

Who's Winning the Shipping War?

Evaluating the USPS[®], FedEx[®]
and UPS[®] on Tracking Events,
Delivery Times and Overall Costs



stamps
.com[®]



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Stamps.com provides a secure Internet mailing solution to purchase and print U.S. Postal Service-approved postage using a computer, printer and Internet connection. The company operates under an Information Based Indicia Program (IBIP) license from the U.S. Postal Service. All opinions expressed in this report are solely the author's opinion and do not reflect the opinions of the U.S. Postal Service.

Important Note: This white paper has been updated to reflect 2019 shipping rates and surcharges for all carriers. Actual package tracking and delivery times used in this study were derived from packages shipped in 2013 and 2014.

Executive Summary

Stamps.com, a licensed PC Postage vendor of the U.S. Postal Service®, conducted a study in September 2013 and January 2014 designed to evaluate the three largest shipping carriers in the U.S. market: the U.S. Postal Service (USPS®), UPS®, and FedEx®. The project analyzed the main factors that e-commerce businesses typically take into consideration when selecting a shipping carrier: reliability, delivery time, and cost.

- **Reliability:** Reliability is important to e-commerce sellers and consumers alike. A shipping carrier that provides continued location visibility to their buyers while a package is in transit helps minimize the time spent fielding customer questions about the location of their packages.
- **Delivery Time:** Faster delivery time translates to better customer service. The sooner products get into buyers' hands, the happier they are and the more likely they are to become repeat customers.
- **Cost:** Shipping costs can quickly add up for e-commerce businesses. Now more than ever, e-commerce sellers need to stay competitive among other online retailers while still maintaining profit margins.

For the study, Stamps.com staff from three different locations (Los Angeles, Virginia, and Chicago) shipped nearly 150 packages across the United States. These locations represent common warehouse locations positioned regionally throughout the U.S., with Los Angeles representing packages shipped from the West Coast, Virginia representing packages shipped from the East Coast, and Chicago representing packages shipped from the Central U.S.

Shipping carriers normally base their transportation costs on delivery distances to geographical "shipping zones." Each shipping zone contains several U.S. Zip Codes for a specific region, and the zone is based on the distance from the origination Zip Code to the package delivery Zip Code. The USPS, FedEx and UPS all utilize eight shipping zones for delivery within the U.S. For our study, we sent packages to all eight shipping zones from each location.

Packages were shipped from each location on two separate days — Monday and Thursday. Monday was chosen so carriers could have a full workweek to deliver the packages. Thursday was chosen so carriers could incorporate

weekend delivery into their schedule, although no weekend delivery surcharges were paid.

Package size and weight replicated a typical e-commerce transaction, with a package being shipped from a business or warehouse to a residence. All packages were identical in size and shape using a 12" x 9" x 3" brown box with an actual weight of 1 lb. 9 oz. — both common product sizes and weights for a variety of industries including apparel, books, electronics, and sporting goods.

For each package, Stamps.com monitored the number of tracking events (scans) received during transit, the delivery time and the shipping cost, including any added surcharges.

The study generated significant conclusions to help e-commerce sellers lower costs and improve delivery times.



Important Note: This white paper has been updated to reflect 2019 shipping rates and surcharges for all carriers. Actual package tracking and delivery times used in this study were derived from packages shipped in 2013 and 2014.

Key Findings

Reliability and Package Tracking

- For all three carriers, 100% of the packages arrived at their destinations without any significant damage to either the box contents or the box itself. Additionally, no packages were lost in transit for any length of time.
- The number of total tracking scans per package was nearly equal among all carriers. The average number of scans per package was 9.79 scans for UPS, 10.38 scans for FedEx, and 9.42 scans for the USPS.

Delivery Times for Packages Shipped on Monday

- USPS delivery times were fastest for packages shipped on Monday: 100% of USPS Priority Mail packages were delivered within two days, compared with only 50% of UPS Ground, and 58% of FedEx Home Delivery packages.
- On average, all three carriers delivered packages to Zone 1 in one day and to Zone 4 in two days.
- UPS Ground and FedEx Home Delivery delivered packages faster by half a day, on average, to Zones 2 and 3.

- For farther distances (Zones 5 to 8), the USPS was the clear leader with two-day delivery for all packages (up to four days faster than UPS and FedEx).

Delivery Times for Packages Shipped on Thursday

- USPS delivery times were fastest for packages shipped on Thursday: 92% of USPS Priority Mail packages were delivered within two days, compared with only 33% of UPS Ground and 55% of FedEx Home Delivery packages.
- On average, all three carriers delivered packages to Zone 1 within one day and to Zone 3 within two days.
- UPS Ground and FedEx Home Delivery delivered packages faster by a little over half a day, on average, to Zone 2.
- For farther distances (Zones 4 to 8), the USPS was the clear leader with two-day delivery for nearly all packages except those traveling to Zone 8. This timeframe was at least two days and as many as four days faster than UPS. When compared to FedEx, this timeframe was up to four days faster.

Average Total Days to Delivery

Normal Delivery
(Shipped on Monday)

2.75 UPS Ground	2.21 FedEx Home Delivery
---------------------------	------------------------------------

1.79
USPS
Priority Mail

Average Total Days to Delivery

Including Weekend Delivery
(Shipped on Thursday)

3.83 UPS Ground	3.25 FedEx Home Delivery
---------------------------	------------------------------------

2.08
USPS
Priority Mail

...Key Findings, *continued*

Cost Comparison – using 2019 rates and surcharges

- Using 2019 FedEx Home Delivery standard rates (which automatically includes a \$3.80 residential surcharge over ground shipping rates) and UPS Ground daily rates, with a discount rate of 20%, and adding fuel surcharges and residential fees, 2019 USPS Priority Mail pricing was the lowest cost option for packages 2 lbs. or lighter across all zones, with savings between \$3.84 and \$4.87 per package compared to the private carriers.
- For packages weighing 1 lb. to 11 lbs. and traveling to Zones 1 to 4, the USPS offered cost savings between \$1.40 and \$3.84 compared to FedEx Home Delivery.
- Fuel surcharges and residential delivery fees charged by FedEx and UPS increased the total shipping costs per package by up to 50%. The USPS does not add these fees and surcharges.
- Note that UPS and FedEx Minimum Net Package Charge (description in addendum) can often remove any earned discounts that have been negotiated in the 1 lb. weight group for Zones 1-7 and the 1lb. to 6 lb. weight groups for Zone 1.

- These findings suggest that the USPS Priority Mail Service offers the most cost savings when shipping packages that weigh between 1 lb. and 11 lbs. to a residence in Zones 1 through 4. Additionally, for packages weighing up to 2 lbs., the USPS shipments were faster and less expensive across all zones.
- FedEx Home Delivery provided cost savings for packages weighing 7 lbs. and more traveling to Zones 5 through 8. UPS and FedEx provided cost savings for packages weighing 21 lbs. or more, regardless of the zone.

Total Tracking Scans Per Package

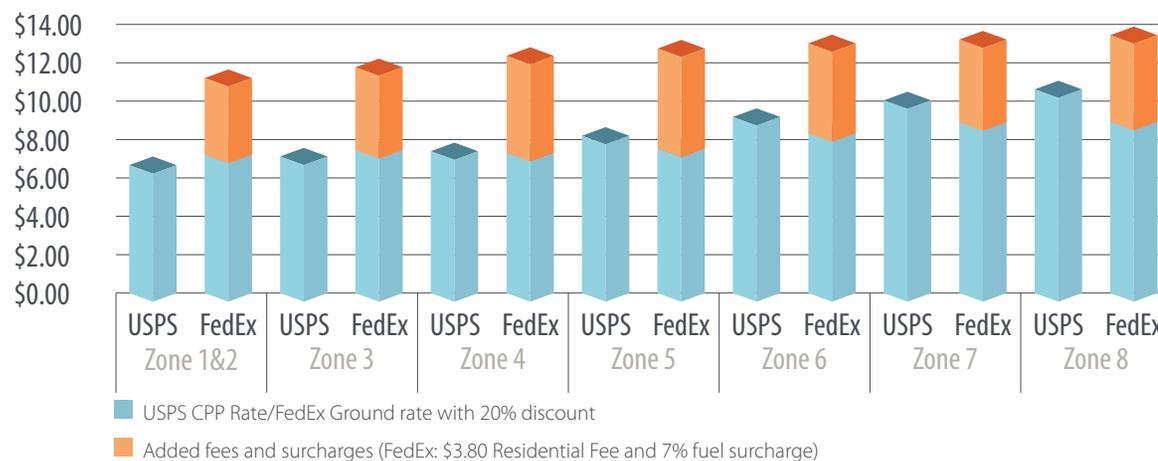
9.79 UPS Ground	9.42 USPS Priority Mail
10.38 FedEx Home Delivery	

Average Cost to Ship
2 Lb. Package to Residence

\$12.73* UPS Ground	\$12.87* FedEx Home Delivery
\$8.89 USPS Priority Mail	

* Includes fuel surcharge and residential delivery fee.

Figure 1: 2 lb. Package Cost Comparison by Zone - FedEx vs USPS



Methodology

Important Note: *This paper has been updated to reflect 2019 shipping rates and surcharges for all carriers. Actual package tracking, delivery times and shipping costs used in this study were derived from packages shipped in 2013 and 2014.*

In September 2013 and January 2014, staff of Stamps.com, a licensed PC Postage vendor of the U.S. Postal Service, conducted a study designed to evaluate the three major shipping carriers in the U.S. — the USPS, UPS and FedEx.

In total, 144 packages were sent from three separate locations to all eight shipping zones using each carrier. The locations were Los Angeles, Chicago, and Virginia (see Figure 2). The packages were shipped via price comparable mail classes for each carrier — USPS Priority Mail, UPS Ground, and FedEx Home Delivery. Staff sent the packages in groups of 24 from each location on two separate days — Monday and Thursday.

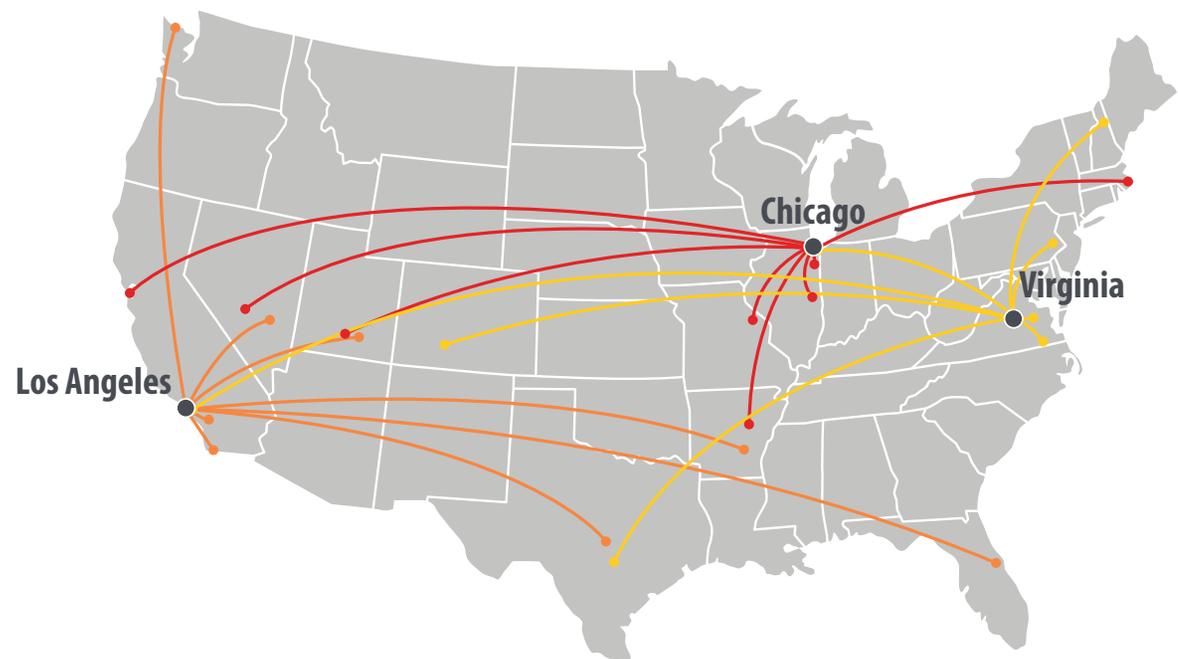
Monday was chosen to collect delivery time data when the carrier had five business days for delivery. Thursday was chosen to show delivery times when the carrier had to incorporate the weekend into the delivery schedule.

The project used common package sizes and weights to duplicate a typical e-commerce transaction (traveling from a business or warehouse to a residence). All packages were identical in size and shape using a 12" x 9" x 3" brown box with a weight of 1 lb. 9 oz. (billed at 2 lbs for USPS and at 3 lbs for UPS and FedEx). This increase in weight for FedEx and UPS is due to the change to their dimensional weight

divisor from 166 or 139. FedEx decreased their divisor in January 2017 and UPS decreased from 166 to 139 in December 2017. (See page 16, "How Dimensional Weight Impacts Pricing," for additional information).

For each package, we tracked the number of scans, delivery time in transit, total delivery days and the total shipping cost.

Figure 2: Packages Shipped from Three U.S. Locations to All Eight Shipping Zones



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Finding #1: Carrier Package Tracking

With the growth of e-commerce, package tracking capabilities are more important than ever. Once a buyer completes an online purchase they are often anxious to track the location of their package at all stages of the delivery process. Carrier package tracking provides this valuable insight to the buyer.

Online retailers typically send an email to the buyer alerting them that their package has shipped and this email normally includes carrier tracking information. Having tracking information allows the buyer to check the whereabouts of the package 24/7. It can also lower customer service costs for e-commerce sellers because it can reduce support center calls and other customer inquiries regarding package location.

Carrier Package Tracking Capabilities

Over the years, UPS and FedEx have had excellent package tracking capabilities. Their systems provide many different entry scans as a package moves through the transportation process, including times and exact whereabouts for a package. Conversely, the USPS has often been criticized for only providing Delivery Confirmation scans when a package is delivered (until 2012 actual scans in transit had been very limited).

USPS Tracking Improvements

In 2012, the USPS began investing millions of dollars in shipping operations and tracking upgrades with a goal of becoming the leader in the shipping industry. This investment allowed USPS packages to get more automated scans

in transit. As of October 2013, USPS internal documentation¹ indicates that 98% of USPS mail carriers now carry real-time scanners, allowing them to provide package tracking information back to the USPS database and website within minutes.

Total Tracking Scans per Package

The results of our study found that the average number of scans per package were almost identical among carriers. UPS Ground had 9.79 scans per package, FedEx Home Delivery had 10.38 scans per package and USPS Priority Mail had 9.42 scans per package (see Figure 3).

Figure 3: Total Number of Scans per Package



¹ USPS internal documentation MTAC Visibility and Service Performance

Average Package Scans per Day

The higher the number of package scans per day, the more information the buyer has to track the package moving toward its final destination. This scanning process also helps the buyer determine the estimated arrival date of the package, which can help reduce lost or stolen packages and allow for a better customer experience.

Our results for the average number of package scans per day while in transit show that the USPS leads the private carriers in providing more daily communication to the buyer. On average, UPS had 2.47 package scans per day, FedEx had 3.21 package scans per day and the USPS had 3.36 package scans per day (see Figure 4).

The investments that the USPS made to its scanning infrastructure in recent years resulted in closing the gap with UPS and FedEx.

Note: This report's addendum contains actual package scan examples from each carrier.

Figure 4: Average Package Scans per Day

Total Package Scans / Total Delivery Days

Carrier	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Average
UPS Ground	3.17	4.50	3.40	2.47	1.39	1.82	1.67	1.33	2.47
FedEx Home Delivery	4.50	4.75	4.31	3.25	2.82	2.23	2.15	1.78	3.21
USPS Priority Mail	4.67	3.94	3.11	3.22	3.44	3.11	2.89	2.46	3.36

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Finding #2: Package Delivery Speed

Package delivery speed is an important factor for all e-commerce sellers. Once buyers make a purchase they want to receive their merchandise as fast as possible for either no additional cost above the product price (free shipping) or for a very low fee.

This demand for fast delivery can be traced to the popularity of Amazon Prime, which provides free two-day shipping on millions of products sold on Amazon.com. According to a Morningstar report by analyst R.J. Hottovy, this service is expected to grow from 10 million subscribers in 2013 to 25 million subscribers by 2017.² (Update: As of April 2017, Amazon Prime had grown to 80 million subscribers).

Not only does fast delivery time have a direct impact on increased sales, it also helps lower internal costs by reducing the number of customer inquiries via email or telephone to support centers. E-commerce sellers who are able to meet and exceed these demands will continue to set themselves apart from their competition.



² R.J. Hottovy of Morningstar on Amazon Prime's Lessons in Creating Loyal Customers
<http://smallbiztrends.com/2013/06/subscription-based-membership-programs.html>

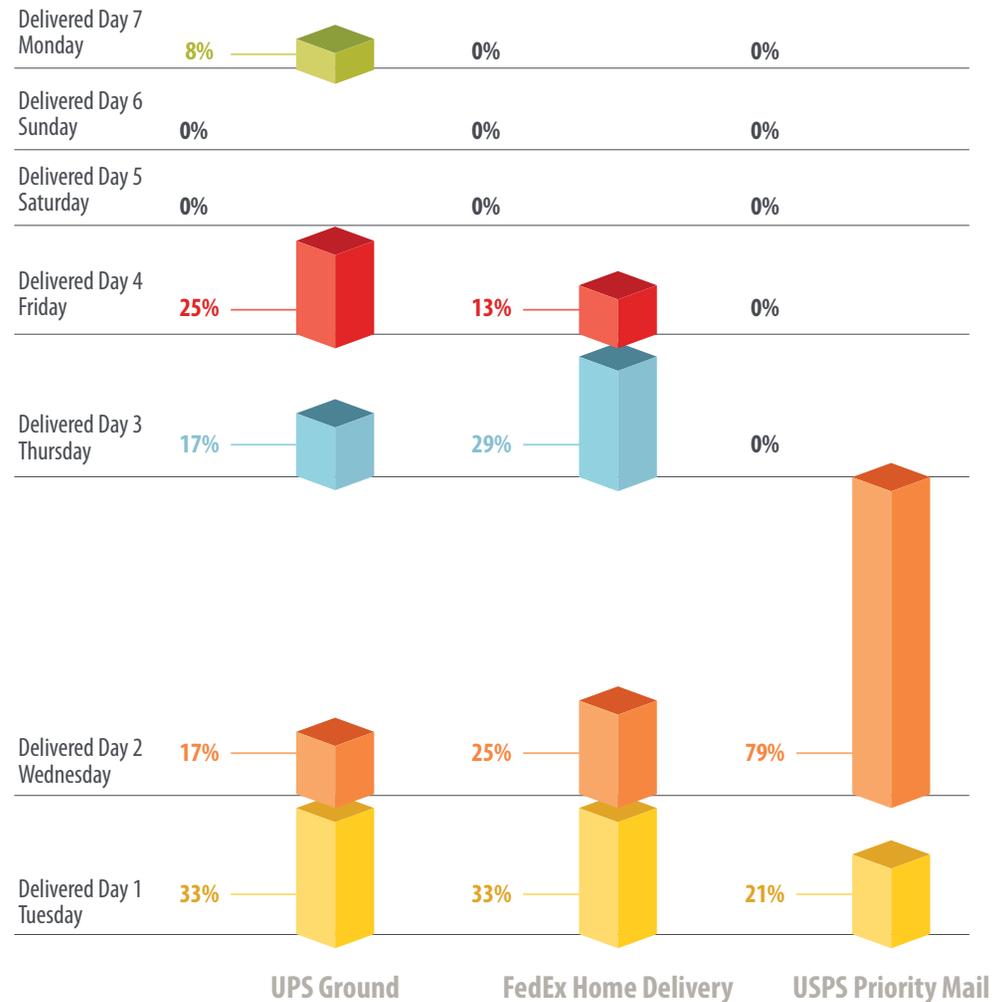
...Finding #2: Package Delivery Speed – Monday

Overall Delivery Times

Of the 72 packages shipped out on a Monday for the project, data showed that 100% of USPS Priority Mail packages were delivered in two days to all eight shipping zones. UPS delivered 50% and FedEx delivered 58% of packages within two days (see Figure 5) to all eight shipping zones.

Figure 5: Percent of Packages Delivered per Day

Normal Delivery (Shipped on Monday)



...Finding #2: Package Delivery Speed – Monday, *continued*

When looking at the total delivery time to a residential destination across all zones, USPS Priority Mail packages were delivered in 1.79 days on average (see Figure 6). That is almost one full day faster than UPS Ground (2.75 days on average) and about a half day faster than FedEx Home Delivery (2.21 days on average).

Delivery Times by Shipping Zone

With the exception of Flat Rate service, the distance a package is traveling affects its shipping price, and that distance is measured by “zones.” Shipping zones are calculated based on the number of miles from the origination Zip Code

to the destination Zip Code. Zone 1 is the closest zone to the origination; Zone 8 is the farthest zone from the origination.

While all shipping carriers delivered to Zone 1 in one day for packages shipped on Monday, UPS and FedEx showed slightly better performance with delivery to Zones 2 and 3 (see Figure 7).

All carriers delivered to Zone 4 within two days. Conversely, the USPS led in delivery time for packages delivered to Zones 5 to 8, averaging two days (in some cases, USPS delivered up to four days faster than UPS and up to two days faster than FedEx).

Figure 6: Average Total Days to Delivery

Normal Delivery (Shipped on Monday)

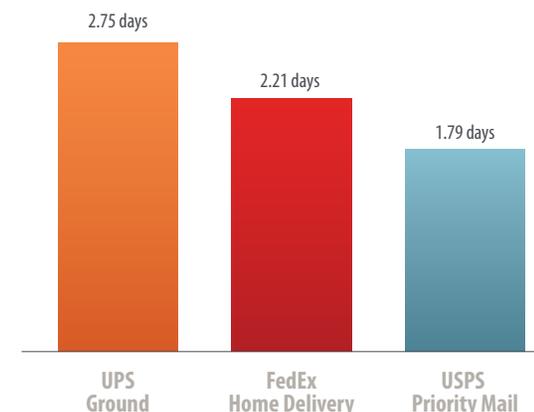


Figure 7: Average Total Days to Delivery by Shipping Zone

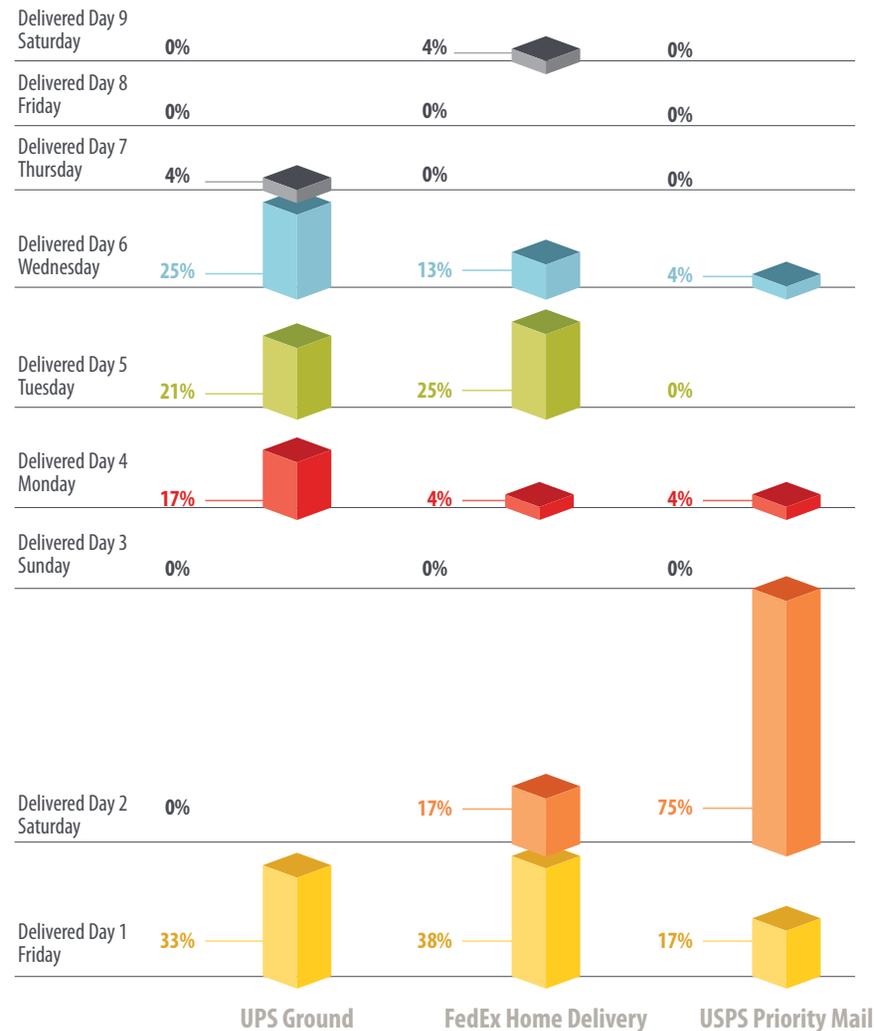
Normal Delivery (Shipped on Monday)

Carrier	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Average
UPS Ground	1.00	1.00	1.33	2.00	3.00	3.67	4.00	6.00	2.75
FedEx Home Delivery	1.00	1.00	1.33	2.00	2.33	3.00	3.00	4.00	2.21
USPS Priority Mail	1.00	1.33	2.00	2.00	2.00	2.00	2.00	2.00	1.79

...Finding #2: Package Delivery Speed – Thursday

Figure 8: Percent of Packages Delivered per Day

Including Weekend Delivery (Shipped on Thursday)



Impact of USPS Free Saturday Delivery

One factor that influenced the delivery time data for the Thursday shipments was USPS' free Saturday delivery. Saturday delivery is incorporated into the USPS' regular delivery schedule which added 52 more free delivery days per year. FedEx Home Delivery Service allows packages to be delivered between Tuesday and Saturday. Even though Saturday delivery was offered, our study showed that on average, these FedEx packages were delivered a little more than a day later compared to USPS packages.

Additionally, FedEx Home Delivery does not provide delivery service on Mondays, creating a longer gap for packages shipped on Thursday and Friday to reach their destinations. However, in our study, one FedEx package was delivered on a Monday.

For the 72 packages we sent out on a Thursday where the USPS and FedEx could use Saturday delivery, the data shows that 92% of USPS packages were delivered within two days, compared with 55% of FedEx packages and only 33% of UPS packages (see Figure 8).

...Finding #2: Package Delivery Speed – Thursday, *continued*

Analyzing the total delivery time to a residential destination across all zones for packages shipped on Thursday, our study showed that USPS Priority Mail packages were delivered in 2.08 days on average (see Figure 9). That is a little over a day faster than FedEx Home Delivery (3.25 days on average) and more than one and a half days faster than UPS Ground (3.83 days on average).

The average delivery time results for Thursday shipments put the USPS as the leader for packages sent to Zones 4 to 8. The average delivery time for USPS packages sent to Zones 4 to 7 was two days

and for Zone 8 was four days. This length of time is anywhere between over half a day to over four days faster for shipments being carried by FedEx and UPS (see Figure 10).

Our study showed that almost all USPS Priority Mail packages (92%) were delivered across all eight shipping zones within two days when shipped on a Thursday. In comparison, only a third of UPS packages (33%) and a little over half of the FedEx packages (55%) were delivered within the same timeframe.

In terms of actual delivery time, all three carriers delivered to Zone 1 in one day. While UPS and FedEx performed slightly better in Zone 2, the USPS outpaced both carriers in deliveries to Zones 4 to 7, averaging only two days in delivery time and in some cases, delivering up to four and four and half days faster than UPS and FedEx respectively. With free delivery offered on Saturdays, at 2.08 days, the USPS emerged as the clear leader for average total days to delivery for packages shipped later in the week, followed by FedEx Home Delivery at 3.25 days.

Figure 9: Average Total Days to Delivery

Including Weekend Delivery (Shipped on Thursday)

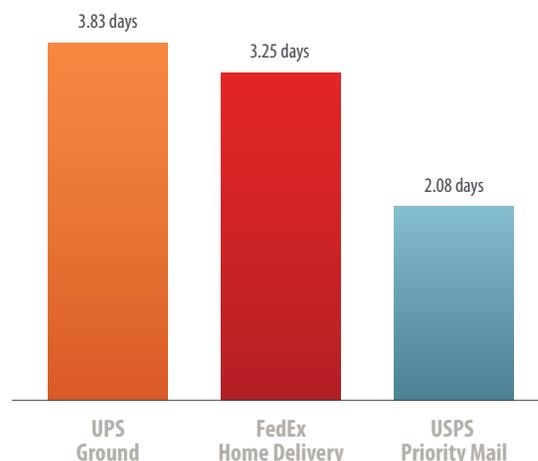


Figure 10: Average Total Days to Delivery by Shipping Zone

Including Weekend Delivery (Shipped on Thursday)

Carrier	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Average
UPS Ground	1.00	1.00	2.00	4.00	5.00	5.33	6.00	6.33	3.83
FedEx Home Delivery	1.00	1.00	1.00	2.67	3.00	5.00	6.33	6.00	3.25
USPS Priority Mail	1.00	1.67	2.00	2.00	2.00	2.00	2.00	4.00	2.08

Important Note: This white paper has been updated to reflect 2019 shipping rates and surcharges for all carriers. Actual package tracking and delivery times used in this study were derived from packages shipped in 2013 and 2014.

Finding #3: Cost Savings

Shipping costs are important to e-commerce sellers. While the importance of free shipping has declined over the years, according to the 2017 UPS Pulse of the Online Shopper executive summary³ more than half of shoppers say they abandoned their shopping carts because shipping costs made the total purchase more than expected.

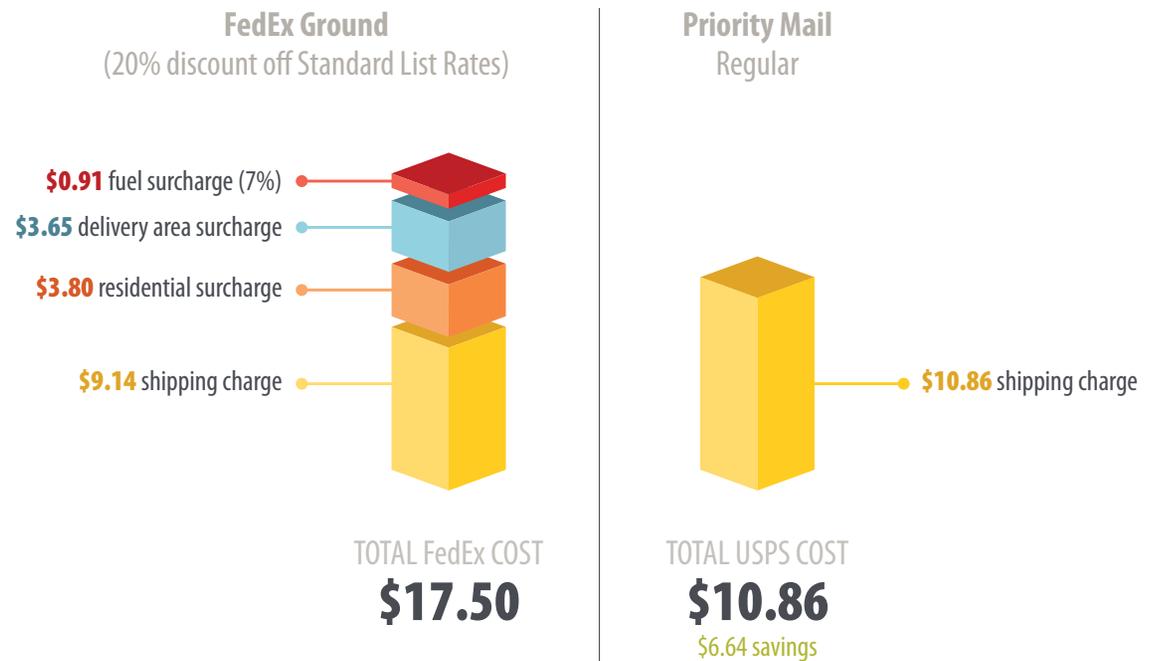
With more and more e-commerce sellers of all sizes offering free shipping, online retailers are being forced to incorporate low shipping costs in order to stay competitive and maintain their margins.

Influence of Surcharges on Total Shipping Costs

UPS and FedEx have a number of fees that are added to generate a total shipping cost for package delivery. There are over 30 different surcharges with fees ranging from \$2.60 to over \$50 including address correction, invalid account numbers, and return charges. The most frequent UPS and FedEx surcharges are the fuel surcharge (included with every package), a residential surcharge, and a delivery area surcharge for rural locations (see Figure 11).

Figure 11: 2 lb. Package Cost Comparison – Zone 8

Los Angeles 90245 to Dunstable, MA 01827 | Residential Address



³ 2017 UPS Pulse of the Online Shopper (page 10): https://na-sjst.marketo.com/rs/928-AIZ-868/images/UPS-Pulse-of-the-Online-Shopper-2017-Volume-4_The_Savvy_Shoppers.pdf

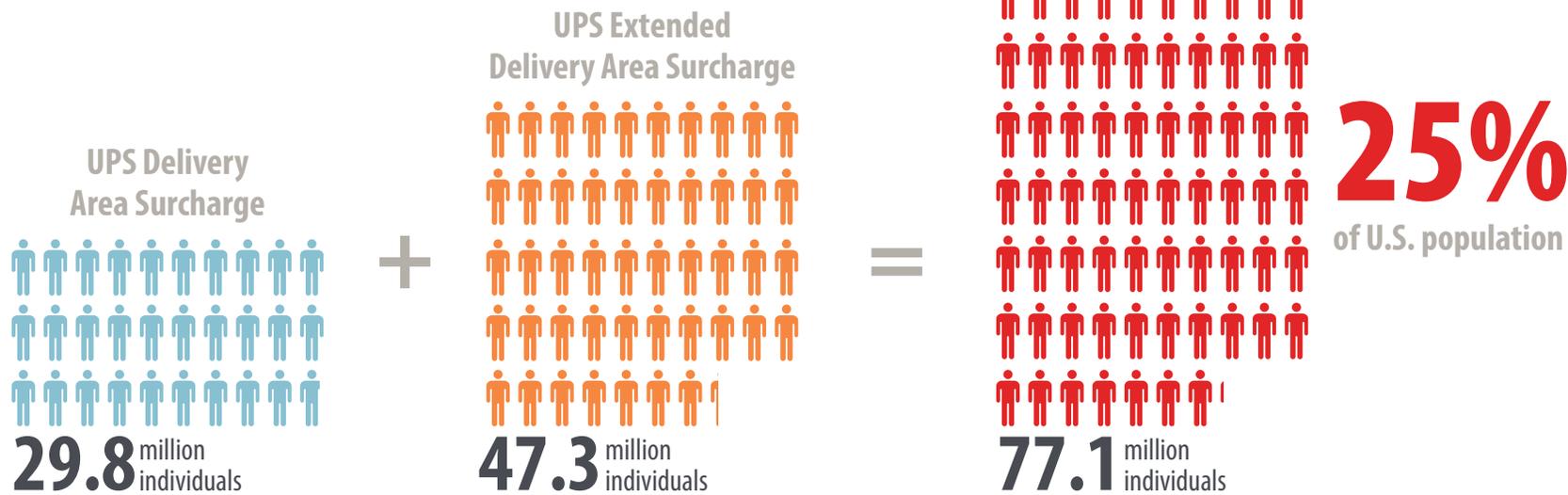
...Finding #3: Cost Savings, continued

What are Delivery Area Surcharges?

FedEx and UPS include a Delivery Area Surcharge for shipments to a residence that is outside of a large metropolitan area. At the time of our study, with UPS Ground Delivery, 25% of the U.S. population⁴ was affected by a Delivery Area Surcharge or Extended Delivery Area Surcharge (see Figure 12). In contrast, the USPS does not include these fees or surcharges in its shipping program.

Figure 12: 25% of U.S. Population Affected by UPS DAS/EDAS Surcharges

Delivery Area Surcharge



⁴<http://www.zip-codes.com> Data based on census 2010

http://www.ups.com/media/en/area_surcharge_zips_us.xls Delivery Area Surcharge - UPS.com

Billable Weight: How Dimensional Weight Impacts Pricing

Starting in 2015, UPS and FedEx adjusted billable weight pricing for their ground delivery services to incorporate Dimensional (DIM) Weight for all box sizes instead of using the actual weight of a package. DIM weight reflects package density, which is the amount of space a package occupies on a delivery truck in relation to its actual weight.

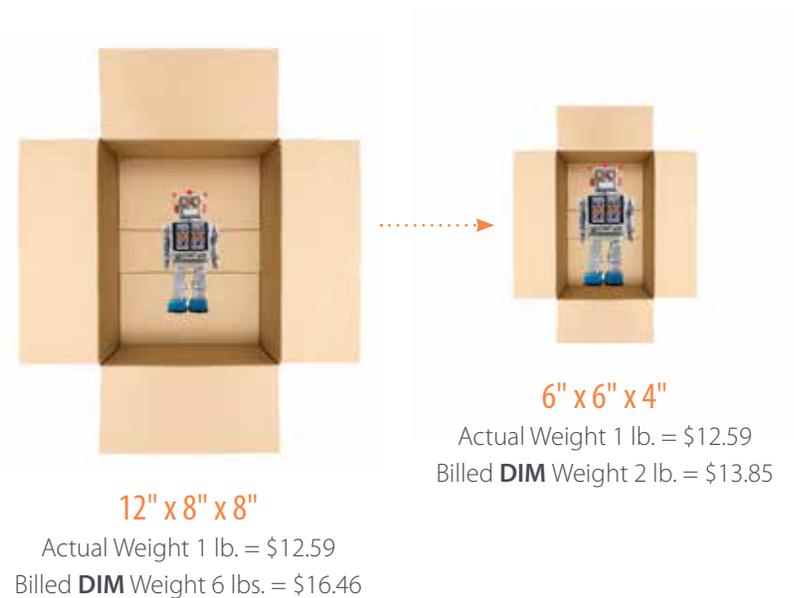
Billable weight for any size package shipped via Ground delivery is either the package's actual weight or DIM weight, whichever is greater. Space is important for shipping carriers because they want to keep costs low by filling their delivery trucks with as many packages as possible. A 1 lb. box containing a large stuffed animal weighs the same as a 1 lb. box containing a pair of shoes, but the box with the stuffed animal will take up more space on the delivery truck than the smaller box containing the shoes.

UPS and FedEx made the switch to DIM weight pricing on all packages to better align with their actual shipping costs. It is important to note that the USPS only charges DIM weight on packages over one cubic foot (1728 cubic inches – LxHxW).

Figure 13: DIM Weight Cost Increases for 1 lb. Package

Phoenix 85008 to New York City 10028 | Residential Address | Shipped UPS Ground

Lower shipping costs by keeping package size as small as possible:



Billed DIM Weight: $12" \times 8" \times 8" = 768$ total cubic inches divided by 139 (FedEx domestic DIM weight divisor) = 5.53 or 6 lbs.
 FedEx Pricing: 20% earned discount off Ground rates, \$3.80 residential fee and 7% fuel surcharge added.

...Finding #3: Cost Savings, continued

How Shipping Costs Were Calculated for Study:

A weight of 3 lbs. was used for cost comparisons for both FedEx and UPS for the box size 12"x9"x3". Both carriers use a divisor of 139 to determine DIM Weight.

The following carrier list rates and discounts were used in the study:

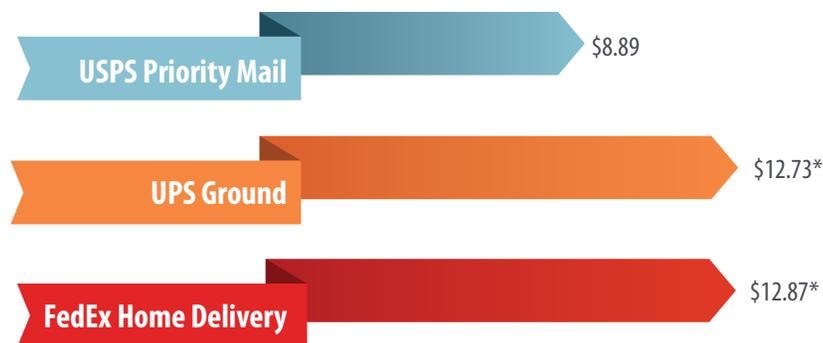
- **USPS:** Postage was purchased online using Stamps.com (Commercial rates — the standard rate when purchasing postage online). Since the USPS does not include any surcharges, none were included.
- **UPS:** Shipping rates were based off the "2019 Daily List Rates." Since most UPS shippers receive some form of negotiated "earned discount," we included a 20% discount off the Daily List Rates for packages; also included were the \$3.65 residential fee and 7% fuel surcharge. Six of the 48 packages shipped using UPS Ground included an additional Delivery Area Surcharge and two of the packages included an Extended Delivery Area Surcharge.

- **FedEx:** Shipping rates were based off the 2019 Standard List FedEx Home Delivery Rates. Similar to UPS, FedEx customers typically receive a negotiated discount and we included a 20% discount off of FedEx Ground Rates for all packages; we also added the \$3.80 residential fee that is charged on every Home Delivery parcel, and 7% fuel surcharge. Six of the 48 packages shipped using FedEx included an additional Delivery Area Surcharge, and two of the packages included an Extended Delivery Area Surcharge.

Shipping Costs Comparison

We examined the data for the 2 lb. packages by calculating the average costs and then segmenting costs by individual zones. The average cost to ship the packages was \$13.29 with UPS Ground*, \$13.45 with FedEx Home Delivery* and \$8.89 with USPS Priority Mail (see Figure 14).

Figure 14: Average Cost to Ship a 2 lb. Package

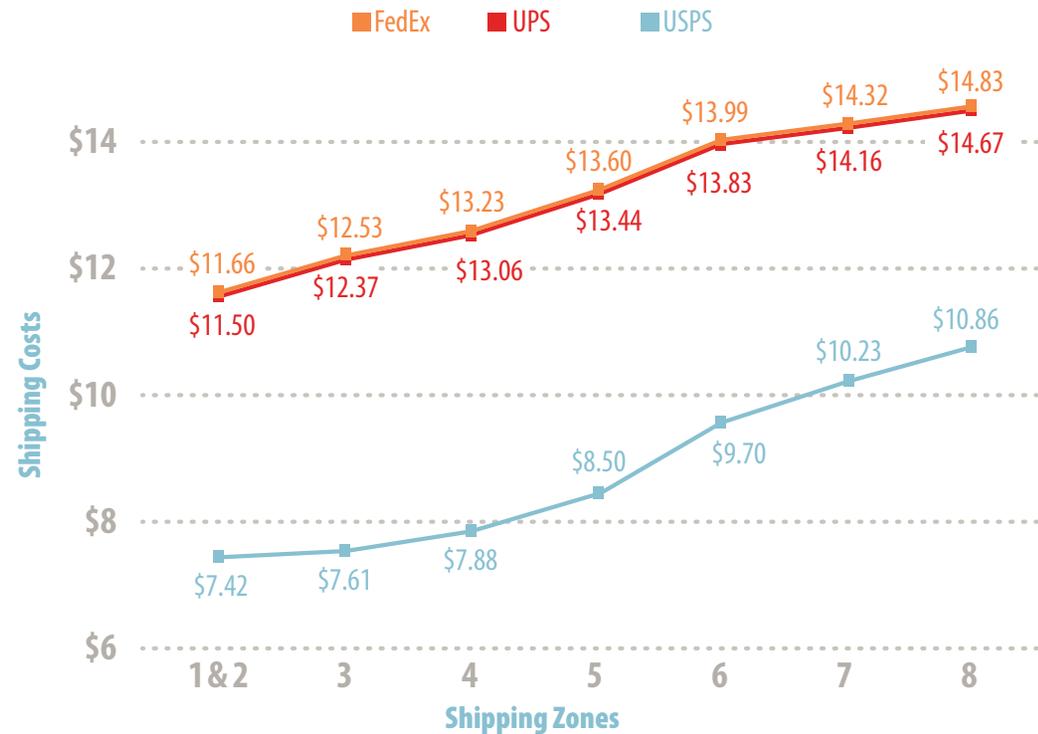


UPS Daily List Rates: <https://www.ups.com/us/en/shipping/daily-rates.page>

FedEx Standard List Rates: https://www.fedex.com/content/dam/fedex/us-united-states/services/FedEx_StandardListRates_2019.pdf

* FedEx and UPS rated at 3 lbs. due to size of package (12"x9"x3") using 139 DIM divisor.

Figure 15: 2 lb. Package Cost Comparison – Residence – All Zones



The total cost — including surcharges — to ship a 12"x9"x3" package with UPS Ground ranges from \$11.50 to \$14.67 across all 8 zones. With FedEx Home Delivery, the total cost ranges from \$11.66 to \$14.83. In comparison, it costs between \$7.42 and \$8.89 to ship the same package, actual weight 2 lbs., with USPS Priority Mail, resulting in average cost savings of up to \$4.48 across all zones (see Figure 15). The largest USPS savings were in Zone 4, with the average savings as high as \$5.26 per package (see Figure 16).

Figure 16: Shipping Costs by Zone

2 lb. Package (actual weight) to Residence

Carrier	Zones 1 & 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Avg Total
UPS Ground	\$11.50	\$12.37	\$13.06	\$13.44	\$13.83	\$14.16	\$14.67	\$13.29
FedEx Home Delivery	\$11.66	\$12.53	\$13.23	\$13.60	\$13.99	\$14.32	\$14.83	\$13.45
USPS Priority Mail	\$7.42	\$7.61	\$7.88	\$8.50	\$9.70	\$10.23	\$10.86	\$8.89

Rates based on 12"x9"x3" package

UPS pricing: 2019 Ground daily rate with 20% discount, DIM Weight applied (3 lbs), \$3.65 residential fee and 7% fuel surcharge

FedEx pricing: 2019 FedEx Ground Rates with 20% discount, DIM Weight applied (3 lbs) to residence, \$3.80 residential surcharge and 7% fuel surcharge

USPS pricing: 2018 Priority Mail Commercial Rates, 2 lb package actual weight

...Finding #3: Cost Savings, continued

Heavier Package Cost Comparison

The adjoining chart shows the cost savings per package using USPS Priority Mail commercial rates compared to FedEx Home Delivery. Savings with USPS are significant in the 1 lb. to 2 lb. range to all zones, and in the 3 lb. to 6 lb. range for Zones 1 to 5. There are also noteworthy savings for Zones 1 to 4 for packages weighing up to 11 lbs.

FedEx Home Delivery starts to offer lower rates for heavier packages traveling further distances. For instance, a 6 lb. package traveling to Zone 6, costs \$2.65 less per package with FedEx Home Delivery. And, while USPS offers lower rates for packages up to 20 lbs. traveling in Zones 1 and 2, for packages weighing more than 20 lbs., FedEx Home Delivery offers lower rates to all zones. (see Figure 17).

Figure 17: USPS Priority Mail vs. FedEx Home Delivery

Cost Savings per Package Using USPS Priority Mail

Savings per package

■ = \$ saved using USPS ■ = \$ saved using FedEx

Weight	Zones 1 and 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
1 LB	\$3.84	\$3.83	\$4.25	\$4.43	\$4.53	\$4.46	\$4.34
2 LBS	\$3.94	\$4.57	\$4.87	\$4.44	\$3.63	\$3.46	\$2.99
3 LBS	\$4.05	\$4.54	\$4.89	\$4.34	\$2.19	\$1.22	\$0.45
4 LBS	\$4.17	\$4.47	\$4.71	\$4.09	\$0.66	\$0.51	\$2.01
5 LBS	\$4.28	\$4.73	\$4.72	\$4.24	\$0.65	\$2.33	\$4.16
6 LBS	\$4.44	\$4.93	\$4.86	\$1.11	\$2.65	\$4.94	\$7.35
7 LBS	\$4.67	\$4.03	\$4.88	\$0.21	\$4.37	\$7.28	\$9.69
8 LBS	\$4.79	\$3.82	\$3.45	\$1.41	\$5.99	\$9.28	\$12.54
9 LBS	\$4.12	\$3.57	\$3.13	\$2.53	\$7.66	\$10.91	\$15.19
10 LBS	\$3.97	\$3.25	\$3.16	\$3.67	\$9.31	\$12.94	\$17.17
11 LBS	\$3.08	\$1.37	\$1.40	\$5.39	\$10.77	\$14.51	\$19.20
12 LBS	\$2.59	\$0.98	\$0.74	\$6.72	\$12.80	\$16.63	\$21.31
13 LBS	\$2.23	\$0.46	\$1.24	\$7.59	\$14.60	\$16.97	\$21.70
14 LBS	\$1.89	\$0.15	\$2.12	\$8.82	\$15.62	\$18.05	\$22.66
15 LBS	\$1.46	\$0.59	\$2.70	\$9.55	\$16.14	\$18.27	\$22.70
16 LBS	\$1.23	\$1.23	\$3.61	\$10.79	\$17.66	\$19.78	\$24.68
17 LBS	\$0.99	\$1.66	\$4.27	\$11.66	\$18.89	\$20.85	\$26.73
18 LBS	\$0.73	\$2.15	\$5.07	\$12.45	\$20.28	\$22.65	\$28.09
19 LBS	\$0.63	\$2.06	\$5.10	\$12.67	\$21.56	\$24.15	\$29.73
20 LBS	\$0.21	\$2.13	\$5.23	\$12.51	\$22.08	\$25.21	\$31.31
21 LBS	\$0.22	\$2.21	\$5.31	\$13.06	\$21.69	\$24.86	\$31.08

FedEx Pricing: 2019 Standard FedEx Home Delivery Rates (including \$3.80 residential fee), 20% discount, and 7% fuel surcharge
 USPS Pricing: 2019 Priority Mail Commercial Rates

Other USPS Priority Mail Options

Unlike FedEx and UPS in which shipping services and costs usually focus on delivery time, the USPS offers many different versions of Priority Mail, including Flat Rate Boxes, Regional Rate Boxes, and Cubic Pricing — all which have specific uses and cost efficiencies focused around package size and weight.

Shippers who are able to optimize their order fulfillment to accommodate these unique Priority Mail product offerings can lower shipping costs significantly. Some examples include:

Priority Mail Flat Rate

Priority Mail Flat Rate pricing eliminates the need to weigh packages or calculate shipping fees, as long as the package weighs less than 70 lbs. and the item can fit into the box without reconstruction. Flat Rate Boxes are a great option for extremely heavy items — specifically over 20 lbs. — traveling both short and long distances.

Priority Mail Cubic Pricing

Cubic Pricing provides high volume shippers significant discounts for small, heavy packages that weigh less than 20 lbs. and measure no more than 0.5 cubic feet in volume.

Priority Mail Regional Rate Box A and B

Regional Rate Boxes are a version of Priority Mail built for shippers who are looking for a low cost mail class for packages traveling short distances. Regional Rate Boxes are provided free from the USPS and come in two sizes: Box A holds up to 15 lbs. and Box B holds up to 20 lbs.

A Note About USPS Pricing

With the January 27, 2019, USPS Price Change, Commercial Base (CBP) and Commercial Plus (CPP) pricing tiers became equal. USPS made this change so pricing would align with the industry standard of offering one set of commercial prices for each product. USPS offers other discounted rates to high-volume shippers, including Negotiated Service Agreement (NSA) pricing. Please contact a Stamps.com Shipping Specialist at 1-800-576-3279 for more information.



...Finding #3: Cost Savings, continued

Find Cost Efficiencies with Regional Rate Box A

Regional Rate shipping costs are based on the destination zone, not the weight. For example, the price for a 3 lb. package going to Zone 1 is the same as that for a 15 lb. package going to Zone 1. While the product name indicates a more local or regional service, Regional Rate Box A is the lowest cost option provided by the USPS in the 1 lb. to 15 lb. range for packages going both short distances as well as to nationwide destinations.

When comparing the Regional Rate Box A rates to FedEx Home Delivery (using a 20% discount off posted rates for packages) and 7% fuel surcharge, savings were found in all U.S. shipping zones for packages weighing up to 15 lbs. When using Priority Mail Regional Rate Box A for a 15 lb. package going to a residence in Zone 8, e-commerce sellers can save up to \$13.16 per package compared to FedEx Home Delivery (see Figure 18).

Figure 18: USPS Mail Regional Rate Box A vs. FedEx Home Delivery

Cost Savings per Package Using USPS Priority Mail Regional Rate Box A

Savings per package

 = \$ saved using USPS Regional Rate Box A

Weight	Zones 1 and 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
1 LB	\$3.14	\$3.26	\$3.62	\$3.32	\$2.35	\$1.90	\$1.39
2 LBS	\$3.71	\$4.33	\$4.63	\$4.18	\$3.33	\$3.14	\$2.65
3 LBS	\$4.01	\$4.68	\$5.11	\$4.84	\$3.99	\$3.77	\$3.63
4 LBS	\$4.23	\$4.82	\$5.40	\$5.36	\$4.41	\$4.53	\$4.40
5 LBS	\$4.44	\$5.13	\$5.72	\$5.81	\$5.02	\$5.04	\$5.04
6 LBS	\$4.70	\$5.37	\$5.96	\$6.12	\$5.28	\$5.34	\$5.26
7 LBS	\$5.17	\$5.59	\$6.22	\$6.46	\$5.49	\$5.65	\$5.86
8 LBS	\$5.34	\$5.84	\$6.49	\$6.67	\$5.83	\$6.02	\$6.30
9 LBS	\$5.48	\$5.97	\$6.63	\$6.77	\$6.08	\$6.54	\$7.01
10 LBS	\$5.70	\$6.07	\$6.73	\$7.08	\$6.33	\$7.30	\$7.95
11 LBS	\$6.10	\$6.29	\$6.97	\$7.16	\$6.75	\$8.45	\$8.94
12 LBS	\$6.26	\$6.71	\$7.07	\$7.33	\$7.21	\$9.05	\$9.69
13 LBS	\$6.49	\$6.97	\$7.32	\$7.68	\$7.61	\$10.17	\$10.79
14 LBS	\$6.76	\$7.15	\$7.33	\$7.85	\$8.40	\$11.19	\$12.00
15 LBS	\$6.82	\$7.50	\$7.60	\$8.43	\$9.19	\$11.74	\$13.16

FedEx pricing: 2019 Standard FedEx Home Delivery Rates with 20% discount, and 7% fuel surcharge
 USPS Pricing: 2019 Priority Mail Regional Rate Box A

Important Note: This white paper has been updated to reflect 2019 shipping rates and surcharges for all carriers. Actual package tracking and delivery times used in this study were derived from packages shipped in 2013 and 2014.

Conclusion

E-commerce sellers have multiple options to choose from when it comes to shipping their products. When working with a combination of package sizes and weights, using a blend of all three shipping carriers is a smart strategy.

Historically, FedEx and UPS have had excellent package scanning capabilities. Their systems provide many different entry scans as a package moves through the mail, including times and exact whereabouts. However, the USPS has invested millions of dollars in its infrastructure, and that investment has translated into detailed package-in-transit information for customers. This puts the USPS on par with private carriers in package delivery tracking.

Any online retailer knows that faster delivery times translate into increased sales. For that reason, delivery speed is an important factor when selecting a shipping carrier. Our study discovered that the USPS offers the fastest average delivery times in the areas we tested.

E-commerce sellers may want to vary shipping carriers depending on package weight and

delivery location type. For higher weight packages — specifically, packages over 5 lbs. — UPS and FedEx offered the most cost savings. For lower weight packages — packages that are 5 lbs. and under— the USPS is the best option for delivery time and cost savings when traveling to a residence. For packages sent to a business address (instead of a residence), the elimination of the residential surcharges help to make UPS and FedEx rates more comparable with USPS' low costs.

To be competitive, online retailers must meet customer expectations including detailed package tracking, faster delivery speeds, and lower shipping rates. We recommend using the data in this study to develop a comprehensive e-commerce shipping strategy.



Important Note: This white paper has been updated to reflect 2019 shipping rates and surcharges for all carriers. Actual package tracking and delivery times used in this study were derived from packages shipped in 2013 and 2014.

Addendum

How Shipping Locations and Delivery Addresses Were Chosen

Our three shipping locations were selected to represent common transportation routes for package delivery. Our goal was to have a location represented from each coast and from a central point in the U.S. Los Angeles was our West Coast location for packages headed eastbound. Virginia was our East Coast location for packages going westbound. Chicago represented a central location for packages going both directions.

Delivery addresses were chosen based on their geographic location in the U.S., with a requirement to ship packages to all eight shipping zones from each shipping location using the USPS, FedEx and UPS.

Minimum Net Charge

Both UPS and FedEx have a minimum net charge, which is the rate of Zone 2 for a 1 lb. package; for both UPS and FedEx Ground rates the minimum net charge is \$7.85.

While high-volume shippers can often negotiate steep “earned discounts,” the “earned discount” does not go into effect if the discounted shipping cost is below the minimum net charge.

For packages shipped with UPS and FedEx, the 20% earned discount caused the rate to go below the minimum transportation fees in the following zones and weights:

- **1 pound:** Zones 1-7
- **2 pounds:** Zones 1-3
- **3 pounds:** Zones 1 and 2
- **4 pounds:** Zones 1 and 2
- **5 pounds:** Zones 1 and 2
- **6 pounds:** Zones 1 and 2

How “Days to Delivery” Was Calculated

To determine the number of days it took to deliver a package, all 7 days of the week were considered as regular delivery days in the calculation.

E-commerce sellers and their customers alike are primarily concerned with the total time it takes to deliver and receive packages, regardless of whether a weekend falls in between that duration. To keep our study as close to this perception as possible, all 5 weekdays and both weekend days were included in the overall delivery time calculation. For instance, for a package that shipped on a Thursday and was delivered on a Monday, days to delivery was determined to be 4 days.

How Packages Were Tracked

Package tracking information was documented from each carrier's individual website. Using the unique tracking number for each package the total number of scanning events and delivery days were noted.

Example of Package Scan Tracking: **USPS Priority Mail**

Product & Tracking Information

Postal Product: Priority Mail® Features: \$50 insurance included USPS Tracking™

DATE & TIME	STATUS OF ITEM	LOCATION
September 28, 2013, 11:04 am	Delivered	ADDISON, IL 60101
September 28, 2013, 8:22 am	Sorting Complete	ADDISON, IL 60101
September 28, 2013, 5:14 am	Arrival at Post Office	ADDISON, IL 60101
September 28, 2013, 1:46 am	Depart USPS Sort Facility	CAROL STREAM, IL 60199
September 28, 2013, 12:21 am	Arrive USPS Sort Facility	CAROL STREAM, IL 60199
September 27, 2013, 11:51 pm	Depart USPS Sort Facility	ELK GROVE VILLAGE, IL 60007
September 27, 2013, 9:13 pm	Processed through USPS Sort Facility	ELK GROVE VILLAGE, IL 60007
September 26, 2013	Depart USPS Sort Facility	SANDSTON, VA 23150
September 26, 2013	Electronic Shipping Info Received	
September 26, 2013, 7:12 pm	Processed at USPS Origin Sort Facility	SANDSTON, VA 23150
September 26, 2013, 5:35 pm	Dispatched to Sort Facility	WILLIAMSBURG, VA 23188
September 26, 2013, 1:40 pm	Acceptance	WILLIAMSBURG, VA 23188

Example of Package Scan Tracking: **FedEx Home Delivery**

Ship (P/U) date: **Thur 9/26/2013**
Williamsburg, VA US

Delivered
Signature not required

Actual delivery: **Mon 9/30/2013 2:42 pm**
Wolfeboro, NH US

Buttons: [Customize Delivery](#) [Request Notifications](#) [Obtain Proof of Delivery](#) [More actions](#)

Travel History

Date/Time	Activity	Location
- 9/30/2013 - Monday		
2:42 pm	Delivered Left at front door. Signature Service not requested.	Wolfeboro, NH
- 9/28/2013 - Saturday		
4:36 am	On FedEx vehicle for delivery	SADD, ME
4:30 am	At local FedEx facility	SADD, ME
- 9/27/2013 - Friday		
11:12 pm	Departed FedEx location	WILLINGTON, CT
7:46 pm	Arrived at FedEx location	WILLINGTON, CT
9:52 am	Departed FedEx location	HAGERSTOWN, MD
4:10 am	Arrived at FedEx location	HAGERSTOWN, MD
- 9/26/2013 - Thursday		
10:10 pm	Left FedEx origin facility	CHESAPEAKE, VA
7:50 pm	Arrived at FedEx location	CHESAPEAKE, VA
5:46 pm	Picked up	CHESAPEAKE, VA
- 9/19/2013 - Thursday		
11:43 am	Shipment information sent to FedEx	

...Addendum, *continued*

▼ Additional Information			
Shipped/Billed On:	09/19/2013		
Type:	Package		
Weight:	2.00 lbs		

▼ Shipment Progress What's This? 			
Location	Date	Local Time	Activity
Laconia, NH, United States	09/30/2013	5:27 P.M.	Delivered
	09/30/2013	5:56 A.M.	Out For Delivery
Laconia, NH, United States	09/28/2013	2:17 A.M.	Arrival Scan
Shrewsbury, MA, United States	09/27/2013	11:59 P.M.	Departure Scan
	09/27/2013	6:30 P.M.	Arrival Scan
North Haven, CT, United States	09/27/2013	4:35 P.M.	Departure Scan
	09/27/2013	3:41 P.M.	Arrival Scan
Stratford, CT, United States	09/27/2013	2:48 P.M.	Departure Scan
	09/27/2013	1:30 P.M.	Arrival Scan
Richmond, VA, United States	09/27/2013	2:32 A.M.	Departure Scan
Richmond, VA, United States	09/26/2013	10:48 P.M.	Arrival Scan
Newport News, VA, United States	09/26/2013	9:05 P.M.	Departure Scan
	09/26/2013	4:59 P.M.	Pickup Scan
United States	09/19/2013	2:25 P.M.	Order Processed: Ready for UPS

Example of Package Scan Tracking:
UPS Ground

About Stamps.com

Whether you ship one package a day or 10,000, from your garage or from a giant warehouse, the Stamps.com family of companies has the tools to make your USPS shipping process faster, more efficient and more reliable than ever before.

E-commerce Integrations

- Integrate USPS seamlessly into any e-commerce or warehouse workflow
- Support for all selling channels from a single user interface
- Multi-Carrier Support

Warehouse Shipping

- Gain access to substantial USPS discounted rates
- Scalable with existing equipment — printers, scales and barcode readers
- Multiple shipping stations or locations

#1 USPS Postage API

- Rate, ship and track packages from within your software
- Platform Independent — build both advanced desktop and cloud-based solutions
- Build and test on a safe sandbox environment without costs

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