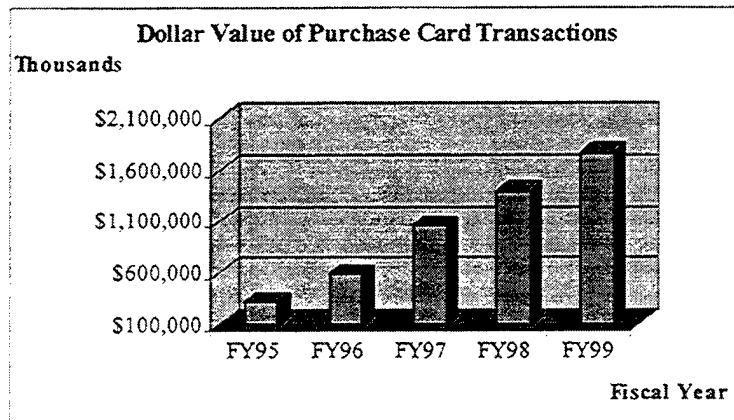


Figure 2. The Total Value of DoN Purchase Card Transactions from FY 95 to FY 99 (Hoover, 2000).

accounts that showed current balances, status of payments, and other useful information. Delivery of monthly statements, user reconciliation, and certification were all automated, practically paperless, and nearly instantaneous. The Citibank program also automated payment of the vendors via the Defense Finance and Accounting Service (DFAS) (NAVSUP, 1998).

In the last 11 years, Government customers of goods and services valued at less than \$2,500 were the beneficiaries of rapid acquisition reform. The purchase card raised the status of Government customers from requestors to empowered buyers. Cardholders became responsible for the quality and timeliness of procurements.

B. MANAGEMENT OF A PURCHASE CARD PROGRAM

1. Delegation of Contracting Authority

Department of Navy activities that wish to establish a Governmentwide Commercial Purchase Card program must obtain permission from the appropriate

contracting authority within the chain of command. Such authority lies with the Head Contracting Agency (HCA).

a. *Head of the Contracting Activity (HCA)*

The HCA is the Government official charged with managing contracting authority within his or her contracting area of responsibility. The HCA is responsible for the delegation and use of contracting authority including use of the purchase card (NAVSUP, 1999).

b. *Agency Program Coordinator (APC)*

Within the command or activity, the APC is responsible for the delegation and use of the contracting authority by assigned personnel. The HCA delegates contracting authority to the Agency Program Coordinator (APC). The APC then redelegates contracting authority to cardholders and approving officials (AO) (NAVSUP, 1999).

c. *Certificate of Appointment*

A Standard Form 1402 (Certificate of Appointment) is used to delegate contracting authority. The letter of delegation specifies the single purchase limit, billing cycle purchase limit, transaction type, and any limits on method of payment. DoN activities are also encouraged to develop local procedures for appointing approving officials and cardholders (NAVSUP, 1999).

2. *Training Requirements*

All prospective cardholders and approving officials must receive training in DoN policies and procedures and local agency policies and procedures before receiving purchase card usage authority. The minimum required training is provided via the following media:

- Navy/Marine Corps Purchase Card Interactive Tutorial on the Internet
- Navy/Marine Corps Purchase Card Training and Interactive Customer assistance on CD Rom
- NAVSUP Commercial Purchase Card Course for Micropurchasers
- Any HCA approved purchase card course that contains the information provided in the NAVSUP Commercial Purchase Card Course for Micropurchasers (NAVSUP, 1999). Cardholders and approving officials are also required to complete refresher training on a biannual basis for as long as they fill their billets (NAVSUP, 1999).

3. Establishing a Local Program

- Naval activities coordinate the establishment of a purchase card program via the respective administrative chain of command. Upon approval, naval activities set up the program with the appropriate GSA purchase card contractor. Citibank is the current contractor for the Department of the Navy.
- Payment procedures are coordinated through the Defense Finance and Accounting Service (DFAS)

4. Cardholder's Contracting and Account Limitations

a. Cardholder's Single Purchase Limit

HCA's set limits of purchase authority for each cardholder. The limits are delegated in increments of \$50.00 and routinely set at the micropurchase threshold of \$2,500.00 (NAVSUP, 1999).

b. Billing Cycle Purchase Limit

HCA's also set the billing cycle purchase limit for each cardholder's account. This limit is set in increments of \$100 (NAVSUP, 1999).

5 Using the Purchase Card

- The cardholder is responsible for ensuring that several conditions exist before he or she effects a purchase card transaction. First of all, sufficient funds must be available to accomplish the transaction. He or she must screen all requests for possible purchases from mandatory sources of supply in accordance with FAR Part 8.001 and local agency requirements. Additionally, he or she must make a determination if the purchase price is fair and reasonable in accordance with FAR Part 13.202 (Citibank, 2000).

- The cardholder may make purchases using several methods. He or she can simply go to a vender's place of business and make an over-the-counter purchase. This method is particularly useful for fulfilling urgent or low dollar value requirements that would be too cumbersome and costly if using the traditional means of supply. He or she can also purchase supplies via telephone or facsimile. Venders can ship the supplies or arrange for pickup by an agent of the buyer. Lastly, cardholders can make purchases using the Internet (NAVSUP, 1999).
- The cardholder is responsible for ensuring security of his or her purchase card and account information. The person whose name appears on the card is the only individual authorized to use that card to make purchases. Additionally, he or she must exercise common sense with regard to passing purchase card numbers over nonsecure telephone lines and over the Internet (NAVSUP, 1999).
- Cardholders are also responsible for retaining receipts of transaction to aid in the reconciliation process. Purchase records are maintained for a minimum of 36 months, while billing statements are maintained for 75 months (NAVSUP, 1999).

6. Reconciliation of Purchase Card Accounts

Near the completion of every monthly billing cycle, the cardholder is responsible for reconciling the transactions that appear on the account statement with his or her records. The cardholder is required to complete the reconciliation within five days of receiving the statement from the purchase card contractor (NAVSUP, 1999).

- If there are discrepancies with what appears on the statement, the cardholder must notify the approving official and attempt to correct the statement with any appropriate means at his or her disposal. Upon completion of the reconciliation process, the cardholder signs the statement and forwards it with supporting documentation to the approving official (NAVSUP, 1999).
- The approving official ensures that all purchases that appear on the statement were made in accordance with DoN policies and procedures. He or she reviews the charges for accuracy and resolves any questionable entries with the cardholder. After reconciliation of the statement with the cardholder, the AO certifies it by signing the statement. Within five days of receiving the statement, the AO completes his or her own reconciliation (NAVSUP, 1999).

C. SUMMARY

This chapter presented a brief background of the Department of Navy purchase card program. The General Services Administration awarded the first bankcard program contract to the Rocky Mountain Bank Card System following a successful test program; it was based upon the VISA card and known as the IMPAC card. The purchase card program was intended for authorized purchases of commercial items and services. It gradually replaced traditional methods of procurement until it became the preferred method for all micropurchases. The program expanded rapidly until 1996 when DoN switched the contract to Citibank. Under the new contract, the program continued to expand throughout DoN activities. The Citibank program also increased cardholder and approving official abilities to manage the program by moving it entirely online via the Internet. Concurrently, cardholders were given greater flexibility in the authorized use of the card.

This chapter also discussed several current aspects of DoN purchase card procedures including delegation of contracting authority, required training, usage regulations, training requirements, and account reconciliation procedures. While the level of purchasing authority is now greatly reduced, the level of responsibility on the part of cardholders and approving officials continues to increase. Chapter III discusses the purchase card program at the Marine Forces Reserve.

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III. THE MARFORRES GOVERNMENTWIDE COMMERCIAL PURCHASE CARD PROGRAM

This chapter presents background on the research site, the MARFORRES Government Commercial Purchase Card Program. Included is a discussion of the relation among pertinent elements including Citibank and Citidirect, traditional small purchase processes, the effect of the reduction in the acquisition workforce and specific personnel roles and responsibilities. The chapter concludes with a theoretical model derived to assess MARFORRES cardholder and approving official self-motivation.

A. BACKGROUND OF THE MARINE FORCES RESERVE

The Marine Forces Reserve is the Headquarters command for all Marine Reservists and Reserve units located throughout the United States and Puerto Rico. The MARFORRES staff, at the Headquarters facility in New Orleans, Louisiana, provides policy, guidance, direction, and support to the 104,000 Reserve Marines who make up the Marine Forces Reserve (MARFORRES, 2000). The four Major Subordinate Commands (MSC) of MARFORRES are the 4th Marine Division (4th MARDIV), the 4th Marine Aircraft Wing (4th MAW), the 4th Force Service Support Group (4th FSSG), and the Marine Corps Reserve Support Command (MCRSC) (MARFORRES, 2000).

The mission of the Marine Forces Reserve is to:

- Augment and reinforce active Marine Corps forces in time of war, national emergency or contingency operations
- Provide personnel and operational tempo relief for the active forces in peacetime
- Provide service to the community (MARFORRES, 2000)

The Marine Corps Reserve is equipped and trained to the same standards as the active Marine forces (MARFORRES, 2000).

**B. OVERVIEW: THE MARFORRES GOVERNMENTWIDE
COMMERCIAL PURCHASE CARD PROGRAM**

1. Background of the Program

The purchase card program at MARFORRES was established in October 1993 with the Rocky Mountain Bank System VISA card (Bates, 2000). For the first time, users in Marine Forces Reserve units were able to effect simple purchases without submitting a purchase request to a contract office. This delegation of contracting authority is particularly important to the Marine Forces Reserve where the contract office is geographically separated from the user by up to several thousand miles.

The Governmentwide Commercial Purchase Card Program cardholders and approving officials are spread among units in 47 of 50 states and Puerto Rico (Bates, 2000). The typical reserve infantry battalion might have four subordinate companies in four different states. Thus, the delegation of contracting authority for simple purchases is critical to efficient procurement of low dollar value high usage items.

According to the Agency Program Coordinator, the program had 414 cardholders in Fiscal Year 1994 (see Figure 3). Within four years, the number of cardholders increased 168 percent to 1,110 cardholders. From February 1998 to November 1998, the MARFORRES purchase card provider changed from RMBS to the USBank Corporate Payment System known as CPS USBank. During that period, the program grew to 1,183 cardholder accounts of all types including open, closed, and approving official accounts. With the beginning of Fiscal Year 1999, the purchase card contract was transferred to

Citibank Corporation. Under the new provider, the program was trimmed to 838 accounts by Fiscal Year 2000 (Bates, 2000). The reduction in the number of all types of accounts from Fiscal Year 1999 and Fiscal Year 2000 was the result of a concerted effort to trim the number of cards and to clean up the mistakes generated by changes in providers, evolving procedures, and U.S. Postal Service problems (Bates, 2000).

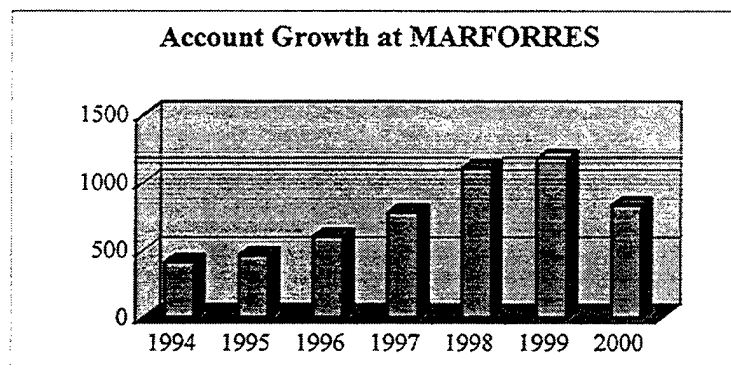


Figure 3. Growth in the Number of Cardholder and Approving Official Accounts at MARFORRES. (Bates, 2000)

Each turnover of purchase card providers brought different levels of friction. At the very least, each account had to be closed and then reopened with the new provider. Every cardholder had to be issued a new card (Bates, 2000). If the provider used bulk rate mailing, the correspondence passed through the U.S. Postal Service's automated routing system. This system often misread the nine digit postal codes, and new cards, statements, and other documents were returned as undeliverable (Bates, 2000). The reserve unit in Ceiba, Puerto Rico, for instance, did not even have a postal code.

2. The Purchase Card Chain of Responsibility

The purchase card chain of responsibility starts with the MARFORRES Contracting Officer and his Agency Program Coordinator (APC), both located at

MARFORRES Headquarters in New Orleans (see Figure 4). The APC is a Government civil service employee who reports to the MARFORRES Contracting Officer. She has no staff but manages the entire program via a combination of computer-based databases and networks such as Lotus Notes. Adjacent to the Contracting Officer is the Comptroller. He or she is responsible for ensuring that funds are obligated to cover purchase card transactions. In time, Alternate Agency Program Coordinators (AAPC), at each of the four Major Subordinate Commands mentioned earlier, will shoulder more of the management burden currently held by the APC (Bates, 2000).

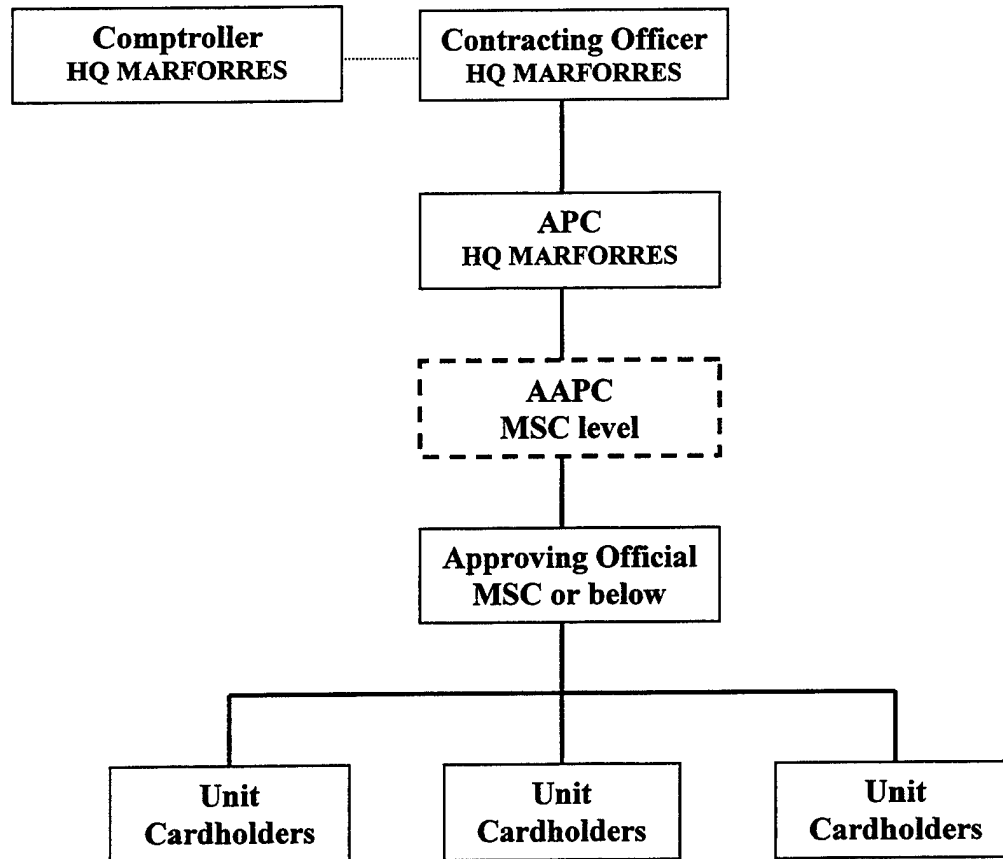


Figure 4. The MARFORRES Purchase Card Chain of Responsibility (Source: developed by researcher).

Contracting authority is delegated to 72 approving officials located around the United States and Puerto Rico at different levels of command. Each approving official provides oversight to several dozen cardholders in subordinate commands. The decentralized nature of the program requires a large degree of autonomy at the approving official level. The approving official is normally the unit supply officer and fund administrator and can be active duty, active reserve, or a civil servant (Bates, 2000). He or she serves as a liaison between the unit cardholders and the APC in New Orleans. The approving official coordinates the activities of cardholders including the resolution of disputes between cardholder records, vendors, Citibank, and others. He or she is also responsible for certifying the legitimacy of all purchases made during each monthly billing cycle. When electronic payment of invoices becomes standard operating procedure, control will be further decentralized to the approving officials (Bates, 2000). They will have the ability to pay monthly invoices directly.

Each reserve unit has cardholders resident in the commodity areas and work centers such as the motor pool or administrative section. They are also comprised of active duty Instructor & Inspector staff and active duty reserve Marines. Unlike other Government organizations, civil service cardholders are rare in MARFORRES. Each cardholder receives cardholder authority from the MARFORRES Contracting Officer, after successfully completing the minimal training requirements. The cardholders manage their portion the program via manual records and the Citibank on line database called Citidirect. As of February 2000, MARFORRES averaged between 3000 and 4500 purchase card transactions per month (Winicki, 2000).

3. Delineation of Purchase Card Programs at MARFORRES

The MARFORRES Governmentwide Commercial Purchase Card program is divided between four distinct management areas or subprograms:

- Material & Service Purchase Authorization Cards (MSPAC)
- For Payment Only Authorization Cards (FPOAC)
- Clothing Order Payment Authorization Cards (COPAC)
- Subsistence Payment Authorizations Cards (MEALS) (Bates, 2000)

These subprograms reflect the uniqueness of the Marine Forces Reserve (when compared with active duty units). It has peculiar logistics support requirements and varying amounts of support on site at each reserve center. Unlike active forces, for instance, many reserve units must contract out for rations and quarters for drilling reservists. Equipment and uniform replenishment is conducted under separate regulations but paid for through use of the purchase card.

There are two basic distinctions between the four subprograms. First, MSPAC is the "general use" purchase card and the other three programs are "For Payment Only." Second, management of the MEALS and COPAC subprograms is the responsibility of the APC at MARFORRES, while the FPOAC and MSPAC cards are the responsibility of the MARFORRES Comptroller (Bates, 2000).

4. Interface and Oversight of the Program

The system of interface and oversight that exists under the Citibank program is illustrated in Figure 5. When a cardholder makes a purchase from a commercial vendor, the charge can post with Citibank almost instantaneously (represented by the solid black arrows). Citibank associates the charge with the cardholder's account and posts the

charge via an online Internet statement in Citidirect. Charges and credits post to the cardholder's Citidirect account within the same 24-hour period as when the card was read or swiped at the vendor's terminal (Citibank, 2000). The approving official and APC also can view charges and credits as they are posted against the cardholder's account (represented by the dashed arrows). By the end of calendar year 2000, the Alternate Agency Program Coordinator will be added to the chain of responsibility. He or she will also be able to monitor individual cardholder accounts (Bates, 2000).

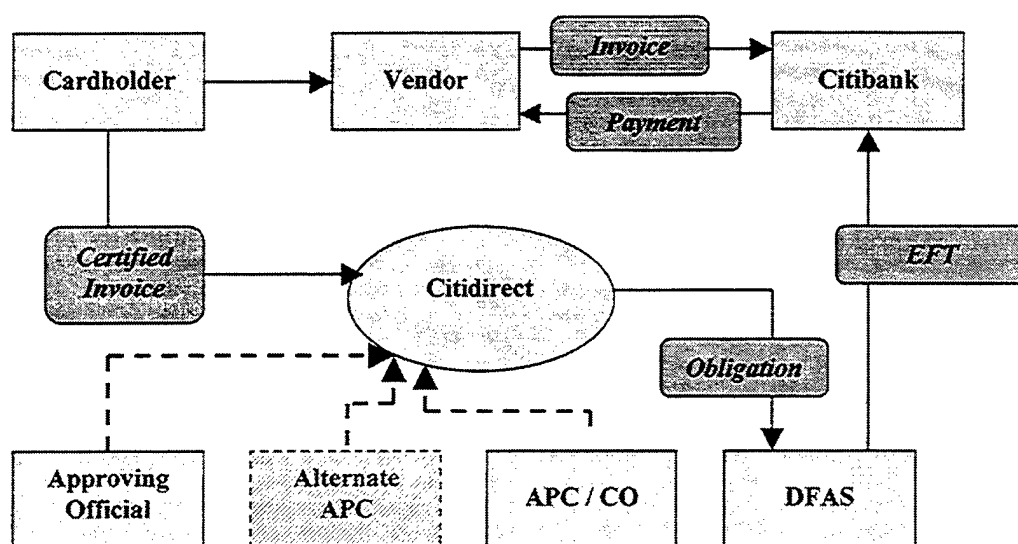


Figure 5. Purchase Card Stakeholder Spectrum (Source: developed by researcher).

After the cardholder and his or her approving official have certified the monthly invoice, an obligation from Citidirect posts with the Defense Finance and Accounting Center (DFAS). Upon receipt of the certified account invoice and the Citidirect obligation, DFAS effects an electronic funds transfer (EFT) to Citibank (Roark, 2000). Citibank then pays the vendor. The system is currently backed up with monthly paper statements that are mailed to the cardholder and approving official. Eventually, the

program will be almost entirely paperless with account management occurring on line via the Internet and other computer based networks. According to the APC, however, that is not likely to occur until network servers and data storage media become more capable and reliable (Bates, 2000)

5. Citibank and Citidirect

Citidirect accounts allow the DoN cardholder and the approving official to track the status of his or her account from anywhere in the world, at anytime, as long as they have access to the Internet (Citibank, 2000). As of November 2000, about half of the DoN activities have implemented Citidirect account management (Roark, 2000). Previously, the cardholders referred to his or her manual records to check the status of available funds and charges. Now, electronic account transaction statements are updated continuously as charges post against the account. The cardholder and approving official can view the status of funds on a daily basis (Winicki, 2000). Despite the availability of on line management resources, many MARFORRES cardholders continue to rely primarily on their manual record keeping (Bates, 2000).

Traditionally, one of the weakest areas of the DoN purchase card program has been reconciliation of the account (Burk, 1999). Before implementation of Citidirect, the cardholder maintained a manual record of the transactions that occurred with the account. Over time, the number of current and still pending charges could become very difficult to manage. For instance, if a cardholder rejected an item, it might take more than one billing cycle to credit the account and clear the charge. Consequently, the accrument of late charges was a significant problem and resulted in millions of dollars of extra charges throughout DoN (Burk, 1999). Citidirect provides near real-time visibility of current and

pending charges. It facilitates better management by both the cardholder and the approving official.

From the perspective of the vendor, the arrival of the purchase card as a means of Government procurement was a significant improvement (GAO, 1996). Nonetheless, acceptance of the RMBS bank card as a method of payment did not guarantee timely payment from DoN customers. Within some commands, it might still take months before the funds were sent from the appropriate account to the vendor. As of June 2000, the Citibank purchase card program can provide for instantaneous payment via electronic transfer of funds (Citibank, 2000). Vendors can receive payment before they even ship goods or provide services to the Government user. In agencies that adopted the new procedures, the approving officials became responsible for ensuring the funds were properly obligated under the Electronic Payment System.

C. THE CARDHOLDERS: BACKBONE OF THE PURCHASE CARD PROGRAM

1. Traditional Methods of Procuring Small Dollar Value Items

Before the adoption of the micropurchase threshold as a procurement category and the purchase card as its primary purchasing vehicle, the customer submitted a purchase request for any small dollar items that he or she required in support of official Government functions. The request might pass from his or her desk to a supervisor and over to the unit supply officer. The supply officer would typically approve the request if funds were available or forward it to the commanding officer for final approval before forwarding it to the next official in the chain of command. It would then be approved at that level and sent on to the next. Eventually, it would be sent over to the base or

regional contracting office for action. The process often required that an individual walk the request through the entire chain of command in order to get the item in a timely manner. In some units, the supply officer was the individual who walked the purchase request through, knowing that his rank would open the doors and get the required signatures in order to get the request over to the contracting office. When the request reached the contracting office, it went into the pile with all the other purchase requests.

To illustrate the process, assume an infantry platoon commander requires a common item not available through regular supply channels (see Figure 6). The item could be something as simple as hand soap. Using an infantry battalion as an example, the process looks like this:

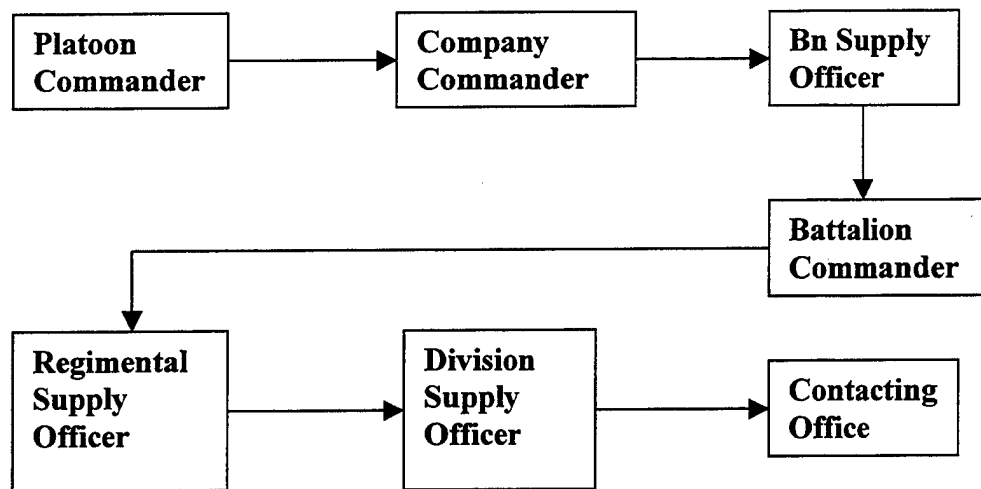


Figure 6. Traditional Marine Corps Small Purchase Chain.

Even if the supply officer walked the request through the chain of command, it might still take several weeks to clear the contract office. At each link, the item became increasingly remote from the customer's original requirement. Any official in the chain of command might decide to amend the request to allow for a substitute. He or she might

examine the request and deny it based upon the fact that a similar item is available through the supply system. Purchase requests were routinely lost. Adversarial relationships between individuals at different levels in the chain of command resulted in increased numbers of denied requests. Battalion Commanders had to intercede with Regimental Commanders to ensure that purchase requests were processed. All of this might occur for the purchase of an item worth no more than \$20.00.

Analyses, conducted by the United States Army, of the costs associated with this cumbersome process have shown that one transaction might easily exceed \$132.00 in administrative costs at Army commands (Burk, 1999). More robust estimates put the administrative cost at over \$250.00 per transaction (GAO, 1996; Moore, 2000). Obviously, procurement under traditional means was an inefficient and often ineffective means of procuring goods and services.

The purchase card eliminated most of the steps illustrated in Figure 6 above. In today's purchasing environment, the platoon commander will often have a cardholder within the platoon or company organization. Purchases that used to take weeks now take hours or days. The administrative cost of procuring the item dropped to about \$30.00 or even less per transaction (Burk, 1999). When that cost differential is multiplied by the thousands of transactions that now occur on a daily basis, the administrative savings within DoD and DoN are huge. According to the DoD Purchase Card Program Office, administrative cost savings resulting from increased use of the purchase card exceeded \$178 million for Fiscal Year 1999 alone.

2. Reduction in the Acquisition Workforce

Simultaneously, the last ten years of acquisition reform brought many other fundamental changes to DoD acquisition well beyond the purchase card. Perhaps the most significant of the changes was the reduction in the DoD acquisition workforce and infrastructure. Between Fiscal Year 1990 and Fiscal Year 1999, DoD reduced its acquisition workforce from 460,516 to 230,556 personnel (DODIG, 2000). During the same time period, the value of procurement actions of all types only decreased about 3% from \$144.7 billion to \$139.8 billion (DODIG, 2000). The number of procurement actions actually increased from 13.2 million to 14.8 million or about 12% (DODIG, 2000). Within DoN alone, 140 contracting offices were closed between 1996 and 1999 (Jenkins, 1999). While these personnel and offices supported acquisition and contracting at all levels, the 50% reduction in the acquisition workforce resulted in an increasingly significant reliance upon procurement at the user level. Today, many of the contracting offices that slowed the procurement process under the traditional means of procurement no longer exist.

Despite the reduction in overall capability and increased workload, a recent inspector general report found that both Navy and Marine Corps procurement agencies have actually increased their ability to support purchases of goods and services at and below the micropurchase threshold (DODIG, 2000). This success is a direct result of the purchase card program and its primary user – the cardholder.

D. MOTIVATION AND THE CARDHOLDER AT MARFORRES

1. The MARFORRES Cardholder

A cardholder at Marine Forces Reserve is designated by the Contracting Officer (upon completion of training) and issued the purchase card. The cardholder is responsible for the purchase of goods and services with that card in accordance with DoN regulations and MARFORRES policies and procedures (Citibank, 2000). He or she must understand and comply with MARFORRES regarding authorized purchases, record keeping, reconciliation, and payment of the monthly Statement of Account. The cardholder typically receives between two and eight hours of training from a CD Rom or Internet based training program and operates largely on his or her own. The cardholder can potentially obligate the Government for thousands of dollars of unauthorized purchases and, when exposed by controls within the purchase card program, severely degrade his or her unit's ability to procure goods and services below the micropurchase threshold. Yet, this rarely happens. The program at the Naval Postgraduate School, for instance, has never had an improper purchase (Moore, 2000). In fact, the GAO found no patterns of illegal procurement activity in 12 Government agencies (including DoD) during its study of IMPAC card usage in 1996 (GAO, 1996).

2. Intrinsic and Extrinsic Cardholder Motivation

The choices that a cardholder makes in effecting purchase card transactions are a reflection of several factors including his or her training, experience, organization, and motivation. The relationship between intrinsic and extrinsic task motivation explains many of the forces that combine to formulate the decision making process for the

cardholder on a daily basis. Figure 7 illustrates the relationship between internal or intrinsic motivation and external or extrinsic motivation.

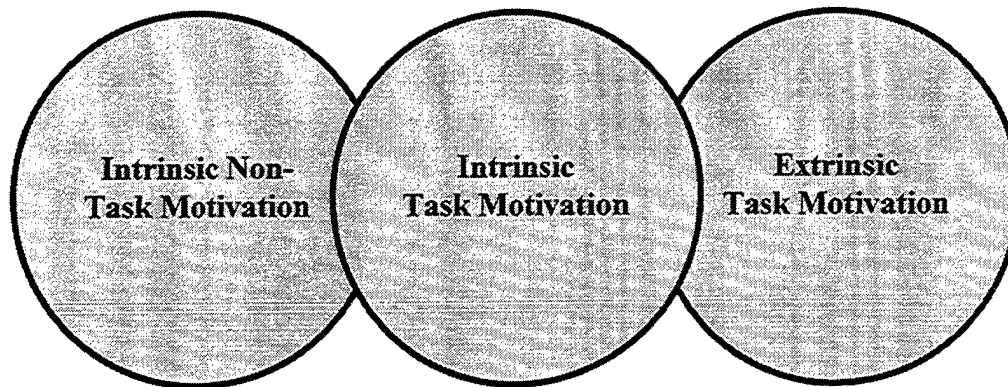


Figure 7. Task Motivation Relationship (Thomas & Jansen, 1997).

Intrinsic nontask motivation is the benefit perceived by the cardholder for belonging to the organization (Thomas & Jansen, 1996). The cardholders and approving officials within MARFORRES, for example, place significant value upon being Marines. Most are proud of serving the unit that they are assigned to and the civilian communities within which they serve. The desire to excel is another element of intrinsic nontask motivation. It is not specific to one task, but may occur in the performance of many or all tasks. The individual desire to excel can be likened to Henry Murray's definition of the "need for achievement – a need to overcome obstacles and attain a high standard...to increase self regard by the successful exercise of talent" (Murray, 1938). In the tradition of Deming, many cardholders and approving officials within DoD realize that doing any job well has its own rewards. Those rewards are far deeper than simply earning a paycheck or pleasing a supervisor. Many Marines strive for excellence for its own sake.

Pinder described achievement motivation as “a struggle against one’s own standard of excellence” (Pinder, 1964).

Extrinsic task motivation is factors such as pay, recognition, praise, and awards (Thomas & Jansen, 1996). The cardholder generally receives these benefits through the approval and recommendations of others. The value of extrinsic task motivation is directly proportional to the value that the cardholder places upon specific extrinsic rewards. Pay and benefits are earned based upon whether or not the cardholder is serving on active duty and not directly tied to his or her performance as a cardholder. Awards can diminish in value as the cardholder becomes more senior within the organization. This is particularly true with the U.S. military. In the last two decades, the value of each reward, normally a medal or ribbon, diminished as the total amount of medals (and ribbons) proliferated. Simultaneously, the criteria for earning the medal became less and less meaningful. Recognition as leaders and dependable subject matter experts is possibly the most significant extrinsic motivation for most cardholders and approving officials in MARFORRES.

Intrinsic Task Motivation is “the positively valued experiences that individuals get directly from their work tasks” (Thomas and Velthouse, 1990). The cardholder or approving official’s sense of intrinsic nontask motivation and extrinsic task motivation enhance the Intrinsic Task Motivation that the cardholder perceives on a daily basis in the performance of his or her cardholder or approving official duties (Thomas & Jansen, 1996).

3. A Cardholder Intrinsic Task Motivation Model

After studying the works of experts in the field of motivation such as Deming, Hackman and Oldham (1975, 1976), Deci (1995), and Thomas (1996, 1997, 2000), one can devise a model to illustrate the motivation shared by cardholders and approving officials at MARFORRES. The model below portrays the factors contributing to cardholder and approving official Intrinsic Task Motivation, performance, and task satisfaction.

a. Task Dimension: Criticality

Task dimensions are those parameters that define the decision-making environment for the cardholder or approving official. This dimension is derived from the Hackman and Oldham model of job design as an influence upon intrinsic motivation (Hackman & Oldham, 1975). This model proposes that an individual is motivated by the perceived importance of the task. In this research context, that decision can be based largely upon individual perception of how important or critical the purchase card and its associated tasks are to the work section and to the unit. Most cardholders and approving officials, particularly those who are on reserve unit staffs, have several responsibilities of varying importance that are often not related to the purchase card. For example, a staff sergeant on a reserve staff may fill the billets of logistics officer and logistics chief. Under those two billets lie embarkation, food service, supply, transportation, ordnance, armory, maintenance and possibly several others – including purchase cardholder. The amount and quality of the time that the cardholder or approving official devotes to managing his or her duties can be a direct reflection of how he or she perceives the criticality of those duties to the section, unit, and to him or herself.

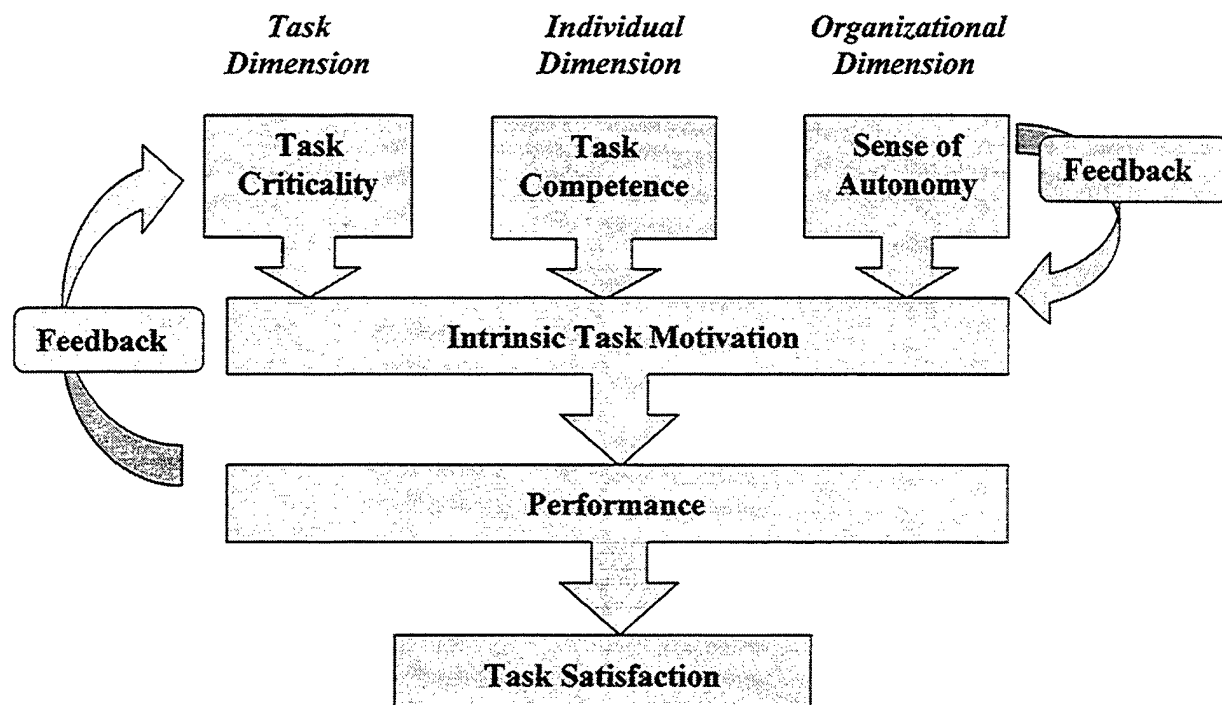


Figure 8. Cardholder/Approving Official Intrinsic Task Motivation Model.

b. Individual Dimension: Task Competence

Task competence is the cardholder or approving official's perception of how well he or she is prepared to perform duties such as market research and reconciliation of account statements. According to Deci, the perception that one is truly effective is a reward in itself and intimately related to intrinsic motivation (Deci, 1995). Thomas and Tymon describe Task Competence as one of the fundamental building blocks of intrinsic motivation (Thomas & Tymon, 1997). The perception of competence is the cumulative amount of all types of training, fiscal maturity, experience, and professional development. Training includes purchase card training as well as the degree of both formal and informal supply procedures training and other administrative or managerial type training that all cardholders receive through the course of their employment with the Government. Fiscal maturity is a measure of how much experience

and training the cardholder has with fiscal management both professionally and privately. Within DoD, there are cardholders who have advanced degrees in finance sharing the same amount of cardholder responsibility with others who have never even had a checking account. Of course, a large degree of their sense of competence results from performing the cardholder's duties through several billing cycles. Lastly, professional development is the totality of training designed specifically to enhance leadership qualities. Strong leadership skills are considered to be inherent to being a Marine. The integrity and personal responsibility expected of cardholders and approving officials within MARFORRES are intimately tied to leadership development.

c. Organizational Dimension: The Sense of Autonomy

The sense of autonomy is the perceived measure of how much flexibility the cardholder enjoys in carrying out his or her duties. According to Deci, autonomy is the basis for continued growth. It allows the individual to "experience themselves as themselves – as the initiators of their own actions" (Deci, 1995). Thomas and Tymon expand the notion of autonomy beyond the individual's experiences as "initiators of actions" to the idea that an autonomous individual experiences a sense of "personal responsibility for the outcomes" of their task performance (Thomas & Tymon, 1997).

The shift to a more horizontal workforce due to reductions in the acquisition workforce within DoD has fostered a greater sense of procurement autonomy at the user level. Simultaneously, the purchase card program also removed many layers of oversight that existed in traditional procurement environment. The nature of the Marine Forces Reserve places significant distance between the cardholder and his or her approving official and the agency program coordinator. This lack of direct management

requires that the cardholder be prepared to make the appropriate procurement decisions at all times. The purchase card program is built upon delegation of contracting authority to the user level. Trusting the user to make appropriate choices and perform the basic periodic requirements such as monthly reconciliation is paramount to the success of the program. It is left to the cardholder to find a way to complete the required tasks despite the situation – even though it is possible for the cardholder to be deployed on short notice to anywhere in the world. Citidirect greatly facilitates management of the account as long as the geographic location or naval vessel supports Internet access. Yet, the choice of what to buy, where to buy it, and what products represent best value procurement is often left almost entirely to the cardholder.

d. Intrinsic Task Motivation

The Hackman and Oldham job characteristics model ties high-quality task performance to an “experienced meaningfulness of work” (criticality), perceived responsibility for work outcomes (autonomy), and knowledge of the results of one’s labor (feedback) (Hackman & Oldham, 1975). The proposed model of Cardholder/Approving Official Intrinsic Task Motivation places these ideas plus the notion of the desire to excel within the context of task dimensions, organizational dimensions, and individual dimensions (refer to Figure 8). If the cardholder or approving official knows that the task is important and that he or she is capable of doing the job, there is an incentive to not just do the task, but to do it well. As the cardholder or approving official becomes more experienced and competent, he or she will be granted increasing levels of discretion in the performance of those duties (autonomy). The intermediate result is the Intrinsic Task Motivation experienced by the cardholder or approving official – the perceived

psychological rewards that he or she derives from performing his or her duties (Thomas & Velthouse, 1990).

e. Performance

The essence of the MARFORRES Governmentwide Commercial Purchase Card Program is cardholder and approving official self-management. The program succeeds because the individual stakeholders are committed to the tasks themselves. According to Thomas, the stakeholders are doing what they believe is best for the program, their customers, their units, and themselves. The Intrinsic Task Motivation provides the basis with which they approach uncertainties or gray areas and motivate them to do their best when no one is paying attention (Thomas, 2000). When Intrinsic Task Motivation is high, the task outcomes result in exceptional customer service, accurate management of cardholder records, and timely dispensation of monthly invoices by both cardholders and approving officials.

f. Feedback

The last step in the self-management process is the measure of progress toward a worthwhile end (Thomas, Jansen & Tymon, 1997). For the cardholders at MARFORRES that measure is feedback. It has many possible forms including comments from customers, supervisors, Citibank, other members of the unit, higher headquarters, and self-assessment. Feedback can be immediate and very powerful. Purchases made by the cardholder can quite literally be the determining factor in whether there will be a hot meal for the unit undergoing cold weather training at 10,000 feet or cold water for fellow Marines training on the desert floor.

In the Cardholder/Approving Official Intrinsic Task Motivation Model, feedback is cyclical. It is a result of the performance of cardholder and approving official duties, as well as a contributing factor to Intrinsic Task Motivation. Unlike other models, cardholder and approving official feedback is the measure of both positive and negative comments. Marines in supporting roles expect negative feedback when the customer perceives some deficiency (real or imagined) in their performance. Poor performance can have devastating affects for the customer and their unit. Exceptional attention to duty is expected if not demanded. It is essential to self-management to be able to see how one's decisions are affecting the final outcome of a task. The degree and quality of feedback provides the cardholder with the assurance of knowing that he or she is making progress and a difference as opposed to simply hoping that he or she is (Thomas, Jansen, & Tymon, 1997).

g. Task Satisfaction

Along with the other elements that exist in the cardholder and approving official's working world, Intrinsic Task Motivation is a very important underpinning for an individual's task satisfaction (Thomas & Jansen, 1997). Obviously, things like operations tempo and family pressures can severely degrade the satisfaction that any cardholder or approving official derives from the performance of his or her duties. But, when one examines a large population, it is possible to determine the main contributors to intrinsic cardholder and approving official motivation as well as their relative importance in the creation of task satisfaction. This knowledge may be used to find risk areas within the MARFORRES commercial purchase card program that require managerial risk

mitigation efforts now, as well as areas that if reinforced will likely result in improved cardholder and approving official work processes and performance.

The Cardholder/Approving Official Survey discussed in the next chapter was designed to capture cardholder and approving official perceptions concerning the three dimensions of the cardholder/approving official task motivation model, the sources, frequency, and quality of feedback, as well as level of task satisfaction. With a sample of cardholders and approving officials from MARFORRES, it will be possible to examine and validate the proposed model for Intrinsic Task Motivation illustrated in Figure 9.

E. SUMMARY

This chapter presented an overview of the Government Commercial Purchase Card Program at MARFORRES. Since its establishment in 1993, the program has grown to over 800 active accounts. During that time, the purchase card provider changed from RMBCS to USBank, and again to the current provider, Citibank. With each year, cardholder, approving official, and agency program coordinator management became more and more sophisticated. The Internet brought online management through Citidirect and the hope of a totally paperless system. These changes occurred at a time when Government procurement personnel and facilities were being cut significantly. The drastic reduction in contracting capability was offset by the delegation of contracting authority made possible by the purchase card.

The success of the purchase hinged largely upon the ability of the cardholder and approving official to effect or oversee proper transactions and to perform the necessary management functions to ensure best value procurement at fair prices. As a result of

successful cardholder and approving official management processes, the cost of effecting small purchases dropped from a conservative estimate of \$132.00 per transaction to \$30.00 (or less) per transaction.

The motivational factors that formulate cardholder and approving official self-management lie at the heart of the Governmentwide Commercial Purchase Card Program. A model was devised to gauge the importance of factors such as task criticality, task competence, the sense of autonomy, and feedback as inputs to individual cardholder and approving official Intrinsic Task Motivation and Task Satisfaction. Chapter IV describes the methodology for testing the Cardholder/Approving Official Intrinsic Task Motivation Model.

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IV. RESEARCH METHOD

A. PURPOSE

The intent of this research is to assess the relationship between intrinsic and extrinsic factors and self-motivation among Marine Forces Reserve Governmentwide Commercial Purchase cardholders and approving officials. Following the models presented in Chapter III, a survey was devised to capture the relative valuation of intrinsic and extrinsic sources of motivation. In addition, the survey data can be used to evaluate the relative impact of the elements of Intrinsic Task Motivation on task satisfaction and performance.

B. BENEFITS OF THE RESEARCH

This research identifies many of the distinguishing characteristics of the sample of cardholders and approving officials who participated in the survey within MARFORRES.

On the survey, participants identified:

- Background and experience characteristics
- Sources and amounts of initial cardholder and approving official training
- How confident they were in performing their duties upon receiving initial training and how confident they are today
- How important they perceive the GWPC program to be in their section, unit, and within their own duties
- How free they feel they are to make choices concerning how they manage their portion of the program
- The sources of their motivation in the performance of their duty
- The main sources of feedback related to performance
- How likely they are to respond to that feedback

- How satisfied they and others are with the performance of their cardholder and approving official tasks

The cardholders and approving officials who participated in the survey also were encouraged to provide comments on how to improve quality of training as well as the most significant problems that they have faced in the performance of their duties.

The responses to the survey were analyzed to show the intrinsic and extrinsic nontask and task elements that have the largest impact on how the cardholders and approving officials perceive the quality of the performance of their duties as well as how satisfied they are with how they accomplish their tasks.

The results of the data collection and analysis will be made available as an aid to GWPCPC program management and decision making at the MARFORRES Contract Office.

C. RESEARCH PARTICIPANTS

The survey was sent electronically by the MARFORRES Contracting Officer to approximately 72 approving officials. He asked the approving officials to forward the survey to the cardholders within their areas of responsibility. All 808 (as of 29 September 2000) active account holders could have potentially participated in the survey. The sample included the Agency Program Coordinator, 72 approving officials, and up to 735 active cardholders. The exact number of participants cannot be known given the possibility that an unknown number of the sample may have stopped performing cardholder or approving official duties during the survey period, never received the survey, or were unable to access their electronic mail or Lotus Notes accounts during the survey period.

D. RESEARCH PROCEDURE

The MARFORRES Agency Program Coordinator was instrumental in facilitating the survey process. The survey was attached to an electronic mail message with links to a downloadable Microsoft Word file or to a Lotus Notes Database. The respondent was informed that should he or she desire to remain totally anonymous, the Word version should be downloaded, filled out electronically or by hand, and forwarded directly to the researcher. The participants could email, fax, or mail their completed surveys to the researcher. All other respondents could utilize the Lotus Notes version for immediate capture in a MARFORRES Contracting Office database. The results of the Lotus Notes based surveys were emailed to the researcher by the APC.

E. CARDHOLDER/APPROVING OFFICIAL SURVEY

The survey appeared to the respondents in a Lotus Notes format that allowed the participant to select drop down windows and indicate answers directly into a Notes database. (A complete form of the survey questions is given in Appendix A.) As mentioned earlier, if the participant desired to remain anonymous, he or she could download the Microsoft Word version and respond directly to the researcher.

The survey was designed to be easily completed and captured in either a Lotus Notes database or within some other spreadsheet program like Microsoft Excel. Progression through the survey followed the same path that one would take while progressing through the Cardholder/Approving Official Intrinsic Task Motivation Model introduced in Chapter III.

1. Elements of the Survey

a. Background and Experience

This section of the survey is designed to provide the researcher with an understanding of several key background characteristics of the survey sample (see Appendix A). Question 1 asks the survey participant to indicate if he or she is a cardholder or approving official and for how long. Cardholders are also asked to indicate if they are purchase type cardholders or are authorized For Payment Only (FPO). Question 2 captures the level of procurement experience that the participant had prior to becoming a cardholder or approving official. It is possible the cardholder might have five years or more experience in some procurement position. Conversely, many cardholders have no formal prior experience in Government procurement. Question 3 asks the participant to identify the average number of purchases made each month using the purchase card. The number is likely to vary widely between none in the case of some approving officials to several dozen for some cardholders. Question 4 provides the average age of the participants.

Questions 5 and 6 are designed to provide the researcher with information concerning what percentage of the cardholders have a checking account and at least one major credit card and how long they have held them. These are indicative of fiscal maturity. It is possible that participants do not have personal credit cards, yet perform all the duties of a Government purchase cardholder. Question 7 asks participants to provide their current job description. From this question, one can determine who is most likely to be an approving official or cardholder within MARFORRES. Question 8 provides the

respondents' rank or grade within the organization. These data were used to identify which ranks are most likely to perform the cardholder and approving official duties.

Levels of experience as cardholders or approving officials, prior experience in procurement, age, and the fiscal maturity, represented by maintaining checking accounts and credit card accounts, may contribute to the perceived levels of task competence in the Intrinsic Task Motivation Model.

b. Task Competence

In the Cardholder/Approving Official Intrinsic Task Motivation Model introduced in Chapter III, the sense of task competence is the individual-level factor of Intrinsic Task Motivation. In addition to experience, the amount of training may be reflected in the level of perceived initial and current competence among survey participants. Question 9 asks participants to identify the amount of training that they received before assuming their duties as cardholder or approving official. Because training can come from a number of sources (Internet based, CD-ROM based, and classroom instruction), participants were also asked to identify the sources (Question 10). Most training is now conducted via an Internet based tutorial. Before that, cardholders received their initial training from CD-ROM based tutorials and formal classroom instruction. Other types of instruction might include training conducted during the turnover of billet holders, self-taught, or on-the-job. With enough responses, the researcher can examine the relationships between the amount and type of training and the feelings of competence that cardholders and approving officials felt when they assumed their duties.

Question 11 asked whether participants have completed follow-up training. All approving officials and cardholders are required to complete refresher training within two years of receiving the initial training. With this question, the researcher can examine relationships between the incidence of follow-up training and the level of competence that the respondents currently perceive. Question 12 assesses the amount of competence that participants felt they had when they first assumed their duties as cardholder or approving official. This question and all of the "rating" questions to follow use a 6-point Likert-type response format with only the two anchor points defined. For Question 12, 1 was "very low" and 6 was "very high." Question 13 assesses the respondent's perception of current competence using a rating format similar to that in Question 12. The questions are:

- How high did you feel your level of competence was when you assumed your duties as cardholder or approving official?
- How competent in your duties as cardholder or approving official do you feel you are today?

Question 14 is an optional open-ended question that allowed the participant to provide suggestions for improving both the initial training and the follow-on training.

c. Task Criticality

In the Cardholder/Approving Official Task Motivation Model, perceived Criticality of Tasks is the major indicator of the Task Dimension contributing to intrinsic motivation. This section of questions is designed to elicit participant perceptions of the importance of quality to various stakeholders as well as the number of hours per week that the participants dedicates to performing his or her cardholder or approving official

duties. The participant indicated how important the quality of his or her work is to his or herself and to the section or unit. The perceived importance of quality will provide a sense of how meaningful cardholder and approving official tasks are to the participant. Meaningfulness is the opportunity that the participant perceives he or she has to pursue a worthy task purpose (Thomas & Jansen, 1997). The level of meaningfulness in the task dimension will lead to a measure of how important the quality is to overall cardholder and approving official Task Satisfaction in the Task Motivation Model.

Questions 15-17 present three sources of meaningfulness or Task Criticality. Each uses a 6-point Likert-type rating format as shown for Question 12 with anchors being 1 = not so important to 6 = very important. The questions are:

- How important to you is the quality of your work as cardholder or approving official?
- How important is the quality of your cardholder or approving official work to your section or unit?
- How much impact does the quality of your work as a cardholder or approving official have on the ability of others in your organization to accomplish their mission?

Question 18 provides the participant with a range of values to indicate the number of hours he or she dedicates to the performance of task performance. This indicator will vary significantly among cardholders, approving officials, and different billets holders such as supply chiefs versus personnel clerks.

d. Sense of Autonomy

Thomas and Jansen (1997) have found that authority and trust are two key building blocks of the sense of choice that workers have in performing their duties. A sense of choice can only be experienced to the extent to which autonomy is allowed by

the organization. Workers with authority to make decisions regarding the critical task elements of their duties are likely to have greater job satisfaction (Thomas & Jansen, 1997). Additionally, the perception that they are trusted to use that authority is another critical indicator of job satisfaction (Thomas & Jansen, 1997). This section allows survey participants to indicate their perceived level of decision-making autonomy, freedom to disapprove illegal or questionable purchase requests, and if they have ever effected a transaction that they knew was illegal or questionable – “not right.”

Questions 19 and 20 use a 6-point rating format where 1 = “very little” and 6 = “to a great degree.”

- To what degree do you feel that you are free to make decisions regarding how you manage your cardholder or approving official duties?
- Do you feel that you can say no to illegal or questionable purchase requests without repercussions?

Question 21 asked participants to indicate (yes or no) if they have ever effected a purchase card transaction that they felt was illegal or questionable. Honest answers will provide the researcher with indicators of what percentage of the participants disagreed with purchases but effected them anyway. The question does not allow for differentiation between illegal actions and questionable actions. Questionable actions could be purchases that were effected in spite of the existence of contrary guidance or other priorities that the participant felt were a better use of limited funds.

e. Intrinsic and Extrinsic Rewards

As illustrated in Figure 7 of Chapter III, motivation can be derived from extrinsic factors (e.g., bonuses, commendations, or threat of sanctions), intrinsic nontask

factors (a general desire to excel) or intrinsic task factors. This section is intended to define the chief sources of both intrinsic and extrinsic task motivation.

Question 22 asked participants to rank the likely sources of their motivation in order of importance to him or her. Serving their customers and unit is Intrinsic Task Motivation item (meaningfulness). Receiving advancement, avoiding negative consequences, and pleasing supervisors are extrinsic motivational factors. These indicators are largely dependent upon rewards and punishments controlled by others. The pursuit of overall excellence is an intrinsic nontask motivational factor that the participant feels independent of the specific nature of the task (i.e., general desire to excel). The format of this question and instructions are presented below:

- Assuming you are the best cardholder or approving official in your organization, why do you excel? Rank in order of importance to you personally from #1 (most important) to #6 (least important). Use each number only once.
 - o I have made serving my customers a personal priority
 - o I have made serving my unit a personal priority
 - o I have made receiving advancement or awards a personal priority
 - o I have made overall excellence a personal priority
 - o I fear the consequences of doing the job poorly
 - o I have made pleasing my supervisor a personal priority

f. Feedback

This section of the survey is designed to provide indicators of the importance and incidence of various types of feedback to the cardholder and approving official. While studies have shown that positive feedback increases intrinsic motivation (Thomas & Jansen, 1997), this section considers both positive and negative feedback.

The sources of feedback vary between interpersonal communication between customers, supervisors, and the participant, as well as electronic media. It is possible that a cardholder might rarely if ever speak directly to his or her customers. Approving officials may perform their duties in reserve centers several thousand miles distant from their immediate supervisors.

Question 23 allowed the participants to rank the primary sources of feedback in order of frequency. The format and instructions are presented below:

- How do you know how well you are performing your duties as a cardholder or approving official? Rank in order of frequency from #1 (most frequent) to #6 (least frequent). Use each number only once.
 - o Comments from your customers
 - o Comments from vendors
 - o Comments from your supervisors
 - o Comments from your higher headquarters
 - o Comments from Citibank
 - o Other. Specify

Question 24 asked participants to rate how important the feedback that they receive is to them as a cardholder or approving official using a Likert-type scale where 1 = "not so important" and 6 = "very important." Question 25 asked participants to rank the usefulness (1 = "most useful" to 6 = "least useful") of the feedback that they receive from the same set of sources used in question 23. Question 26 asked participants to rate how likely they are to be affected by the feedback that they receive. Specifically, how likely are they to modify how they perform their duties as a cardholder or approving official (1 = "not very likely;" 6 = "very likely").

g. Task Satisfaction and Performance Quality

This section assesses the overall impact of the previous four sections dealing with task competence, task criticality, the sense of autonomy, extrinsic and intrinsic rewards, and the affect of feedback. According to the theoretically derived model presented in Chapter III, the participants' perceptions of quality of work performance and work satisfaction are likely to reflect the Task, Individual, and Organizational Dimensions of the Cardholder/Approving Official Task Motivation Model.

Question 27 is a rating measure of how satisfied the participant is with his or her performance as a cardholder or approving official (1 = "not very satisfied;" 6 = "very satisfied"). Responses to this question form the basis for the measurement of Task Satisfaction in the proposed Task Motivation Model. Question 28 is a measure of how well the participant feels his or her performance as a cardholder or approving official is perceived by customers, supervisors, and the organization (1 = "not very satisfied;" 6 = "very satisfied"). It provides the input for measuring the Performance aspect of the Task Motivation Model.

h. Optional Questions

Questions 29 and 30 were optional questions regarding program problems and information for contacting the participant. Question 29 was an open-ended question that provided the participant the opportunity to identify the most significant problem(s) that they encounter in the performance of their duties as cardholder or approving official

at MARFORRES. Question 30 allowed participants to provide information by which they could be contacted if they desired to participate further in the survey process.

F. ANALYSIS

The survey was designed for the capture of participants' responses in a Lotus Notes Database maintained at the MARFORRES Contracting Office or in a spreadsheet like Microsoft Excel. As the survey progressed, all responses were collated into one Microsoft Excel spreadsheet. Participants who left questions blank (excepting the optional responses) or who failed to follow the instructions in answering were contacted by telephone or e-mail to correct the discrepancy. When the bulk of the responses were gathered, the spreadsheet was exported into a Statistical Package for Social Sciences (SPSS) program file for statistical analysis. The SPSS program will allow for presentation of simple statistics, such as the ranks or ages of the participants, as well as analysis of connections between such items as level of training and perceived competence. Finally, SPSS will allow the researcher to evaluate the Cardholder/ Approving Official Task Motivation Model by examining the relationship between contributing factors of intrinsic motivation (i.e., competence, autonomy, feedback, task criticality) and resulting performance and satisfaction.

G. SUMMARY

This chapter discussed the methodology of this research. The purpose and benefits of the research were briefly highlighted as an aid to decisionmaking within the Marine Forces Reserve Contract Office. The research sample was defined as those cardholders and approving officials within MARFORRES who participated in the survey. The primary research procedure was a 30-question survey of various elements of the

Governmentwide Commercial Purchase Card Program at MARFORRES including background of the participants, training, perceptions of Task Criticality, Task Competence, the Sense of Autonomy, and sources and impact of Feedback. Each element of the Cardholder and Approving Official Survey was discussed as a means for testing the hypothetical Cardholder/Approving Official Intrinsic Task Motivation Model, as was the proposed analysis of the survey results. Chapter V will present those results and their analysis.

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V. SURVEY DATA PRESENTATION AND ANALYSIS

A. INTRODUCTION

This chapter contains the results and analysis of the Cardholder and Approving Official Survey that was made available to all cardholders and approving officials within the Marine Forces Reserve. All tables in this chapter were created by the researcher using data from the survey.

B. SURVEY PARTICIPATION

The Cardholder and Approving Official Survey was created with the assistance from the Agency Program Coordinator at MARFORRES HQ in New Orleans, Louisiana. She made the survey available to all MARFORRES approving officials via a Microsoft Word file or via a Lotus Notes Database. The MARFORRES Contracting Officer asked the approving officials to forward the survey electronically to all of their subordinate cardholders. Under this method of distribution, the survey could have been made available to all of the 808 account holders (current as of 29 September) within the MARFORRES Governmentwide Commercial Purchase Card Program. It is not possible to determine what percentage of the cardholders and accounting officials actually received either version of the survey. Survey comments made by the approving officials indicate that an unknown number of potential respondents were unable to participate for various reasons including deployments, business travel, and leave.

Of the possible 808 participants, 114 returned usable surveys that were at least partially completed. Of the number that were incomplete or incorrectly filled out, all but

ten were eventually completed fully and in accordance with the instructions. This was accomplished by the proactive quality control efforts of the APC and the researcher. Assuming that all cardholders and approving officials were at least aware of the survey, the response rate was 14.1%.

C. SURVEY RESULTS

1. Participant Background and Experience

a. *Question 1 Results and Analysis*

All participants were either a cardholder or an approving official. The length of time that they could have held one or both of the billets varied significantly from one month (or less) to several years. The cardholder could hold a purchase for purchases or For Payment Only as discussed in Chapter III. The frequency distribution and descriptive statistics of the responses are captured in Tables 1 and 2 respectively.

	Type	Frequency	Percent
Valid	AO	28	24.6
	CHP	69	60.5
	CHPO	17	14.9
	Total	114	100.0

Table 1. Frequency of Cardholders and Approving Officials.

All 114 participants indicated that they were one of three possible types of account holder: 1. Approving Official (AO), 2. Cardholder – Purchase (CHP), or 3. Cardholder – For Payment Only (CHPO). Approving officials accounted for 24.6% of the participants, while cardholders – purchase and cardholders – For Payment Only accounted for 60.5% and 14.9% respectively.

All 114 participants provided an estimate of the number of years and months that they have performed the duties of cardholder, approving official, or both.

The greatest percentage of participants or 15.2% estimated that they had held the billet for about a year. Of the total sample, 36.4% indicated that they had held the billet for 12 months or less. The sample mean was 23.33 months with a standard deviation of 17.27.

	N	Minimum	Maximum	Mean	Std. Dev.
Months Using Program	114	1	96	23.33	17.27
Prior Experience	114	0	185	17.10	34.92
No. of Purchases per Month	114	0	300	14.43	31.06
Current Age	114	20	50	30.63	5.64
No. of Years with Checking Acnt	114	0	30	11.99	6.37
No. of Years with Credit Card Acnt	114	0	25	9.46	5.54

Table 2. Cardholder and Approving Official Background.

b. Question 2 Results and Analysis

All 114 participants indicated if they had any prior experience in Government procurement before becoming a cardholder or approving official. Of the total sample, 65.7% indicated that they had zero prior experience in Government procurement before becoming cardholders or approving officials. Cardholders and approving officials with two years or less prior experience made up a total of 76.8% of the total sample. The mean was 17.1 months of prior experience with a standard deviation of 34.92. The large number of supply chiefs who participated in the survey represented the bulk of the prior experience.

c. Question 3 Results and Analysis

Question 3 asked for the average number of purchases on a monthly basis. Of the total sample, 13.1% made zero purchases on a monthly basis. These included approving officials with no direct micropurchase requirements and cardholders who were

only recently appointed. Of the remaining sample, 82.9% made between 1 and 30 purchases per month. The mean number of monthly purchases was 14.43 with a standard deviation of 31.06.

d. Question 4 Results and Analysis

Of the 114 participants, all provided their age. Of the total sample, 15.2% were between the ages of 20 and 25 and 50.5% were between the ages of 20 and 30. The mean age of the participants was 30.63 with a standard deviation of 5.64 (see Table 2). This mean reflects the fact the most of this sample is older having completed one or more tours with the active Marine Corps before being screened for service on MARFORRES unit staffs. Consequently, MARFORRES cardholders are typically older than the average cardholder in the active duty Marine Corps.

e. Question 5 Results and Analysis

All 114 participants indicated if they maintained a checking account and how long they have maintained it in years. The responses were not further reduced into months as in previous questions. The mean for the sample was 11.99 years with 3.3% indicating that they did not maintain a checking account (see Table 2).

f. Question 6 Results and Analysis

All 114 participants indicated if they maintained a personal credit cards and how long they have maintained them in years. The responses were not further reduced into months. The mean number of years that they had held at least one personal credit card was 9.46 years with 6.6% indicating that they did not hold any personal credit cards (see Table 2).

g. Question 7 Results and Analysis

All 114 participants indicated their current billet. Table 3 is a frequency distribution of the responses. Supply personnel accounted for the largest portion of the sample. Supply chiefs made up 30.7% of the participants with supply officers accounting for an additional 14%. Fiscal chiefs were the third most populous group at 13.2%.

Billet	Frequency	Percent
Admin Clerk	6	5.3
APC	1	.9
Corpsman	2	1.8
Embark NCO	2	1.8
Fiscal Chief	15	13.2
Fiscal Clerk	2	1.8
Fiscal Officer	1	.9
I&I Staff	4	3.5
Legal Clerk	1	.9
Logistics Clerk	2	1.8
Logistics Officer	3	2.6
MAGTF Planner	1	.9
Maintenance Chief	3	2.6
NCOIC	2	1.8
Personnel Clerk	2	1.8
Supply Chief	35	30.7
Supply Clerk	13	11.4
Supply Officer	16	14.0
Training NCO	1	.9
Unit Diary Chief	1	.9
Unit Dispatcher	1	.9
Total	114	100.0

Table 3. Participant Billets.

Supply clerks were the fourth most populous group with 11.4%. The other billets indicate the dispersion of micropurchase authority across MARFORRES. They included individuals from administrative, personnel, logistics, motor transport operations, maintenance, and operations (training) sections. Two U.S. Navy corpsmen responded as well. Only one civil servant (the APC) participated. This ratio of 113 to 1 differs

significantly with the purchase card program at the Naval Postgraduate School. At NPS, over half of the cardholders are civil service employees in the grades of GS-4 and GS-5 (Moore, 2000).

h. Question 8 Results and Analysis

All 114 participants indicated their rank or grade. Table 4 is a frequency distribution of the responses. This frequency distribution portrays the dispersion of micropurchase authority throughout the MARFORRES rank structure.

Rank	Frequency	Percent
E-3	2	1.8
E-4	16	14.0
E-5	29	25.4
E-6	24	21.1
E-7	18	15.8
E-8	5	4.4
GS-09	1	.9
O-3	14	12.3
O-4	4	3.5
O-5	1	.9
Total	114	100.0

Table 4. Participant Rank/Grade.

Of the total sample, 41.2% were sergeants (E-5) and below. Captains (O-3) accounted for 12.3%. There were no Second or First Lieutenants (O-1 or O-2) represented. This is in part due to the fact that most junior officers complete one tour in the active duty Fleet Marine Force (FMF) before transferring to fill I&I Staff billets. Many of the supply officers in similar units in the active duty FMF would be Lieutenants with far less experience in Government procurement. There were also only two Lance Corporals (E-3), while many cardholders in the active duty FMF are Lance Corporals and Corporals (E-4).

2. Participant Training and Perceptions of Competence

a. Question 9 Results and Analysis

All 114 participants indicated the amount of initial training that they completed. The mean number of hours of training completed before assignment as a cardholder or approving official was 7.03 with a standard deviation of 9.9. A frequency analysis revealed that 66.7% of the sample completed six hours or less, while 81.7% indicated that they completed eight hours or less. Of that percentage, 4.4% completed zero hours of formal training before assuming their duties. In these cases (zero hours), the participant was assigned the duties of approving official or cardholder as part of the billet they assumed. They indicated that their primary source of training upon assuming the billet was on-the-job and turnover from the former billet holder.

The average number of hours of initial training reported in this survey is less than a 1995 cardholder survey conducted at the Naval Air Warfare Center, Weapons Division, China Lake, CA. In that survey sample of 141 cardholders (no approving officials), the average number of initial training hours completed was 8.2 hours or 14.3% more than the MARFORRES survey sample (Zayas, 1995).

b. Question 10 Results and Analysis

All 114 participants indicated the type of initial training that they completed. Table 5 portrays the frequency distribution of the responses. For purposes of this survey, CD represented compact disc based training. IB represented Internet based training. CR represented classroom instruction and other was anything else that the participant felt was some form of training. The participants who chose "other" had only

on-the-job or turnover training before assuming their billets. Compact disc type instruction was the most common among the survey participants with 31.6%.

Type Training	Frequency	Percent
CD-ROM (CD)	36	31.6
CD & CR	11	9.6
Classroom (CR)	11	9.6
Internet Based (IB)	29	25.4
IB & CD	11	9.6
IB & CR	8	7.0
IB & CR & CD	4	3.5
Other	4	3.5
Total	114	100.0

Table 5. Participant Initial Training Type.

Internet based training accounted for another 25.4%. Only 9.6% indicated that they had completed classroom training and no other type. Another 26.2% had completed some combination of the three sources of formal training, and 3.5% indicated that they had received training via all three media.

c. Question 11 Results and Analysis

All 114 participants indicated whether or not they had received follow-up training. Table 6 portrays the frequency distribution of the responses.

Yes / No	Frequency	Percent
N	34	29.8
Y	80	70.2
Total	114	100.0

Table 6. Incidence of Follow-Up Training.

According to DoN purchase card regulations, Cardholders and approving officials are also required to complete refresher training on a biannual basis for as long as they fill their billets (NAVSUP, 1999). A frequency distribution from Question 1

revealed that 60.5% of the respondents had been cardholders for two years or less. Yet, 70.2% of the total sample has already received some type of follow-up training.

d. Questions 12-13 Results and Analysis

All 114 participants indicated how competent they felt upon assuming their billets. Table 7 portrays the descriptive statistics of the responses. On a scale of 1

Competence	N	Mini	Maxi	Mean	Std. Dev.
Comp Then	114	1	6	3.88	1.23
Comp Now	114	1	6	5.04	.82

Table 7. Mean Rating of Initial and Current Competence.

to 6 (1 being “very low” and 6 being “very high”) the mean response was 3.88 with a standard deviation of 1.23. This level of perceived competence is a result of prior experience in Government procurement as well as the completion of initial training. In contrast, “competency now” has a mean response of 5.04 with a standard deviation of .82. This represents an increase of 1.16 in perceived competence since they first assumed their duties as cardholders and approving officials. Of the total sample, 53.5% indicated perceived competence as “very high.” A T-type test revealed that perceptions of competence now (Comp Now) were significantly higher than perceptions of initial competence (Comp Then). The T value was 10.47 significant to .001.

The researcher also tested for possible differences in perceived initial competence as a result of the source of initial training. Survey participants were divided into three groups: 1. Those who received Internet-based training; 2. Those who received CD-ROM training; and 3. Those who received classroom or some combination of all three principal sources (see Table 5). An analysis of variances (ANOVA) test was conducted to compare the mean ratings of initial competence for these three groups. The overall

result was the F-test with a value of 2.78 significant to the .067 level. Given the small sample size, .067 was assumed to be significant. A post hoc comparison of means using the Least Significant Difference test revealed that the group who received training using CD-ROM had a significantly lower mean rating of initial competence (mean=3.41) than either the group with Internet based training (mean=3.97) or the group representing combinations of CD-ROM, Internet based, and classroom type training (mean=4.07) (difference significant to the .10 level).

e. Question 14 Results

Question 14 was an optional open-ended question that allowed the participant to provide suggestions for improving both the initial training and the follow-on training. Of the sample, 28% elected to provide some type of comment. Eight participants suggested that the Internet based and CD-ROM training is inadequate in some respect. One cardholder stated that he could not understand portions of the CD-ROM instruction. One approving official stated that the initial training was inadequate for the number and variety of oversight functions that he has to perform – “only the best approving officials can catch all of the mistakes that cardholders can make.” Fifteen other participants called for a return to classroom training because one “can get into real trouble with” the Purchase Card. One respondent suggested having a “mandatory 3-5 day class at MARFORRES HQ on a quarterly basis for all new cardholders. The class must be solely for the purpose of teaching Marines purchasing with the Government purchase card and the online system.” Another participant suggested making the “Small Purchase Course” mandatory again. Six respondents requested focused training on accessing and using Citidirect, trouble shooting, and using MARFORRES databases.

Approximately half of the responses in Question 14 suggested that more follow-up type training is required. Twelve respondents called for more workshops or conferences. One Sergeant fiscal chief stated that formal instruction should precede adoption of new procedures (such as e-payment or online reconciliation). Five suggested that, although updates are sent out regularly via e-mail, they should be consolidated periodically (monthly or quarterly) and provided to all units in a standardized media such as CD-ROM.

One Gunnery Sergeant summed up the comments of several others with “I think there is a basic disconnect between the level of experience and training the [4th Marine] Division personnel have and what they expect the using units to have. Approving officials are expected to train their cardholders, but most AOs, I believe, are only basically trained in all the rules and procedures themselves.” According to the Gunnery Sergeant, there should be a standard course of instruction for approving officials to give their cardholders. This course would in effect train both the cardholders and the approving officials at the same time.

3. Criticality of Duties

a. Questions 15-17 Results and Analysis

Three questions evaluated sources of meaningfulness or task criticality. The participants indicated how important the quality of their work as cardholders or approving officials was to them personally (Question 15) and their sections or units (Question 16). The level of importance was indicated by ratings of 1 (not so important) to 6 (very important). Table 8 portrays the descriptive statistics of the responses.

Importance of Quality to:	N	Minimum	Maximum	Mean	Std. Dev.
Self	114	1	6	5.49	.91
Section or Unit	114	3	6	5.39	.83
Impact of Task Quality on Others	114	3	6	5.33	.74

Table 8. Mean Ratings of Importance and Impact of Quality.

In Question 15, the mean response was 5.49 with a standard deviation of .91. Of the sample, 68.4% indicated that they considered the quality of their work as cardholders or approving officials to be “very important” to themselves. In Question 16, the mean level of importance of quality of cardholder or approving official task performance was 5.39 with a standard deviation of .83. Of the sample, 57% rated the level of importance task quality to be “very important.”

Question 17 evaluated how much impact the quality of their work as cardholders or approving officials had on the ability of others in their organization to accomplish their mission. Table 8 shows that the participants felt that the quality of their work as cardholders or approving officials had a high impact upon the ability of others to perform their mission (mean = 5.33). They had an appreciation of the criticality of their tasks with regard to aiding others to accomplish their own tasks. Overall, these three means are statistically equivalent.

b. Question 18 Results and Analysis

All 114 participants provided the estimated number of hours that they dedicated to purchase card activities such as market research and reconciliation. The scale was 1 to 4 with following values: 1 = 1-2 hours per week; 2 = 3-5 hours per week;

3 = 6-9 hours per week; and 4 = 10 or more hours per week. The mean response was 2.26 or between five and six hours per week with a standard deviation of .95. Of the sample 11.4% stated that their weekly duties consumed ten or more hours (see Table 9). Several respondents commented that the amount of work associated with their duties was actually increasing over time.

Hrs per Week	Frequency	Percent
1-2 hrs	27	23.7
3-5 hrs	43	37.7
6-9 hrs	31	27.2
10 or more	13	11.4
Total	114	100.0

Table 9. Number of Hours Per Week.

4. **Autonomy: Freedom to Manage One's Program**

a. Question 19-20 Results

All 114 of the participants indicated the degree that they felt free to make decisions regarding how they manage their cardholder or approving official duties. On a scale of 1 to 6 (1 = very little; 6 = to a great degree), the mean was 4.33 with a standard deviation of 1.33 (see table 10). Of the sample, 51% reported a high degree of autonomy (with a rating of 5 or 6), and more than 80% reported moderate or high autonomy (i.e., rating of 4 or greater).

Question 20: Freedom to Make Decisions	1 Very Little	2	3	4	5	6 To a Great Degree
Frequency	5	8	11	32	36	22
Percent	4.4%	7.0%	9.6%	28.1%	31.6%	19.3%

Table 10. Frequency of Autonomy Ratings.

In Question 20, participants indicated the extent to which they feel they can say no to illegal or questionable purchase requests without repercussions. On a scale of 1 to 6, the mean was 5.46 with a standard deviation of .9. Of the sample, only 12.3% rated their discretion to say no at 4 or less.

c. Question 21 Results and Analysis

All 114 participants indicated if they had ever effected a purchase that they felt was "not right." Of the sample, 20 individuals admitted that they had indeed made purchases that they did not feel were right in some way (see Table 11). One respondent added that he made the purchases with permission of his supervisor. Others indicated that they experienced difficulty determining what was legal and authorized. One approving official described unauthorized purchases or those approved "after the fact" as his number one problem in managing the program.

Not Right?		Frequency	Percent
Valid	N	94	82.5
	Y	20	17.5
	Total	114	100.0

Table 11. Made Purchases That Were "Not Right".

5. Motivation: Intrinsic and Extrinsic Rewards (Question 22)

In Question 22, at least 109 of the participants rated several sources of intrinsic and extrinsic motivation in terms of their impact on the performance of their cardholder and approving official tasks (Table 12). Ranked from 1 (most important) to 6 (least important), the most highly ranked answer with a mean rank of 2.05 was, "I have made serving my unit a personal priority" – an intrinsic motivation. The pursuit of overall excellence, an intrinsic nontask motivation, and serving customers, an Intrinsic Task

Motivation, were chosen at about the same rate (mean rankings of 2.4 and 2.41). The fear of consequences of doing the task poorly was the next most frequently selected with the desire to please supervisors and to receive advancement or rewards was last. These lowest ranked factors are all extrinsic sources of motivation. It is noteworthy that the three sources of intrinsic motivation have median rankings of 2 (highest importance) while the three sources of extrinsic motivation are ranked lowest (medians of 5 and 6).

		Customers	Unit	Advance- ment	Personal Excellence	Fear of Conse- quences	To Please Super- visors
N	Valid	110	110	109	110	109	109
	Missing	4	4	5	4	5	5
Mean		2.41	2.05	5.20	2.40	4.24	4.66
Median		2.00	2.00	6.00	2.00	5.00	5.00

Table 12. Rank Ordered Sources of Motivation.

6. Feedback: Sources and Influence

a. Question 23 Results and Analysis

Of the sources of feedback, participating cardholders and approving officials ranked (where 1 = highest rank) customer comments as the most frequent basis for measuring the quality of their work (see Table 13). Feedback from supervisors and Higher Headquarters were the second and third most highly ranked choices. Most participants did not rank vendors and Citibank or Citidirect as significant sources for feedback. Some participants commented that they relied heavily upon their own system of quality control as well as the comments of other cardholders.

		Customers	Vendors	Supervisors	HHQ	Citibank	Other
N	Valid	113	111	112	112	111	112
	Missing	1	3	2	2	3	2
Mean		1.87	3.41	2.38	3.23	4.49	5.61
Median		1.00	4.00	2.00	3.00	5.00	6.00

Table 13. Rank Ordered: Most Frequent Sources of Feedback.

b. Question 24 Results and Analysis

In Question 24, cardholders and approving officials indicated the overall importance of the feedback that they received from all sources. The question did not distinguish between positive and negative feedback. On a scale of 1 (not so important) to 6 (very important), the mean response was 4.12 with a standard deviation of 1.57. The participants' views on the value of feedback were widely distributed with only 41% giving it a high rating of 4 or 5. Almost 45% of the sample indicated that feedback was only moderately important (rating 3-4). Another 13% rated feedback as of little or very little importance (see Table 14).

Question 20:	1	2	3	4	5	6
Importance of Feedback	Very Little					To a Great Degree
Frequency	10	6	23	28	15	32
Percent	8.8%	5.3%	20.2%	24.6%	13.2%	28.1%

Table 14. Frequency of Importance of Feedback Ratings.

c. Question 25 Results and Analysis

In Question 25, participants rated the usefulness of the feedback that they received from the same five sources cited in Question 23 or from another source that the participant was encouraged to provide (see Table 14). Several participants left off vendors and Citibank entirely, commenting that they were not measurable sources of

feedback at all. Customer comments were rated as the most useful form of feedback with comments from Higher Headquarters and supervisors having an equal median rank of 3.

		From Customer s	From Vendors	From Super- visors	From HHQ	From Citibank	From Another Source
N	Valid	111	111	112	111	110	112
	Missing	3	3	2	3	4	2
Mean		2.05	3.58	2.75	2.68	4.16	5.66
Median		1.00	4.00	3.00	3.00	5.00	6.00

Table 15. Rank Ordered Usefulness of Feedback.

d. Question 26 Results and Analysis

All 114 of the participants indicated how likely they were to modify how they performed their duties as cardholders or approving officials based upon the feedback that they receive. On a scale of 1 (not very likely) to 6 (very likely), the mean was 4.42 with a standard deviation of 1.37. Almost 60% of the sample indicated a high likelihood (i.e., rating of 5 or greater) that they would modify their work behavior related to the purchase card based upon feedback (See Table 16).

Question 26: Likelihood of Change Based on Feedback	1 Not Very Likely	2	3	4	5	6 Very Likely
Frequency	9	3	8	26	47	21
Percent	7.9%	2.6%	7%	22.8%	41.2%	18.4%

Table 16. Frequency of Likelihood to Modify Behavior Based Upon Feedback.

e. Questions 27 and 28 Results and Analysis

All 114 of the participants indicated how satisfied they were with how well they were performing their duties as cardholders or approving officials (Question 27) as well as how satisfied they perceived their customers, supervisors, and organization

to be (Question 28). On a scale of 1 (not very satisfied) to 6 (very satisfied), the mean was 4.98 in how satisfied cardholders and approving officials were with their own performance (see Table 17). They reported a mean of 5.15 in how satisfied their customers, supervisors, and organizations were with their performance. While both of these ratings are high, a T-test between the means revealed a T-value of -2.17 with a significance of .032. This indicates that the perception of performance quality is higher than the rating of personal task satisfaction.

		Task Satisfaction	Quality of Performance
N	Valid	114	114
Mean		4.98	5.15
Median		5.00	5.00

Table 17. Task Satisfaction & Performance Quality Means.

A frequency analysis revealed that 82.5% of the sample indicated that their individual Task Satisfaction was high (rated 5 or higher on a scale of 1-6). Additionally, over 83% indicated that their customers, supervisors, and sections were highly satisfied with the quality of their task performance (Table 18).

Question 27:						
Personal Task Satisfaction	1 Not Very Satisfied	2	3	4	5	6 Very Satisfied
Frequency	3	0	5	12	62	32
Percent	2.6%	0.0%	4.4%	10.5%	54.4%	28.1%
Question 28:						
Quality of Performance	1 Not Very Satisfied	2	3	4	5	6 Very Satisfied
Frequency	0	0	3	16	56	39
Percent	0.0%	0.0%	2.6%	14%	49.1%	34.2%

Table 18. Frequency of Satisfaction Ratings.

f. Question 29 Results and Analysis

In Question 29, participants were allotted several lines in which to describe the number one problem that they experienced as a cardholder or approving. Of the sample, 35% provided some comment. The comments are summarized below.

- **Procedural Changes:** Four participants stated that their number one problem is keeping up with changes in procedures. "It is difficult to settle into a system when it requires so much extensive reading – particularly when we have so many other duties."
- **Database:** One Master Sergeant found the database to be impossible to use. An approving official added that the "database will not let customers input, modify, or update their new FY contract requests. Basically, we start behind the power curve due to inadequate access."
- **Tax Free Status of Purchases:** Four cardholders stated that they had problems convincing vendors of the tax-free status of Purchase Card purchases.
- **Workload:** Four participants stated that they had too many responsibilities or too many purchases to be able to devote enough time to proper management of their Purchase Card duties.
- **Citidirect:** Three cardholders and two approving officials stated that they did not have reliable access to Citidirect to manage their own accounts or to monitor subordinate cardholder account statements.
- **Authorized Purchases:** Four participants stated that they had difficulty with unauthorized purchases. One approving official stated that his most significant problem is ensuring cardholders at the unit's remote sites are knowledgeable and understand what constitutes an authorized purchase. Another approving official said that he or she had problems distinguishing between what was authorized and what was not. A third stated that he received too many requests for "non-mission essential items."
- **Fiscal Year Closeout:** Four participants commented that temporary suspension of the purchase card at the end of the Fiscal Year is a "major" problem.
- **Credit Limits:** Three participants stated that the monthly credit limit or the micropurchase threshold diminishes their ability to buy parts, equipment, or services.
- **Different Payment Cards:** Two cardholders stated that they had problems managing the different types of cards. "I don't understand why a payment card and purchase card cannot be one and the same at my unit."

- **GSA Receipts:** Two fiscal chiefs reported a major problem getting receipts from GSA and getting the obligations to post in SASSY at the end of the Fiscal Year.
- **Miscellaneous:** One approving official stated that there was too much paperwork for small purchases. Still another said that his number one problem was getting timely responses from cardholders. On the other hand, one cardholder said his number one problem was getting approval from his approving official. One approving official and one cardholder stated that getting cards issued to the necessary users was too slow and too complicated.

D. ANALYSIS OF TASK, INDIVIDUAL, AND ORGANIZATIONAL DIMENSIONS

After collecting data on MARFORRES cardholder and approving official perceptions of Task Criticality, Task Competence, the Sense of Autonomy, and Feedback, the researcher used Statistical Package for Social Sciences (SPSS) software to determine if they supported the Cardholder/Approving Official Intrinsic Task Motivation Model (Figure 10). The researcher also sought to determine which inputs -- if any of the Task, Individual, and Organizational Dimensions supported the model -- had the highest level of correlation. The results are presented in Tables 19 and 20 below and reflect the elements of the model presented in Figure 10.

Table 19 presents the mean ratings of the four input variables for the proposed Task Motivation Model together with the intermediate outputs of Intrinsic Task Motivation, Performance, and the final output of Task Satisfaction. Of the four inputs, Task Criticality (from Question 17) had the highest mean rating of 5.33. Importance of Feedback (Question 24) had the lowest mean rating of 4.12.

Parameters	Mean	Std. Dev.	N
Impact of Task Quality (Task Criticality)	5.33	.74	114
Perceived Task Competence (Current)	5.04	.82	114
Perceived Level of Autonomy	4.33	1.33	114
Importance of Feedback	4.12	1.57	114
Intrinsic Task Motivation	5.49	.91	114
Quality of Performance	5.15	.76	114
Task Satisfaction	4.98	1.00	114

Table 19. Means for Input and Output Parameters.

The researcher ran a two-tailed Pearson test for correlation of four input variables compared with Intrinsic Task Motivation (Question 15), others' task satisfaction (Quality of Performance/Question 28) and individual Task Satisfaction (Question 27). The results are presented in Table 19. Of the four input variables, the perceived Impact of Task Quality (Question 17) had a correlation with Intrinsic Task Motivation Task of .346 significant to the .01 level, with Quality of Performance of .196 significant to the .05 level, and with Task Satisfaction of .322 significant at the .01 level. Perceived level of current competence (Question 13) had a correlation of .281 with significance at the .01 level for individual satisfaction with task performance, but did not have a significant correlation with Quality of Performance. The input with the highest levels of correlation was the Perceived Level of Autonomy (Question 19). It had a correlation of .499 significant to the .01 level for Intrinsic Task Motivation and .303 significant to the .01 level for others' satisfaction with Quality of Performance. It also had a correlation of .281 significant to the .01 level for Task Satisfaction. The Importance of Feedback had a correlation of .352 significant to the .01 level for Intrinsic Task Motivation and a .007 for Quality of Performance. For Task Satisfaction, it had a nonsignificant negative correlation of -.146.

Parameters	Intrinsic Task Motivation	Quality of Performance	Task Satisfaction
Impact of Task Quality	.346**	.196*	.322**
Perceived Competence (Current)	.499**	.117	.281**
Perceived Level of Autonomy	.338**	.303**	.299**
Importance of Feedback	.352**	.007	-.146

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 20. Correlation of Dimensions with Intrinsic Task Motivation, Quality of Performance, and Task Satisfaction.

E. DISCUSSION

This research used survey participant perceptions of the importance of the quality of their work as an indicator of Intrinsic Task Motivation (Question 15). Intrinsic Task Motivation is “the positively valued experiences that individuals get directly from their work tasks” (Thomas and Velthouse, 1990) (see Figure 9 below). With a mean rating of 5.49 (scale 1 – 6), cardholders and approving officials placed a significant amount of importance on the quality of their work.

Extrinsic Task Motivation is factors such as pay, recognition, praise, and awards (Thomas & Jansen, 1997). The cardholder generally receives these benefits through the approval and recommendations of others. Yet, as seen by the responses in Question 22, MARFORRES cardholders and approving officials placed little importance upon receiving advancement, awards, or punishment.

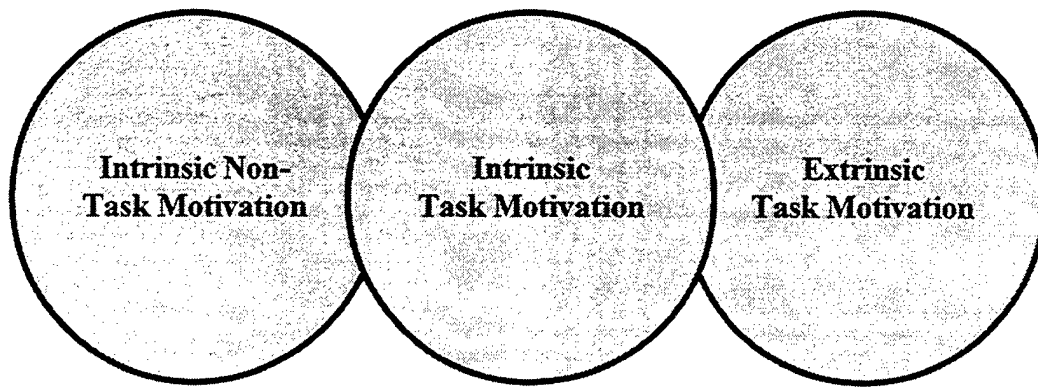


Figure 9. Task Motivation Relationship (Thomas & Jansen, 1997).

Intrinsic Nontask Motivation is the benefit perceived by the cardholder for belonging to the organization (Thomas & Jansen, 1997). The cardholders and approving officials within MARFORRES placed significant importance upon serving their units (Table 12). It was the most highly ranked indicator – over serving customers and serving themselves (Personal Excellence). Placing the unit above one's own self was articulated by Commandant Jones in his Commandant's Guidance (Jones, 2000), and apparently it has resonated throughout the Marine Forces Reserve.

The Cardholder/Approving Official Intrinsic Task Motivation Model hypothesized that there are four inputs to Intrinsic Task Motivation (see Figure 10). They were Task Criticality, Task Competence, the Sense of Autonomy, and Feedback. Task Criticality was considered to be a Task Dimension because it is a measure of how important the task is to the individual. Task Competence was an Individual Dimension with the individual's perception of competence being most important. The Sense of Autonomy was listed as an Organizational Dimension because freedom to make decisions in the management of one's task is granted by others. Feedback crosses all three dimensions in that it results from many sources including the individual's own

perceptions. Feedback for this study was both negative and positive. Correlation tests prove that Task Criticality, Task Competence, the Sense of Autonomy, and Feedback are major contributors to cardholder or approving official Intrinsic Task Motivation. In fact, all four inputs were highly correlated with Intrinsic Task Motivation. Perceptions of current Task Competence were the most highly correlated at .499. These findings reinforce the Intrinsic Task Motivation research conducted by Thomas, *et al.* (1990, 1997, 2000).

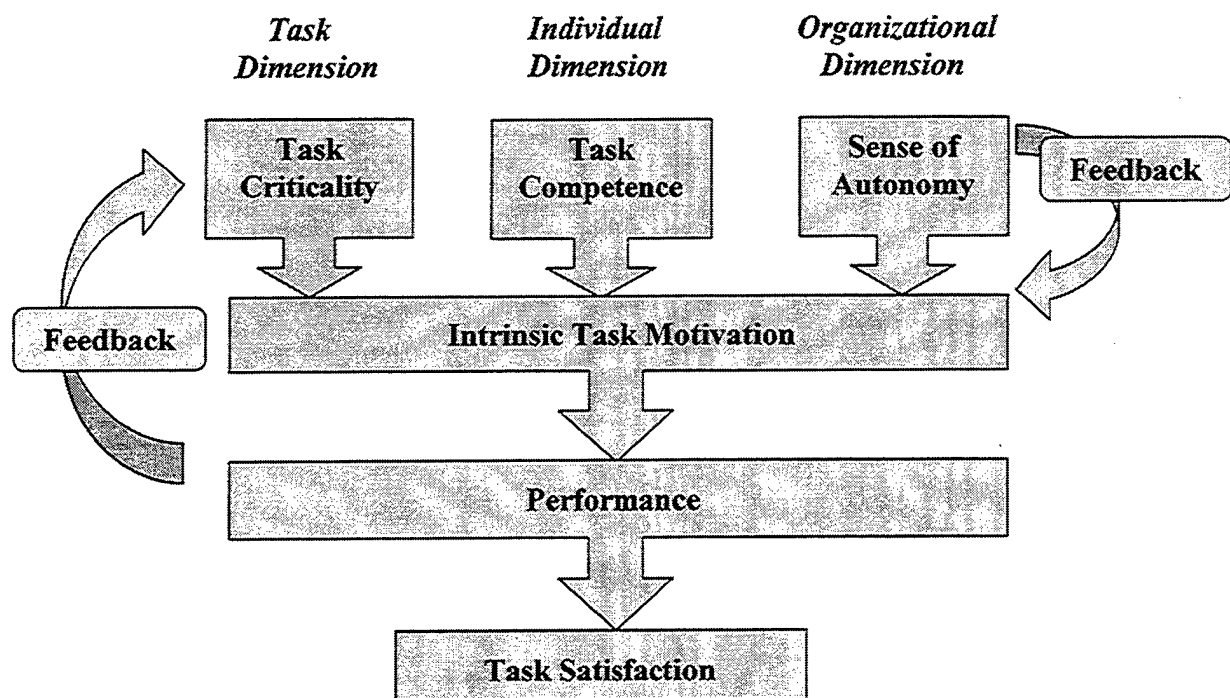


Figure 10. Cardholder/Approving Official Intrinsic Task Motivation Model.

Performance was measured with the responses to Question 16, in which survey participants rated the importance of others' perceptions of the quality of the cardholder's or approving official's work. As seen in Table 8, the mean rating was 5.39 (scale 1 – 6). Of the four indicators, the Organizational Dimension of the Level of Autonomy was most highly correlated at .303 significant to the .01 level (Table 19). In other words, the

quality of cardholder and approving official task performance within the sample is most highly linked to levels of decisionmaking discretion. The Impact of Task Quality on the abilities of others to perform their mission was correlated at .196 significant to the .05 level. The other two indicators, Task Competence and Feedback were nonsignificant.

Three of the four indicators were significantly correlated with the final output of the Task Motivation Model – individual Task Satisfaction (Table 19). The Impact of Task Quality or Task Criticality (in the model) was most highly correlated at .322. Surprisingly, Feedback was nonsignificant. Although it was not clear in the survey, it appears as though much of the feedback that cardholders and approving officials receive is considered to be negative. By examining Questions 16 and 17, the Impact and Importance of Task Quality is perceived to be high. As with many support functions, excellence is expected and taken for granted. Often, only when one's performance falls below the norm does one garner the attention of supervisors or customers. Owing to the nature of the missions performed by MARFORRES units as well as the high standards demanded of Marines in general, there is little room even the perception of poor performance.

F. SUMMARY

This chapter presented and discussed the results of the Cardholder and Approving Official Survey that was made available to all cardholders and approving officials within the Marine Forces Reserve. Descriptive statistics and frequency distributions were used to portray various aspects of the sample. Participant comments on training and problems that cardholders and approving officials have experienced with the program were summarized. Finally, Pearson correlation tests were conducted to determine if four

commonly held inputs to Intrinsic Task Motivation were positively correlated with Performance and Individual Task Satisfaction. While all four inputs were highly correlated with Intrinsic Task Motivation, only the Sense of Autonomy was highly correlated with all three stages of the Task Motivation Model. The next chapter presents conclusions and recommendations for further study.

VI. CONCLUSION AND RECOMMENDATIONS

The objective of this research was to examine the Governmentwide Commercial Purchase Card Program at Marine Forces Reserve for applications suitable for adoption or consideration by other DoN activities. Upon completion of a review of purchase card background and procedures, it became apparent to the researcher that the most interesting aspects of the program were the cardholders and approving officials (at MARFORRES and in general). It can be argued that they are a large part of the reason why the Commercial Purchase Card has become such a successful procurement tool both within MARFORRES and throughout the Government. In pursuing the concept of cardholder and approving official self-management, this thesis began with an examination of the background of the Governmentwide Commercial Purchase Card Program within DoD, DoN and other Government agencies. It then examined aspects of the program at the Marine Forces Reserve and proposed a model for testing the basis of cardholder and approving official Intrinsic Task Motivation as a means of self-management. This chapter presents answers to primary and subsidiary research questions, recommendations regarding the program at MARFORRES, and recommendations for further research.

A. RESEARCH QUESTIONS

1. Primary Research Question

What are the common characteristics and sources of self-motivation for Governmentwide Commercial Purchase Card Program cardholders and approving officials within the Marine Forces Reserve?

Overall, there was strong evidence to support the Cardholder/Approving Official Intrinsic Task Motivation Model presented in Chapter III. Following the model, Task

Criticality, Task Competence, the Sense of Autonomy, and Feedback were all highly significant sources of Intrinsic Task Motivation and therefore self-motivation within the survey sample. Task Criticality and the Sense of Autonomy were also highly correlated with self-reporting of others' perceptions of Quality of Performance. Task Criticality, Task Competence, and the Sense of Autonomy were also highly correlated sources of the cardholders' and approving officials' Task Satisfaction. Feedback was not significantly related to Task Satisfaction. Almost 45% of the sample indicated that feedback was only moderately important (rating 3-4). Yet, 60% of the survey participants indicated a high likelihood (rating 5 or greater on a scale of 1-6) that they would modify their work behavior based upon the feedback that they receive. As mentioned earlier, the researcher suspects that the possible negative aspect of the cardholder and approving official feedback causes the individual to dismiss it as a gauge of performance. The survey sample was much more likely to react positively to perceived decisionmaking discretion or autonomy than all other indicators.

2. Subsidiary Research Questions

What are the unique aspects of the Governmentwide Commercial Purchase Card Program within the Marine Forces Reserve?

The Governmentwide Commercial Purchase Card Program within the Marine Forces Reserve is unique in several respects. It is one of the largest programs with the Department of the Navy and possibly one of the most difficult to manage. It has cardholders in 47 of 50 states and Puerto Rico, and they can be deployed around the world. The one agency program coordinator works out of the Contract Office at

MARFORRES Headquarters in New Orleans, Louisiana. She has no staff but performs APC duties via a system of electronic databases such as Lotus Notes.

There are currently 72 approving officials within the program. They are responsible for approximately 735 cardholders. These approving officials often do not have direct control over the cardholders. The cardholders are administratively and operationally subordinate to their own units. Furthermore, approving officials and cardholders can be physically separated by great distances. While cardholders in other agencies need only cross the office or the base to get face-to-face guidance or authorization from an approving official, this is usually not possible within MARFORRES. Indeed, several cardholders and approving officials noted that communication up and down the procurement chain of command was one of the worst problems that they face.

The cardholders and approving officials within MARFORRES are usually older and more experienced than their active duty counterparts. The average age of the survey participants was 30.63 years. This is because many Marines have already completed a tour with the active duty Marine Corps before being assigned to Instructor-Inspector (I&I) Duty. Before being assigned to MARFORRES staffs, I&I Marines are usually screened and determined to be financially secure and responsible. Additionally, they perform many more duties than the typical active duty force Marine. One gunnery sergeant or staff sergeant might easily perform several duties for the unit to which he or she is assigned. They are trusted to perform tasks normally associated with more senior Marines and receive less scrutiny from higher headquarters. They are literally

ambassadors of the Marine Corps to civilian America, a responsibility that they take very seriously.

What are the background and experience characteristics of the cardholders and approving officials within the Marine Forces Reserve?

Cardholders and approving officials within MARFORRES range from Lance Corporals (E-3) to Lieutenant Colonels (O-5). The most frequently appearing rank in the survey was Sergeant. They may be nearly any military occupational specialty (MOS), but supply and fiscal MOSs represent the bulk of the survey sample (72%). The cardholders and approving officials have anywhere from a few days to several years of experience as cardholders and usually less experience as approving officials. The average number of months in the billet was 23.3 for the survey participants. Supply and fiscal personnel accounted for most of the prior experience in Government procurement. The survey participants effected an average of 14.43 purchases per month, and almost all have held personal checking accounts and credit card accounts for one or more years.

What are the sources and amounts of initial training for cardholders and approving officials within the Marine Forces Reserve?

Most of the population cardholders and approving officials received CD-ROM based or Internet based training upon assuming their billets. Almost 30% of the survey population received some type of formal classroom instruction. None of the participants reported any type of video training. The average amount of initial training was just over seven hours – less than previous surveys conducted in other DoN activities.

How confident were MARFORRES cardholders and approving officials in performing their duties upon receiving initial training and how confident they are today?

On a scale of 1 to 6 (1 = very low; 6 = very high), the average level of perceived cardholder and approving official initial competence was 3.88 within the survey population. That average improved to 5.04 when asked how competent they felt they were at present. The perceptions of Task Competence were highly correlated with individual satisfaction with task performance. Nonetheless, individual participants reported deficiencies with keeping up with procedural changes, differentiating between authorized and unauthorized purchases, and the general knowledge level of newly appointed approving officials.

How important do the MARFORRES cardholders and approving officials perceive the GWPC program to be in their section, unit, and within their own duties?

MARFORRES cardholders and approving official who participated in the survey indicated that they felt the duties associated with the purchase card were very important to their section, unit, and to themselves. Perceptions of Task Criticality were approximately equal (5.39 vs. 5.49), where a maximum rating of 6 was "very important." The perception of Task Criticality is considered by the experts reviewed during this research to be an integral part of Intrinsic Task Motivation. In general, a low perception of Task Criticality would tend to indicate a low level of Intrinsic Task Motivation. The survey sample's perception of task criticality was very high and highly correlated with Task Satisfaction.

How much autonomy do the MARFORRES cardholders and approving officials perceive they have concerning how they manage their portion of the program?

On a scale of 1 to 6, the average level of perceived autonomy was 4.33. In effect, the survey participants attributed a smaller rating to autonomy than every other contributor to Intrinsic Task Motivation except Feedback. Yet, the Sense of Autonomy was the area most highly correlated with both individual task satisfaction and others' task satisfaction (Quality of Performance). In other words, the greater the amount of autonomy granted to the participant, the greater their levels of their own job performance satisfaction as well as the satisfaction of other stakeholders like supervisors, customers, and sections.

What are the main sources of feedback related to performance and how important are they for MARFORRES cardholders and approving officials?

In the survey, the researcher hypothesized that feedback would originate from customers, supervisors, vendors, higher headquarters, and Citibank. The participants were also allowed to indicate and rank any other sources. The survey participants reported that customers provided the most frequent and most useful form of feedback. That was closely followed by supervisors and higher headquarters. The feedback from higher headquarters was more useful than that from supervisors. That is due to the fact the immediate supervisors may be more concerned with outcomes rather than procedures related to the purchase card. The approving official may reside at higher headquarters and are as concerned with procedures as much as outcomes of purchase card use. Bearing the mind that the survey did not differentiate between negative and positive feedback, cardholders and approving officials were less likely to modify the performance

of their duties because of feedback. Several participants noted that they rarely if ever receive any type of meaningful feedback. Overall, the importance of feedback was highly correlated with Intrinsic Task Motivation but nonsignificant with Quality of Performance and Task Satisfaction.

How satisfied are the MARFORRES cardholders and approving officials with the performance of their duties?

Cardholders and approving officials within the Marine Forces Reserve indicated that their perceived level of individual task satisfaction was 4.98 on a scale of 1 – 6 where a rating of 6 was “very satisfied.” About 83% of the sample indicated that their individual Task Satisfaction was high (rated 5 or higher on a scale of 1-6).

How satisfied are MARFORRES customers (end users, supervisors, and organizations) with cardholder and approving official performance?

On a scale of 1 to 6, the perceived level of others’ task satisfaction or Quality of Performance was 5.15 for the survey sample. According to the survey results, over 83% of the cardholders and approving officials felt that their various customers were highly satisfied with the quality of their task performance (rated 5 or higher on a scale of 1-6).

B. RECOMMENDATIONS

1. Fostering Cardholder Self-Management

According to Thomas (2000), if leaders want their subordinates to perform well through self-management they must be intrinsically motivated. They must be committed to performing the task itself for its own sake. They must be committed to doing the cardholder and approving official duties well – regardless of whether or not any one else is around to supervise. For the cardholders and approving officials at MARFORRES,

this Intrinsic Task Motivation can come from perceptions that the tasks are important, perceptions that they are qualified to perform their duties, perceptions that they are trusted to perform those duties, and the existence of quality feedback from customers, supervisors, and the work procedures themselves. Cardholder and approving official comments lead one to conclude that they desire both the tools and training to increase their ability to accomplish purchase card tasks more efficiently as well as improvements in feedback mechanisms.

The MARFORRES Contract Office should consider enabling approving officials to better train and communicate with their subordinate cardholders. Instead of conducting training only at MARFORRES Headquarters, training could be taken on the road and provided to all cardholders in one battalion or regiment. In this manner, the responsible approving official assumes a greater and more formal role in the development of his or her cardholders. This point is particularly relevant given that the amount of self-reported training is measurably less than that of earlier DoN cardholder surveys. Approving officials seem to be very busy but capable and willing to assume a greater training management role in order to reduce time spent reacting to problems.

2. Cardholder and Approving Official Management Capability

The MARFORRES Contract Office should consider providing directed training for selected approving officials and cardholders on program management using Citidirect. If approving officials (and their immediate subordinates) assume a greater responsibility for developing their subordinate cardholders, they must be the subject matter experts on Citidirect and any other network based purchase card management programs. For instance, if every supply officer AO and his or her supply chief fully

understood Citidirect, they could foster its use at the subordinate cardholder level as the primary management tool. Additionally, as a special staff officer, the supply officer is in a unique position to draw command attention to hardware and networking deficiencies. Targeting this population can have the greatest impact upon the entire program.

3. Streamlining Purchase Card Activities

The MARFORRES Contract Office should consider studying the procurement methods used at subordinate commands for excessive and redundant documentation. Survey comments suggest that many participants are hindered by the amount of paperwork required to effect transactions and the amount of paperwork that must be maintained to support program management. Approval methods could be standardized across commands and supported electronically using in-house networks. Theoretically, purchase approvals, Internet receipts, and other correspondence need never be printed or filed in a filing cabinet. Although, most Government agencies will never be entirely paperless, the purchase card program is well suited to near paperless management at the cardholder level. Less printed documentation will enable cardholders and approving officials to perform purchase card duties more efficiently and reduce the amount of time consumed moving paper from desk to desk.

4. Streamlining Purchase Card Issue and Replacement

One of the most frequently reported problems for approving officials was the process for obtaining new purchase cards. NAVSUP, MARFORRES, and Citibank could jointly examine the process for inefficiency. Approving officials could be tasked with describing the problems they encounter, and NAVSUP together with Citibank could find ways to streamline and improve the process.

C. RECOMMENDATIONS FOR FURTHER RESEARCH

According to Captain Roark of NAVSUP, implementation of Citidirect is behind schedule. Approximately, 35% of DoN activities have yet to implement the program (Fanelli, 2000). Citidirect is a major step forward in management of the purchase card program and paperless contracting, yet it is unavailable to many cardholders and approving officials across the Department of the Navy. What are the problems delaying implementation of Citidirect within DoN?

Richard Slater and Miguel Zayas conducted research in 1994 and 1995 concerning cardholder attitudes in various DoN activities. Slater's research was limited to Marine Corps wide IMPAC program policy, while Zayas conducted an informative survey of civilian IMPAC cardholders at the Naval Air Warfare Center, China Lake. How do Intrinsic Task Motivation perceptions differ from previous research for cardholders and/or approving officials in an active duty Marine Corps unit such as the 1st Marine Division at Camp Pendleton, California?

According to the Agency Program Coordinator, existing network storage media is inadequate to support the paperless goals associated with the purchase card program and acquisition reform. What are the information technology requirements necessary to support a program as large as the one at MARFORRES?

APPENDIX. CARDHOLDER/APPROVING OFFICIAL SURVEY

INSTRUCTIONS: This survey is designed to evaluate aspects of the Marine Forces Reserve Governmentwide Commercial Purchase Card Program in order to improve its effectiveness. Responses should be based upon your own experiences and your honest opinions. Please read each question carefully, mark the appropriate response. Questions and comments should be sent to Captain Jeffrey W. Megargel, USMC at jwmegarg@nps.navy.mil, mailed to Capt J. Megargel, Naval Postgraduate School, SMC 1953, Monterey, CA 93943, or faxed to 831-656-1098, Attention: Capt Megargel. The DEADLINE for completion is 10 November 2000. Semper Fi.

BACKGROUND/EXPERIENCE

1. Are you currently a cardholder or approving official? CH ____ / AO _____. How long have you been a cardholder or approving official? ____ Years, ____ Months. If a cardholder, which type? Purchase ____ / Payment Only ____.
2. Prior to becoming a card holder or approving official, had you ever worked in Government procurement? Yes ____ / No _____. If yes, for how long? ____ Years, ____ Months.
3. What is your average number of official monthly credit card purchases? ____ Purchases per month.
4. How old are you (today)? ____ Years.
5. Do you have a personal checking account? Yes ____ / No _____. For how long? ____ Years.
6. Do you have personal major credit cards (for example: VISA, MasterCard, American Express)? Yes ____ / No _____. For how long? ____ Years.
7. What is your current billet or position? _____.
8. What is your current rank or grade? _____.

TRAINING

9. How many hours of purchase card training did you receive prior to becoming a cardholder or approving official (excluding on the job)? ____ Approximate Hours.
10. What type of initial training did you receive? Internet Based ____ / CD Rom ____ / Classroom ____ / Other _____.

11. Have you received follow-up training? Yes ____ / No ____.

12. How high did you feel your level of competence was when you assumed your duties as cardholder or approving official? Mark one rating from 1 to 6.

Very Low 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very High

13. How competent in your duties as a cardholder or approving official do you feel you are today? Mark one rating from 1 to 6.

Very Low 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very High

14. Optional. How can the initial or follow-up training be improved?

CRITICALITY OF DUTIES

15. How important to you is the quality of your work as cardholder or approving official? (Mark one rating from 1 to 6.)

Not so important 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very
Important

16. How important is the quality of your cardholder or approving official work to your section or unit? (Mark one rating from 1 to 6.)

Not so important 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very
Important

17. How much impact does the quality of your work as a cardholder or approving official have on the ability of others in your organization to accomplish their mission? (Mark one rating from 1 to 6.)

Very Low 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very High

18. How many hours per week do you devote to cardholder or approving official duties? Include research, purchases, record keeping, reconciliation, and follow-up, etc.

One to Two _____, Three to Five _____, Six to Nine _____, Ten or More _____.

AUTONOMY / FREEDOM TO MANAGE YOUR PROGRAM

19. To what degree do you feel that you are free to make decisions regarding how you manage your cardholder or approving official duties?

Very Little 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 To a great degree

20. Do you feel that you can say no to illegal or questionable purchase requests without repercussions?

Very Little 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 To a great degree

21. Have you ever made a purchase that you did not feel was right? Yes _____, No _____.

MOTIVATION

22. Assuming you are the best cardholder or approving official in your organization, why do you excel? Rank in order of importance to you personally from #1 (most important) to #6 (least important). Use each number only once.

- I have made serving my customers a personal priority _____.
- I have made serving my unit a personal priority _____.
- I have made receiving advancement or awards a personal priority _____.
- I have made overall excellence a personal priority _____.
- I fear the consequences of doing the job poorly _____.
- I have made pleasing my supervisor a personal priority _____.

FEEDBACK

23. How do you know how well you are performing your duties as a cardholder or approving official? Rank in order of frequency from #1 (most frequent) to #6 (least frequent). Use each number only once.

Comments from your customers _____.

Comments from venders _____.

Comments from your supervisors _____.

Comments from your higher headquarters _____.

Comments from Citibank _____.

Other. Specify _____.

24. How important is feedback to you as a cardholder or approving official?

Not so important 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very Important

25. How would you rate the usefulness of the feedback that you receive? Rank in order of usefulness from #1 (most useful) to #6 (least useful). Use each number only once.

Comments from your customers _____
Comments from venders _____
Comments from your supervisors _____
Comments from your higher headquarters _____
Comments from Citibank _____
Other. Specify _____.

26. How likely are you to modify how you perform your duties as a cardholder or approving official based upon the feedback that you receive?

Not Very Likely 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very Likely

27. How satisfied are you with how well you are performing your duties as a cardholder or approving official?

Not Very Satisfied 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very Satisfied

28. How satisfied are your customers, supervisors, and organization with how well you are performing your duties as a cardholder or approving official?

Not Very Satisfied 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 Very Satisfied

29. Optional. What is the number one problem that you experience as a cardholder or approving official?

30. Optional. Name, rank and phone number and/or email address where you can be reached if you desire to participate any further this in this research effort.

Name _____ Rank / Grade _____

Phone Number Comm (____) _____ - _____ or DSN _____ - _____.

Email address: _____.

Thank you for participating in this survey.

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LIST OF REFERENCES

- Alba, Dennis A. "An Analysis of the Express Purchase (XP) Program." Thesis, Naval Postgraduate School, Dec 1999.
- Bates, L.B. Telephone Interviews. Headquarters, MARFORRES, New Orleans, La, Oct – Nov 2000.
- Burk, Michele M. "An Analysis of Purchase Card Reconciliation Times." Thesis, Naval Postgraduate School, Dec 1999.
- CitiBank. "Citibank Government Purchasing Card Guide." Citicorp, 1998. Available: [<http://www.citibank.com/us/gcs>]
- CitiBank. "Citibank Government Purchasing Cardholder Guide." Citicorp, 2000. Available: [<http://www.citibank.com/us/gcs/document/guides/purchase/purchc/htm>]
- Deci, Edward L. with Richard Flaste. Why We Do What We Do: Understanding Self-Motivation. New York: Penguin Books, 1995.
- Deming, W.E. Out of the Crisis. Cambridge, Ma.: MIT Center for Advanced Engineering Study, 1986.
- Defense Federal Acquisition Regulation Supplement, Oct 2000.
- Fanelli, Albert J., NAVSUP Purchase Card Office, Electronic Message, Dec 2000.
- Federal Acquisition Regulation, Oct 2000.
- Executive Order No. 12931, 59 C.F.R. 199, 1994.
- General Accounting Office. "Acquisition Reform: Purchase Card Use Cuts Procurement Costs, Improves Efficiency." GAO/NSIAD-96-138, Aug 1996.
- Hackman, J.R. and G.R. Oldham. "Motivation Through the Design of Work: Test of a Theory." Organizational Behavior and Human Performance 16, no. 2:250-279, 1976.
- Hackman, J.R., G.R. Oldham, R. Janson, and K. Purdy. "A New Strategy for Job Enrichment." California Management Review 17, no. 4:57-71, 1975.
- Hoover, Todd E., NAVSUP Purchase Card Office, Electronic Message, Nov 2000.

Jenkins, Jr., Rear Admiral Gwilym H. "Strategic Alliances." Brief given at the Acquisition and Contracting Seminar, Monterey, California, Feb 2000.

Jones, J.L. General. "Planning Guidance." Aug 1999. Available at www.usmc.mil/cmc

Moore, Kathie. Personal Interview. Conducted at Naval Postgraduate School, Monterey, California, Apr 2000.

Murray, H. Explorations in Personality. New York: Oxford University Press, 1938.

National Performance Review. "From Red Tape to Results, Creating a Government That Works Better & Costs Less," Report of the National Performance Review, Sep 1993.

Naval Supply Systems Command. "Department of the Navy (DoN) Policies and Procedures for the Implementation of the Governmentwide Commercial Purchase Card Program (GCPC)." NAVSUP Instruction 4200.94, Jun 1999.

Naval Supply Systems Command. "Citibank Purchase Card Conversion Update #6." Message. DTG 101400Z Aug 1998.

Navy/Marine Corps Purchase Card Training & Interactive Customer Assistance CD-ROM, Feb1998.

Office of the Inspector General, Department of Defense. "Audit Report: DoD Acquisition Workforce Reduction Trends and Impacts." No. D-2000-088, Feb 1999.

Office of the Inspector General, Department of Defense. "Audit Report: Use of the International Merchant Purchase Authorization Card." No. 99-129, Apr 1999.

Pinder, Craig C. Work Motivation: Theory, Issues, and Applications. Glenview, Il.: Scott, Foresman & Co., 1984.

Roark, Captain Doug. "NAVSUP Contracting," Brief given at the Acquisition and Contracting Seminar, Monterey, California, Nov 2000.

Slater, Richard S. "An Analysis of Credit Card Use as a Method for Making Small Purchases in the United States Marine Corps." Thesis, Naval Postgraduate School, Dec 1994.

Thomas, Kenneth W. Intrinsic Motivation at Work: Building Energy & Motivation. San Francisco: Berrett-Koehler Publishers, Inc., 2000.

Thomas, Kenneth W., Erik Jansen, and Walter G. Tymon, Jr. "Navigating in the Realm of Theory: An Empowering View of Construct Development." Research in Organizational Change and Development, Volume 10, pp. 1-30: JAI Press, 1997.

Thomas, Kenneth W. and Walter G. Tymon, Jr. "Bridging the Motivation Gap in Total Quality." Quality Management Journal. American Society for Quality, 1997.

Thomas, Kenneth W. and B.A. Velthouse. "Cognitive Elements of Empowerment: An 'Interpretive' Model of Intrinsic Task Motivation." Academy of Management Review 15, no. 4:666-681, 1990.

Tisak, Commander Francis X. "The Afloat Purchase Card Program: Decentralizing Purchasing for the Fleet," Undated. Available: [<http://www.navsup.navy.mil/>]

Winicki, Major Tony, "Electronic Bill Payment Time Line" Brief given at Marine Forces, Reserve Headquarters, New Orleans, Louisiana, Mar 2000.

Winicki, Major Tony, "Marine Corps Regional Contracting" Brief given at the Acquisition and Contracting Seminar, Monterey, California, Oct 1999.

Winicki, Major Tony, "RCO Initiatives for 2000" Brief given at Marine Forces, Reserve Headquarters, New Orleans, Louisiana, Feb 2000.

Zayas, Miguel A. "The Bank Card Program: A Case Study." Thesis, Naval Postgraduate School, Dec 1995.

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