

Through the use of purchasing cards, public and private universities saved \$2.6 million per year per university in administrative costs between 1998 and 2001, according to a recent survey. Small wonder purchasing card spending by universities is expected to double during the next two years.

In the face of severe financial pressures, business officers are redoubling efforts to reduce or eliminate non-value-adding administrative work—particularly when the work has little or no impact on their institutions, students, or alumni. One way to reduce administrative work is by using purchasing cards, pointed out M. Guildord in “E-Procurement Goes to College,” published in the April 2001 issue of *Business Officer*. Purchasing cards, developed in the late 1980s, first helped federal government agencies acquire small-dollar goods without making vendors wait for payment.

The expected benefits of purchasing cards led federal government agencies to charge \$12.3 billion to pay for approximately 23 million low-value transactions in 2000, wrote Lisa Daigle in “A Rough Ride Inside the Beltway,” in the July 2001 issue of *Credit Card Management*. Anne Laurent, in the May 2000 issue of *Government Executive*, estimated that federal agencies save more than \$50 each time a purchasing card is used instead of traditional paper procedures, for a total federal government savings in 2000 of \$1.2 billion.

Purchasing card use by state and local governments has also shown dramatic growth. Research by R. Palmer, M. Gupta, A. Davila, and T. Mills to be published in the August 2002 *Government Finance Review* finds that state and local government purchasing card spending more than doubled between 1998 and 2001 and generated average administrative savings of \$8.3 million per year per state agency and \$640,652 per year per city and county card programs.

Survey Shows Significant Impact

While the growth and benefits of government use of purchasing cards has been widely reported, little is known about the effect of these cards on educational institutions. That’s why 2,551 surveys were sent to the card-using organizations of 14 major banks in the fall of 2000. Of those, 309 organizations responded, for a response rate of 12.3 percent. A later mailing yielded an additional 24 responses.

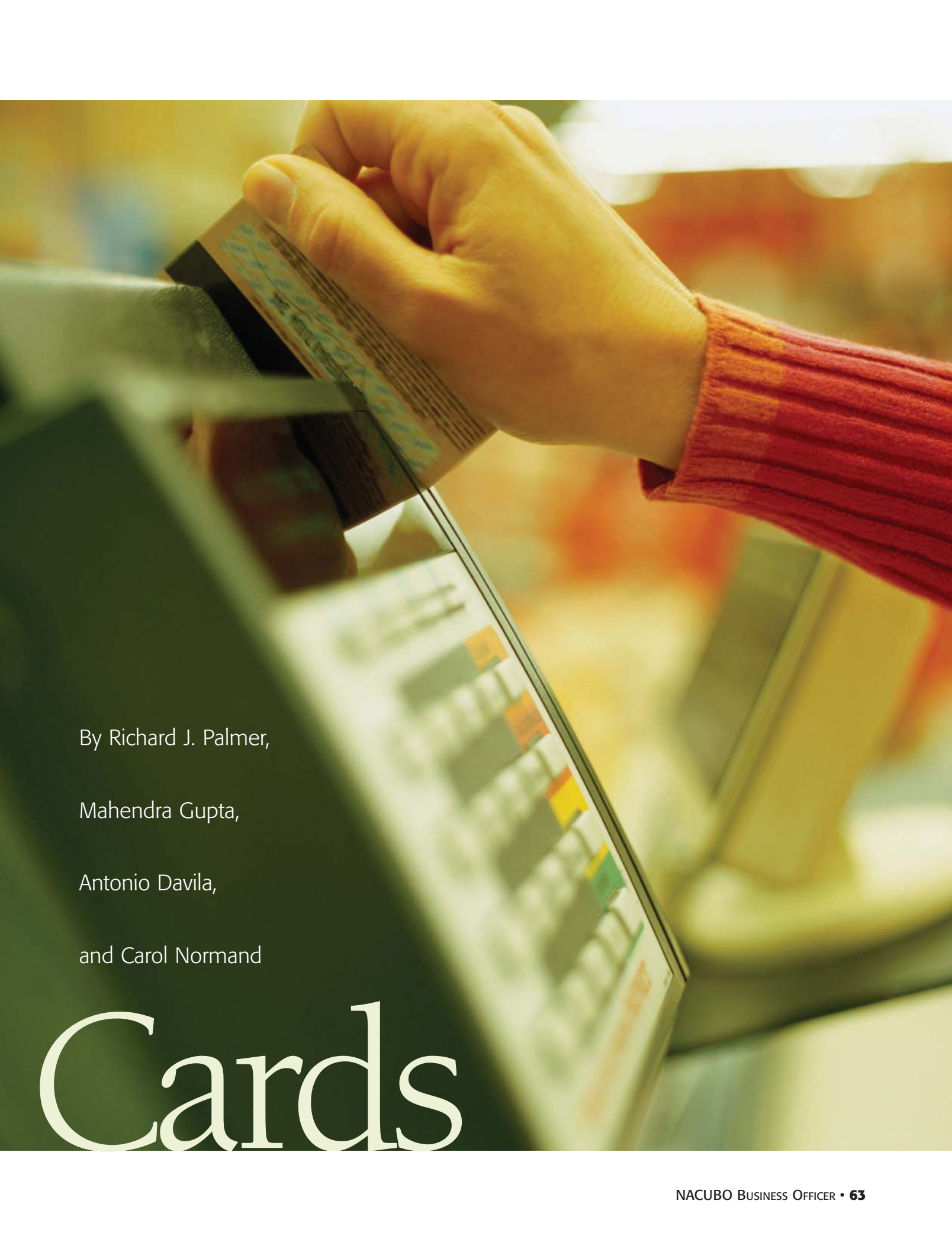
Of the 329 usable responses, 47 were from public and private educational institutions or related institutions. Of those, 36 percent were from “extensive doctoral/research” institutions (as classified by the Carnegie Foundation in 2000), 44 percent were from predominately four-year universities, 11 percent were from junior colleges, and 9 percent were from university-related organizations. Only the responses from doctoral and four-year universities are reported in this article.

Survey results indicate that the impact of purchasing cards on public and private universities has been significant. Universities report the average administrative paperwork processing savings per transaction to be \$110. In addition, the average time elapsed from determination of employee need to the receipt of the ordered good dropped by six days.

Table 1 compares 2001 purchasing card spending-related statistics to a similar but smaller study conducted in 1998. As seen in Table 1, average university spending increased by 86 percent in the 30-month period between the two surveys. This growth rate, however, is slow when compared to state agencies (278 percent) or cities, counties, and school districts (173 percent) but faster than Fortune 500 organizations (4 percent). The statistics show:

- Average transactions per cardholder per month increased by 24 percent (from 3.26 to 4.04 per month).

The Saving Power of Purchasing



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Cards

- The average percentage of university employees who are cardholders increased significantly, rising from 6.8 to 11.4 percent.
- The percentage of active university cards—cards that had been used in the last month—grew from 61 to 74 percent.

Not all factors improved between the two surveys. The average amount spent per transaction dropped from \$218 to \$204, probably because a greater distribution of cards resulted in individuals at increasingly lower levels of the university receiving purchasing cards. Many organizations have lower spending limits and fewer allowable purchase categories for personnel in lower positions.

By providing more cards to employees who are using those cards more frequently, universities nearly doubled card spending during the 30-month period between surveys. On an annual basis, average university purchasing card spending of \$4.9 million translates into 23,732 transactions per year shifted to the purchasing card (at \$205 per transaction). Assuming that the reported cost savings per card transaction is \$110, the average card-using educational institution is generating cost savings of \$2.6 million per year.

Projected University Spending

Table 2 shows current and projected university purchasing card spending in both dollars and as a percentage of the spending within a particular commodity category. Overall, purchasing card spending is expected to grow by 102 percent over the next two years, driving purchasing card purchases from 5.3 to 10.6 percent of total university spending by 2003. The expected doubling of purchasing card spending by universities by 2003 represents a slightly higher growth pattern than achieved during the past two years but is similar to the expected growth of other corporate and governmental respondent categories, with the exception of state agencies, where a modest 55 percent growth is expected.

According to Table 2, 86 percent of the total current university purchasing card spending is for maintenance, repair, and operating goods (MRO), direct materials (e.g., for university hospitals), computers, and office supplies. This percentage falls to 68 percent in 2003, primarily due to large expected increases in purchasing card use for travel and capital goods.

Mission Determines Purchasing Patterns

Universities tend to have different purchasing patterns, depending on their missions. Expenditures at doctoral-granting institutions, for example, will doubtless include significantly more grant- and research-related purchasing activity than non-doctoral-granting peers. Additionally, doctoral-granting universities tend to be larger than non-doctoral-granting counterparts.

TABLE 1: Comparison of University and Purchasing Card Usage

| Public and Private University Respondents | 1998 Survey (n=15) | 2001 Survey (n=38) | Percentage Increase (Decrease) |
|---|--------------------|--------------------|--------------------------------|
| Average number of unit employees | 3,988 | 3,899 | (2%) |
| Average number of unit purchasing cards | 305 | 488 | 60% |
| Average monthly purchasing card spending | \$217,994 | \$405,420 | 86% |
| Median monthly purchasing card spending | \$122,298 | \$130,000 | 6% |
| Monthly spending per card | \$713 | \$832 | 17% |
| Monthly transactions per card | 3.26 | 4.04 | 24% |
| Spending per transaction | \$218 | \$205 | (6%) |
| Cardholders as a % of employees | 6.8% | 11.4% | 68% |
| % of cards active | 61% | 74% | 9% |

To determine how a university's mission influences card use, the sample was divided into two categories—17 doctoral/research extensive and 21 non-doctoral/research universities, based on their Carnegie Foundation classification. (See <http://www.carnegiefoundation.org/classification>.) Tables 3 and 4 present key performance metrics for both university categories.

Tables 3 and 4 show that average program spending at doctoral/research extensive universities is four times higher than baccalaureate-focused counterparts. If all 150 Carnegie doctoral/research extensive universities used purchasing cards as did the respondent group, these institutions would charge \$1.3 billion per year to pay for 7.2 million low-value transactions (given an average transaction size of \$191). At reported administrative savings of \$110 per transaction, current levels of purchasing card use could generate \$793 million in cost savings for doctoral/research extensive institutions today—an average of \$5.3 million per university.

Tables 3 and 4 also indicate that the growth rate of purchasing card spending at non-doctoral institutions is nearly three times higher than doctoral/research extensive institutions. Why? One explanation may be that the non-doctoral/research purchasing card programs are, on average, about two years younger than that of the doctoral/research institutions. Alternatively, purchasing

cards may be a better fit to smaller, less bureaucratic educational institutions. Regardless of the reasons, if all 1,750 non-doctoral/research extensive universities in the United States used purchasing cards as did the respondent group, these universities would charge \$4 billion per year to pay for 14.7 million low-value transactions (given an average transaction size of \$273).

At reported administrative savings of \$110 per transaction, current levels of purchasing card use could generate \$1.6 billion in administrative savings for these institutions today, an average of \$922,694 per university. Purchasing card use by America's 1,900 universities represents a \$5.4 billion dollar market for card issuers and a potential for \$2.4 billion in administrative savings.

Comparisons between cardholder behaviors for both categories of universities also provide interesting information. For

example, transactions per cardholder tripled at non-doctoral/research universities while increasing by only 15 percent at doctoral/research counterparts. Further, average spending per transaction at non-doctoral/research universities increased by 10 percent (to \$273) while falling by 14 percent at doctoral/research extensive institutions (to \$191). Combined, these factors pushed non-doctoral average card spending up 229 percent (to \$989), while average doctoral/research card spending increased by only 1 percent (to \$804). The aggressive nature of card program growth at non-doctoral/research schools is also reflected in the fact that their spending increases are taking place despite a significant handicap—their average per transaction and monthly card spending limits of \$1,309 and \$6,500 are significantly less than doctoral/research university averages of \$2,059 and \$8,875, respectively. ▶

TABLE 2: Current Monthly Spending and Projected Spending by Category for Public and Private Universities (Figures shown in descending order by current purchasing card spending.)

| Category of Spending | Current Total Monthly Spending (000's) | Current Spending With Purchasing Cards (000's) | Projected Spending With Purchasing Cards: 2 Years Out (000's) | Dollar Increase Over 2 Years (000's) | Percent Increase Over 2 Years | Current Capture of Category on Purchasing Card | Projected Capture of Category on Purchasing Card |
|-----------------------|--|--|---|--------------------------------------|-------------------------------|--|--|
| MRO | 20,710 | 2,820 | 3,930 | 1,110 | 39.4% | 13.6% | 19.0% |
| Direct materials | 27,410 | 1,570 | 2,925 | 1,355 | 86.3% | 5.7% | 10.7% |
| Office products | 5,535 | 840 | 1,600 | 760 | 90.5% | 15.2% | 28.9% |
| Computers and related | 6,635 | 625 | 900 | 275 | 44.0% | 9.4% | 13.6% |
| Freight | 2,700 | 250 | 490 | 240 | 96.0% | 9.3% | 18.1% |
| Capital goods | 25,130 | 230 | 1,450 | 1,220 | 530.4% | 0.9% | 5.8% |
| Travel | 5,950 | 200 | 1,630 | 1,430 | 715.0% | 3.4% | 27.4% |
| Other | 3,780 | 100 | 125 | 25 | 25.0% | 2.6% | 3.3% |
| Postage | 1,240 | 90 | 115 | 25 | 27.8% | 7.3% | 9.3% |
| Temp. labor | 1,525 | 25 | 100 | 75 | 300.0% | 1.6% | 6.6% |
| Services | 4,120 | 20 | 200 | 180 | 900.0% | 0.5% | 4.9% |
| Utilities | 7,915 | 10 | 190 | 180 | 1800.0% | 0.1% | 2.4% |
| Leases | 2,100 | 10 | 65 | 55 | 550.0% | 0.5% | 3.1% |
| Benefits | 14,110 | 0 | 0 | 0 | NA | 0.0% | 0.0% |
| Total | 128,860 | 6,790 | 13,720 | 6,930 | 102.1% | 5.3% | 10.6% |

Understanding Program Performance

One goal of the survey is to understand why some educational entities shift more dollars per year to purchasing cards than others. Of course, an educational institution's ability to shift dollars is, in part, a function of the age of its purchasing card program and the institution's size. Controlling for these factors, Table 5 compares organizational and program performance statistics between high-spending and low-spending programs.

Educational institutions included in the high-spending group reported purchase card spending above \$300,000 per month; institutions spending below \$300,000 are included in the low-spending group. The median amount of \$300,000 was identified after eliminating all institutions with purchasing card programs that were less than one year old or had less than 1,001 or more than 8,999 employees. The resulting groups, therefore, differ in terms of monthly card spending but not in the age of their programs or the number of employees.

What are the differences between high-spending and low-spending groups? High-spending organizations give cards to more of their employees (23 percent for high spenders, 11 percent for low spenders). In raw numbers, high-spending universities average more than 2.5 times as many purchasing cards as low-spending universities. High-spending university cardholders use the purchasing card 56 percent more frequently and spend significantly more per transaction (\$221) than their low-spending counterparts (\$144). In addition, a greater percentage of high-spending university purchasing cards are active.

According to Table 5, the benefits obtained by high-spending universities from employee card spending behavior are significantly greater than that of low-spending organizations. High spenders reduced or redeployed an average of 5.1 full-time equivalent accounts payable and purchasing staff because of card use; low spenders cut back by an average of .6.

Active use of the purchasing card must be supported by organizational policies and procedures. Table 6 identifies key differences between the high spenders' and low spenders' card-related policies and procedures. This table shows a \$976 difference in the average spending allowed per transaction between high-spending and low-spending universities. Other differences include:

- High spenders open more categories to purchasing cards. For example, a greater percentage of high-spending organizations allow capital purchases and are less likely to block fuel and automotive or travel purchases with cards.
- Low-spending universities are more likely to require a formal request to obtain a purchasing card and, despite the relative paucity of transactions, are more likely to audit cardholder-purchasing activity than high-spending counterparts. ➤

TABLE 3: Purchasing Cards in Doctoral/Research Extensive Universities

| Doctoral/Research Extensive University Respondents | 1998 (n=9) | 2001 (n=17) | Percentage Increase (Decrease) |
|--|------------|-------------|--------------------------------|
| Average number of unit employees | 5,995 | 7,236 | 21% |
| Average number of unit purchasing cards | 417 | 955 | 129% |
| Average monthly purchasing card spending | \$335,598 | \$765,159 | 128% |
| Median monthly purchasing card spending | \$152,632 | \$674,692 | 342% |
| Monthly spending per card | \$804 | \$800 | 1% |
| Monthly transactions per card | 3.64 | 4.19 | 15% |
| Spending per transaction | \$221 | 191 | (14%) |
| Cardholders as a % of employees | 6.6% | 11.8% | 79% |
| % of cards active | 69% | 69% | 0% |

TABLE 4: Purchasing Cards in Non-Doctoral/Research Universities

| Non-Doctoral/Research Extensive University Respondents | 1998 (n=6) | 2001 (n=21) | Percentage Increase (Decrease) |
|--|------------|-------------|--------------------------------|
| Average number of unit employees | 1,312 | 1,827 | 39% |
| Average number of unit purchasing cards | 146 | 192 | 32% |
| Average monthly purchasing card spending | \$41,589 | \$190,830 | 359% |
| Median monthly purchasing card spending | \$41,658 | \$87,000 | 109% |
| Monthly spending per card | \$301 | \$989 | 229% |
| Monthly transactions per card | 1.21 | 3.62 | 199% |
| Spending per transaction | \$249 | \$273 | 10% |
| Cardholders as a % of employees | 9.1% | 10.0% | 10% |
| % of cards active | 53% | 74% | 40% |

TABLE 5: Differences Between Programs That Charge \$300,000 or More Per Month and Those That Charge Less Than \$300,000 Per Month

| | University Low-Spending Group (n=8) | University High-Spending Group (n=9) |
|---|-------------------------------------|--------------------------------------|
| Agency Statistics | | |
| Average number of employees | 3,236 | 4,083 |
| Program Performance Differences | | |
| Average monthly purchasing card spending | \$153,075 | \$918,842 |
| Average monthly purchasing card transactions | 1,062 | 4,156 |
| Average number of cards | 384 | 977 |
| Average monthly spending per card | \$398 | \$940 |
| Average monthly transactions per cardholder | 2.7 | 4.2 |
| Average transaction size | \$144 | \$221 |
| Cardholders as a % of employees | 11% | 23% |
| Percent of active cards | 60% | 73% |
| Program Benefits | | |
| Average purchasing and accounts payable FTE headcount reduced or redeployed due to purchasing cards | .6 | 5.1 |
| % sharing in card provider's revenue associated with purchasing card use | 0% | 13% |

- High-spending universities are more likely to require their cardholders to use spending logs, dispelling the notion that spending logs discourage card use.
- High-spending universities promote their card programs more aggressively and are more likely to use card issuer data to identify suppliers and manage costs than their low-spending counterparts.
- All high-spending universities conducted live training sessions, and 89 percent have an ongoing method of communicating card program performance. By contrast, 62 percent of low-spending universities conduct live training, and

TABLE 6: Control and Program Management Differences Between High-Spending and Low-Spending Universities

| | University Low-Spending Group (n=8) | University High-Spending Group (n=9) |
|---|-------------------------------------|--------------------------------------|
| Control Differences | | |
| Mean per transaction spending limit | \$1,357 | \$2,333 |
| % that <i>do not allow</i> purchasing card transactions for travel and entertainment | 86% | 56% |
| % that <i>do not allow</i> purchasing card transactions for fuel and automotive | 33% | 0% |
| % that <i>allow</i> capital purchases on cards | 0% | 33% |
| % that centralize purchasing card spending through one administrative person | 25% | 0% |
| % that require employees to make a formal request to obtain a purchasing card | 100% | 78% |
| Average annual number of times a cardholder will be subject to internal audit or accounting review of purchasing card spending activity | 3.2 | 2.2 |
| % that require cardholders to maintain log | 37% | 63% |
| Communications, Training, and Policies | | |
| % that have live training sessions on purchasing card use | 62% | 100% |
| % that have an ongoing method of communicating purchasing card performance | 25% | 89% |
| % with an official policy requiring that certain purchases be made on the purchasing card | 37% | 75% |
| Card Information & Supply Chain | | |
| % that use card spending data to identify potential MRO supplier-partners | 29% | 56% |
| % that use card spending data to negotiate better prices with MRO suppliers | 14% | 44% |

Want to Reduce or Eliminate Paperwork?

In addition to expediting payment, purchasing cards can reduce or eliminate the paperwork associated with requisitions, purchase orders, and invoices for thousands of small-dollar transactions. By eliminating these non-value-adding activities, your institution's procurement personnel can focus on other issues, such as negotiating the best price and terms on high-dollar expenditures.

You can eliminate or reduce the following activities by using purchasing cards:

Accounts Payable

- Receiving, sorting, matching, filing, and entering data relating to receiver, invoice, and purchase order
- Routing/re-routing of invoices for approval and account coding
- Identifying and expediting invoices with early payment discounts
- Managing back-order suspense files for invoices that were partially filled
- "Rationalizing" paperwork—particularly in those cases where employees have taken possession of goods prior to filling out any paperwork
- Handling end-of-month accruals
- Setting up new vendors on computerized accounts payable systems
- Answering phone inquiries from suppliers
- Processing of expense reports for sundry items
- Reimbursing petty cash

only one-quarter have a method of communicating card program performance throughout the institution.

- High spenders are more likely to have an official policy requiring certain purchases be made on a purchasing card.
- High spenders try to use purchasing card data to drive other cost-savings opportunities. About half use spending data to identify potential suppliers and negotiate better prices with suppliers, as opposed to a quarter or less of low spenders.

Barriers to Use

High card spending apparently comes at a cost to management's sense of control. Managers at high-spending universities uniformly expressed more concern than low-spending managers about the following possibilities:

- Card spending would undermine their ability to keep departmental spending within budget.
- Employees would pay too much for goods and services.
- Employees would make duplicate purchases of goods or buy goods with more bells and whistles than needed.
- Employees would buy goods from nonpreferred suppliers.
- Employees would make unapproved purchases that would require corrective action by managers.

- Writing checks for all activities associated with small-dollar purchases, including check processing, matching invoices to checks, obtaining or imprinting signatures, filing, and mailing

Purchasing

- Receiving requisitions and assigning buyers
- Selecting and calling suppliers, which often duplicates work done by the requisitioner
- Negotiating or price checking on small-dollar items
- Establishing terms
- Transcribing requisitions to purchase orders, filing them, and mailing them to suppliers
- Filing and internally distributing copies of purchase orders
- Resolving paperwork discrepancies with invoice
- Closing the order when the transaction is satisfactorily completed

Requisitioning Department

- Filling out requisitions and obtaining approvals on purchases
- Stockpiling of supplies

Mailroom

- Applying postage to and receiving, sorting, and distributing correspondence relating to small-dollar purchases

General Accounting

- Reconciling with bank high numbers of small-dollar checks

Receiving

- Receiving boxes of goods for small-dollar acquisitions, if they can be sent directly to cardholders

By contrast, low-spending university managers were more concerned that third parties would obtain card information to make unlawful purchases and that purchasing card spending would not be tracked to the appropriate general ledger accounts or allocated correctly among the various accounts to which spending applied.

Card issuers and card-using organizations could reduce managerial concern over—and possible resistance to—purchasing card use through electronic controls over cardholder choices. Perhaps, with such controls in place, more educational institutions could save money by using purchasing cards.

Author Bios

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