
Why Automation Matters

A Survey Study of the Modern Accounts Payable Department



How Automated is the Modern AP Department?

Most major organizations will at some point review their processes and benchmark them against other examples in the market. New tools, methods, or business partners offer opportunities to change and improve. Accounts payable is no exception as there are many opportunities to benchmark a company's payables processes and implement improvements.

iPayables occasionally surveys accounts payable management professionals in North America to gain an understanding of the common methods and practices in AP. In this study, we examine:

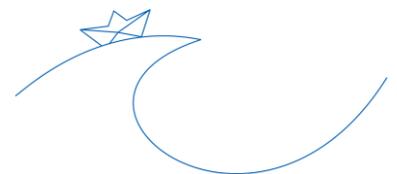
- How invoices are received (paper, email, or electronically).
- How those invoices are processed (manually, OCR, or electronically).
- How many employees does it take to process those invoices.

We then offer an analysis of efficiency (as defined by invoices processed per employee) as it relates to processing type. We hope this study offers you an opportunity to compare your current processes with benchmarks aggregated from many companies, and highlight automation tools that might be beneficial to your organization.

Survey Parameters

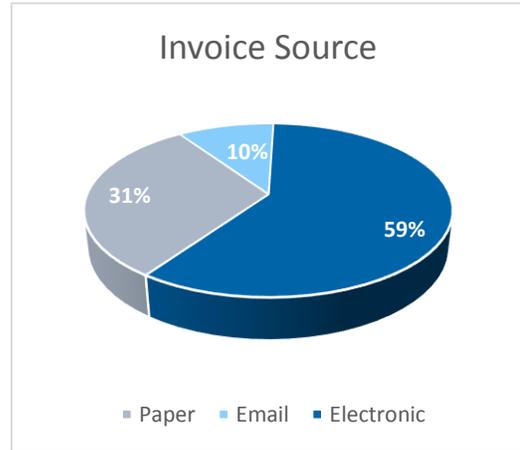
To gain further clarity on how the modern AP department functions, we sent out our email survey to nearly 30,000 CFO's, controllers, AP managers and other finance professionals who are decision makers and have influence over how their respective organization's AP department operates. For verification, the final question of our study (question #5) asked our participants to identify their role in the company. For this study, we targeted companies in the United States whose annual revenue exceeds 50 million. We asked them the following questions:

1. Approximately how many invoices a month does your organization process?
 - a. Total number of invoices a month?
 - b. Of those, how many are paper?
 - c. How many are sent via email?
 - d. How many are entered manually?
 - e. How many are processed via OCR?
 - f. Of those processed with OCR, how many are straight-through processing (without any manual effort)?
 - g. How many are processed fully electronic such as vendor portal, file upload, EDI?
2. What percentage of your Non-PO invoices are routed with approval workflow?
Choose (%): 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100
3. What percentage of your Purchase Order invoices are routed through Automated Match?
Choose (%): 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, 91-100
4. How many people in your organization are processing invoices?
Choose full time or part time
5. What is your role in the company? (list title and company)



Results

To open the survey, we asked our participants to estimate how many invoices per month their respective organization process. This was done to establish some parameters for this study. Mainly, we wanted to know (in a general sense) how big and how busy your average Accounts Payable department is. The organizations that participated in our study, reported an average of 22,039 invoices processed monthly in AP. This indicates that we were mainly dealing with large Accounts Payables departments who process heavy volumes on a daily basis. Data gained from our survey was significant enough to establish quantifiable trends and to correlate various data points for this study.



How Invoices are Received

The results of the survey indicated that out of all the invoices processed in a month, 31% are paper invoices, 10% are email and 59% are electronic. Even though 59% of all invoices were processed electronically, the survey also tells us only 28% of the companies reported that they process all or a majority (greater than 50%) of their invoices electronically (questions 1b-1d). This shows us that companies with the largest invoice volumes use electronic invoicing much more than smaller volume companies.

How Invoices are Processed

Once the invoices are received, they are entered into the payables system in one of three ways, electronically, manually (keyed from paper or emailed invoices) or by scanning (OCR). Electronic Invoices by definition, go straight into the payables system, so that number stays the same as above at 59%. The invoices submitted via paper or email were either manually keyed (20%) or processed after scanning via OCR (21%).

59% Electronic
21% OCR
20% Manual

In question two we asked, “What percentage of your non-PO invoices are routed with approval workflow?” The results show a slight majority of companies use automated workflow. However, the results are not as definitive and show a slight tendency towards larger organization using approval workflow more often. There is not much of a difference between manual and automated workflow in efficiency as viewed by invoices processed per employee. Automated purchase order Invoice matching (Question 3), is more strongly correlated to efficiency than automated workflow, and is more popular in larger organizations.



Automated approval workflow is used by many groups that receive only paper and enter invoices manually. So while automated workflow may help with visibility and control in these scenarios, its impact on efficiency is less obvious. Automated approval workflow is used less by entities that use mainly purchase orders, which is understandable (if most of your invoices are PO invoices, you will use less workflow). In both the manual and highly PO invoice environments, there was no correlation between automated approval workflow and number of invoices processed per employee (our efficiency standard). However, automated approval workflow was used by 82% of organizations that were using some electronic or OCR and were not completely PO invoice based. The evidence in favor of automated approval workflow here is that a large majority of very efficient companies use it as part of their automation strategy.

Headcount in AP

Question four asked, how many people in your organization are processing invoices? This question combined with the total number of invoices processed, gives us our baseline for efficiency. With this, we can establish correlations between the number of invoices processed per person and the different technologies used, giving us some insight into the efficiencies associated with those technologies. The results showed an average of about six people (5.5 full-time, 0.4 part-time) processing invoices per company. The lowest number was one and the largest AP department we sampled had 24 people processing invoices. The efficiencies ranged from 18 to 37,046 invoices processed per month per employee.

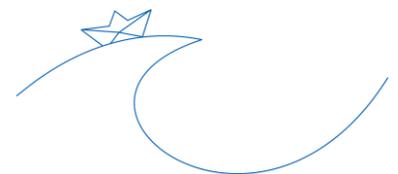
Analysis

Manual vs. Electronic

First we were interested to find out the difference between manual vs. electronic processing. Specifically, how many invoices a typical AP employee could process when they used an electronic method vs those who processed most of their invoices manually. We broke down the data into three separate groups: 1) those that process the majority of their invoices electronically (question g), 2) those who do it mostly with OCR (question e), and 3) those who do it mostly manually (question d). We then evaluated how many invoices were being processed a month per employee. See the results below.

Per Month	Per Week	Per Business Day	Per Hour	Process Type
10,387	2,397	479	60	Electronic
3,821	882	176	22	OCR
906	209	42	5	Manual

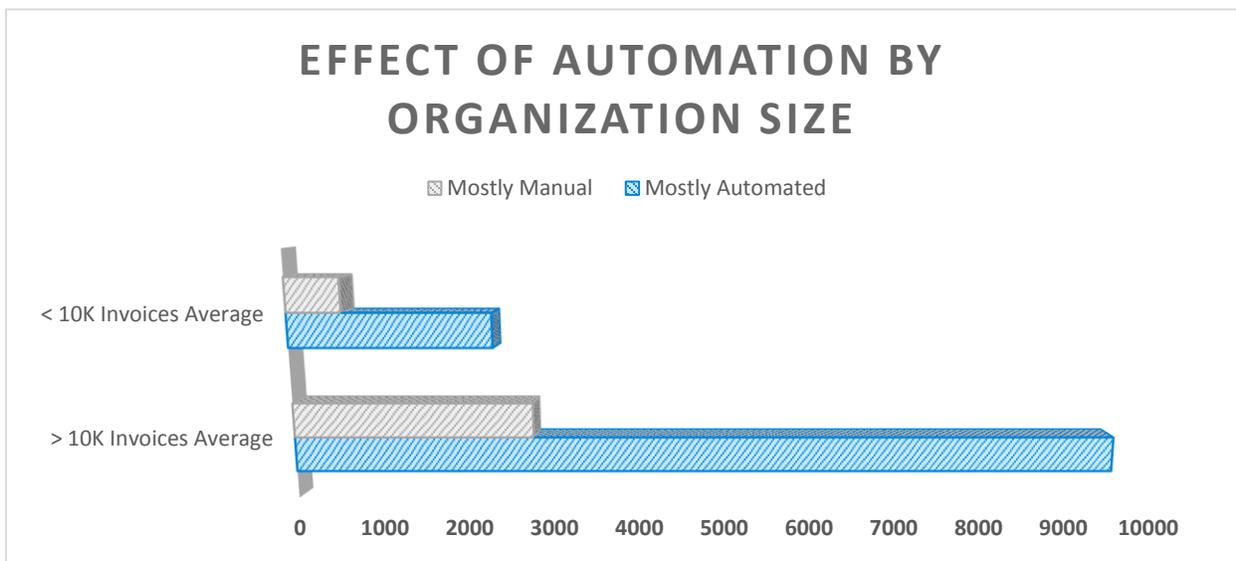
This table shows the number of invoices that are processed per employee (on average) based on the preferred processing method.



Manual vs. Electronic by Company Size

The results show that electronic invoice processing was 3.5 times more efficient than paper processing and the AP department that utilizes e-invoicing is (on average) processing 437 more invoices per employee every day. Based on these results, fewer people are needed to process invoices if it is done electronically.

Many of the companies we surveyed used a mix of processing methods. To analyze processing methods we categorized companies into the method they used most. For example, organizations that process invoices mostly manually average 906 invoices per employee per month, while companies that just process paper, average 700 invoices per employee a month or about 4 invoices an hour.



The chart above shows the number of invoices that can be processed per employee per month

OCR Straight-Through Processing

While OCR processing has benefits over manual processing, the main metric of efficiency is in straight-through processing. After paper is scanned or emailed images are loaded, OCR reads the image to pull data which is then loaded into the automated process, usually with PO matching and approval workflow.

In question 1f we asked was “Of those processed with OCR, how many are straight-through processing (without any manual effort)?” We assumed that if OCR solutions are functioning well, the percentage of straight-through processed invoices would be very high. Unfortunately, the average percentage of straight-through processing with OCR invoices was only 32%.

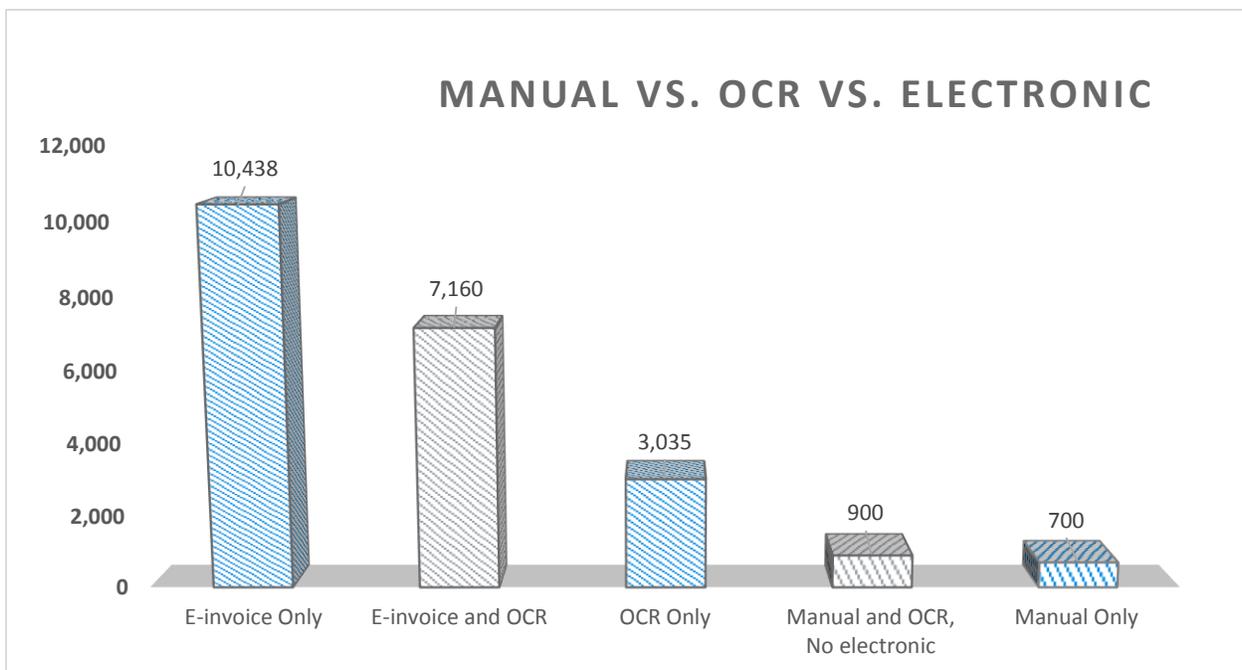


This means that 68% of invoices processed with OCR needed some manual effort by accounts payable to get the invoice back on track in the system.

We did not survey the cause of these disruptions (missing information, OCR failures, scanning problems, PO matching errors, etc.). Even with the low straight-through processing rate, OCR was still more efficient than manual processing. However, the low straight-through processing rate probably explains the lower efficiency than electronic invoice processing (which traditionally has very high straight-through processing rates).

Manual vs. OCR (scanning) vs. Electronic

We broke down the data and separated out all of the different processing methods, be it electronic, electronic with some OCR, OCR only, manual and some OCR, or just manual. The results showed a clear difference between the various combinations and showed that organizations who use all or some electronic invoicing, have a distinct advantage in speed and efficiency over those who don't. Company size or invoicing volume was also something we examined and determined that smaller invoicing companies are more likely to process manually whereas larger volume companies process the majority of their invoices electronically.



The chart above shows the number of invoices that can be processed per employee per month

All companies, large or small in the study, that do all electronic invoicing show greater efficiency rates than their manual or OCR counterparts. We surmise from the data that companies that switch from manual to OCR (no matter the size of company), should experience some efficiency gains.



However, the gains from manual to OCR are not as dramatic as those gains in efficiency that come from switching from manual to electronic or even OCR to electronic invoice processing. We theorize that electronic invoicing is more efficient than OCR because e-invoicing requires no paper and usually involves the supplier as part of the approval process (so they can participate in online inquiry, dispute resolution, and online match exception processing). The automation of the supplier activities as well as the higher straight through processing of electronic invoicing is another reason for the higher efficiency over OCR.

Headcount in AP

Organizations that mostly use electronic invoicing (more than 50%), are processing 437 more invoices per employee every day than companies who process using mostly paper (more than 50%). In fact, straight e-invoicing departments process 370 more invoices per clerk per day than straight OCR departments. For contextual purposes, imagine a large payables department that process 10,000 invoices per month. To do so electronically would require only six payables employees (based on the survey findings). To process 10,000 paper invoices manually, you would need about 15. Even a smaller company processing 3,000 invoices a month only needs about two people as opposed to the five you would need with paper.

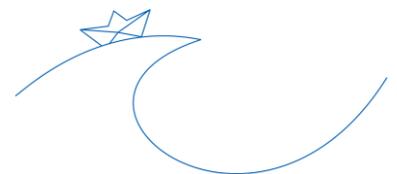
iPayables conducted a previous study titled "*Tangible Benefits of AP Automation*" (that can be [found here](#)). In that study, we surveyed our current customers (consisting of Fortune 500 airlines, restaurant chains, movie studios, grocery chains and others). We asked what happened when they made the transition from manual paper invoice processing to full Accounts Payable Automation (electronic invoicing, automated workflow, dynamic discounting, etc.). They responded that AP Automation, specifically electronic invoicing, resulted in:

- A 62% reduction in AP staff (most of whom were re-allocated to other areas in the company).
- Nearly \$50,000 gained by AP in the form of discount capture (early pay / dynamic discounting)
- A ten day reduction in invoice approval time.

Based on the '*Tangible Benefits*' study and our current survey, it is clear that along with the other benefits; labor costs in AP are dramatically reduced when an organization switches from manual paper invoice processing, or even OCR, to electronic invoicing.

Electronic invoicing seems to be the most effective component of Accounts Payable Automation which may also include approval workflow, dynamic discounting, PO Matching, payments and other features that enable an AP department to process invoices, collect discounts and make payments. As our survey indicated, 437 more invoices are being processed per employee every day by companies that utilize an electronic invoicing automation approach compared to those who still process paper invoices. The fact that only 28% of our respondents reported they use electronic invoicing automation, means there is still room for efficiency gains in the marketplace.

To put this all into context, in the aforementioned study *Tangible Benefits of AP Automation*, iPayables customers reported a 62% reduction in AP labor costs and an average of \$50,000 gained by AP in the form of discount capture (early pay / dynamic discounting) when they switched from manual processing to electronic invoicing automation (with iPayables).



As an example, one major entertainment company reported that pre-automation, there were 53 people processing paper invoices. Now that they are fully automated, they only need five to process the same volume of invoices. If for example, you were to use an estimated average salary of \$50k per year for each AP employee, this would represent a savings of \$2.4 million per year in labor costs alone. In our recent survey, we had one company report they have 24 people processing paper invoices in AP. If they were able to reduce their labor costs by 62%, they could be saving well over \$450,000 a year (per our \$50k per employee estimate).

Summary

Paper, email, and electronic are all common ways to receive invoices today. Paper and email is processed either manually or with OCR (which requires manual effort in 62% of OCR invoices). E-invoices are processed electronically with no manual intervention. Not surprising, manual processing requires the most employees of any method. This is true of companies with less than 10,000 invoices per month as well as companies greater than 10,000 per month. OCR is more efficient (requiring less employees) than manual processing, but because OCR is still challenged by low straight-through processing rates, OCR is less efficient than electronic invoice processing. While the study is designed to be descriptive rather than prescriptive, the higher efficiencies shown by electronic invoicing over manual and OCR processing should be enough to encourage serious consideration of electronic invoicing automation tools above manual or OCR tools.

As companies continue to evaluate market trends and new methods, we hope this study will contribute to the growing evidence in favor of full electronic invoice automation as the most efficient and effective automation tool on the market today.

Additional Resources:

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About iPayables

iPayables is an industry leader in the automating of accounts payable departments, optimizing workflow and streamlining the invoicing / payables process. By using our advanced internet invoicing system (InvoiceWorks®), organizations can process invoices electronically, make changes, and can track payments all while eliminating phone inquiries, data entry, filing and the scanning of documents.

The world's largest airline, largest grocer, largest restaurant chain and other Fortune100 companies use iPayables InvoiceWorks® because of its functionality, flexibility, and unmatched value. iPayables provides supplier tools for invoice web-entry, file upload, EDI, PO flip and paper invoice capture; which integrate seamlessly with our robust and dynamic workflow, purchase order matching, dispute resolution, payment and dynamic discounting capabilities. www.ipayables.com.

