

The Postal Service Cost to Deliver Parcels on Letter Routes and Parcel Routes

Robert Cohen and John Waller

Brief Summary

- Develop street parcel delivery costs for letter and parcel routes
- Savings from delivery of parcels on letter routes is greater than total contribution from competitive products
- Standalone parcel delivery would not be profitable

Background Information

- About 94% of USPS letter routes use cars or small trucks
- Most parcels are delivered on letter routes
- The USPS delivers parcels on national holidays when it does not deliver letters
- The USPS delivers parcels on Sunday for Amazon

Cost Differences Between Letter Routes and Parcel Routes

- Letter routes have fixed structure
- 63% of street delivery cost is not attributable
- Residential parcel routes have no fixed structure
- Virtually all of the time on the street should be attributable because it depends on the number of stops which depends on the delivered volume

Domestic Competitive Product's Volume and Weight (2014)

	Volume (000)	Unit Weight (Lbs.)
Priority Mail Express	36,231	1.02
First-Class Package Services	634,615	0.35
Standard Post	36,024	6.02
Priority	1,483,922	2.16
Parcel Select	920,083	1.75
Parcel Return	55,650	3.07
Total/Weighted Average	3,166,525	1.65

Domestic Competitive Products

Volume, Revenue and Contribution

	Volume (000)	Unit Revenue \$	Unit Cost \$	Unit Contribution (\$)
Priority Exp	36,231	20.97	10.09	10.88
Priority Mail	920,083	7.48	5.69	1.79
Ground Parcels	1,575,596	2.01	1.57	0.43
First-Class Package Service	634,615	2.30	1.82	0.48

Estimating Parcel Delivery Costs on Letter Routes

- Detailed data on competitive product delivery not public
- Rolled forward last public data from 2007 using the change in the productive hourly wage
- Adjusted for change in composition of competitive products

Roll Forward of 2007 City Carrier Street Time Costs

Product	Unit Cost Delivered by City Carriers (Cents)
First-Class Single Piece Parcel	37
First-Class Presort Parcel	29
Express Mail	175
Standard Mail	33
Priority Mail	40
Parcel Select	42
Weighted Average	41

Comparing Roll Forward with Actuals

- USPS data system reports weighted average delivery cost for all domestic competitive parcels to be 40 cents for 2014
- Roll forward estimates 41 cents

Street Delivery Costs on Special Purpose Routes

- Hybrid route: part parcel route and part fixed route structure
- Fixed route activity (e.g.. sweeping street mail boxes)
- Deliver parcels in dense neighborhoods
- \$1.21 unit cost of parcel delivery

Sunday Parcel Route Street Delivery

Simple model cost estimate:

- Productive hourly wage
- Number of stops per hour
- Average number of parcels delivered per stop

Wages of Postal Service

Category of City Carrier	Productive Hourly Wage (\$)	With Piggyback (\$)
Full Time Regular	46.09	61.11
Part Time Regular	45.26	62.23
Part Time Part Time Flexible	43.86	59.22
City Carrier Assistants	19.27 (15.68)	26.02

City Carrier Assistants (CCA)

- Temporary jobs
- No fringe benefits the first year
- No fixed schedule
- One week of training
- Quit rate approaches 50 percent

Sunday Parcel Delivery Costs

Number of stops per Hour	City Carrier Assistants (\$)	City Carrier Regular (\$)
5	4.34	10.19
6	3.61	8.49
7	3.10	7.28
8	2.71	6.37
9	2.41	5.66
10	2.17	5.09
11	1.97	4.63
12	1.81	4.24
13	1.67	3.92
14	1.55	3.64
15	1.45	3.40

Parcel Delivery Costs Comparison

- Estimated cost of street delivery on letter routes-- \$0.42
- Average reported cost of special purpose route street delivery--\$1.21
- Estimated cost of Sunday street delivery-- \$2.17
- Unit contribution of ground parcels--\$0.43

Parcel Route Deployment

- Sundays
- Holidays
- Peak load situations including Christmas

Savings from Delivering Parcels on Letter Routes in 2014

- Difference between street delivery costs on parcel routes and letter routes is \$1.77 per piece
- 3.2 billion pieces
- Savings is \$5.6 billion
- Lower bound
- Greater than \$3.4 billion contribution of competitive products

Findings(1)

- Letter route delivery much cheaper than parcel route
- The cost of street delivery of parcels is about 40 cents
- Special purpose routes cost to deliver parcels is \$1.22
- \$46.09: Productive hourly wage of city carriers
\$19.27: Productive hourly wage of CCA's

Findings(2)

- \$2.17 estimated Sunday delivery cost
- USPS incurs losses when using parcel and special purpose routes
- Savings from delivering parcels on letter routes is about \$5.6 billion
- Savings larger than total contribution from competitive products
- Standalone parcel delivery would not be profitable