

**Republic Of Ireland Quality Of
Postal Service Monitor**

**Annual Report
Items Posted On Or Between
1st January & 31st December, 2006**

ComReg



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1. INTRODUCTION

TNS mrbi has been commissioned by ComReg to monitor the quality of postal service in the Republic of Ireland, according to the European and Irish Standard, I.S. EN 13850: 2002, 'Postal Services – Quality of Service – Measurement of transit time of end-to-end services for single piece priority mail and first class mail' in parallel with the Guide for the implementation of EN 13850, TR 14709. For monitoring purposes, the universe of post is defined as all single piece priority mail and first class mail posted and delivered in the Republic of Ireland. Monitoring is conducted via a nationwide panel of homes and business premises posting and receiving mail on a continuous basis.

This report presents the findings for items posted on or between 1st January and 31st December, 2006.

Reports are issued on a quarterly and year-to-date basis.

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**2. NEXT DAY DELIVERY (D +1): ITEMS POSTED ON OR BETWEEN
1ST JANUARY & 31ST DECEMBER 2006**

		DELIVERY		
		Anywhere	Local (delivery within county of posting)	Dublin County
POSTING	Anywhere	72% (+/-1.0%)	75% (+/-1.2%)	72% (+/-1.2%)
	Dublin county	70% (+/-1.4%)	73% (+/-1.7%)	73% (+/-1.7%)
	Outside Dublin county	75% (+/-1.1%)	77% (+/-1.5%)	70% (+/-1.6%)

1. *() figures in brackets relate to accuracy levels at 95% confidence*
2. *Total number of effective observations – 23,590*
3. *Dublin County consists of the administrative areas of the Dublin City Council, Fingal County Council, South Dublin County Council and Dun Laoghaire – Rathdown County Council.*

3. DELIVERY WITHIN THREE DAYS (D +3): ITEMS POSTED ON OR BETWEEN 1ST JANUARY & 31ST DECEMBER, 2006

		DELIVERY		
		Anywhere	Local (delivery within county of posting)	Dublin County
POSTING	Anywhere	97% (+/-0.4%)	97% (+/-0.5%)	96% (+/-0.5%)
	Dublin county	96% (+/-0.6%)	96% (+/- 0.7%)	96% (+/-0.7%)
	Outside Dublin county	97% (+/-0.4%)	97% (+/-0.6%)	96% (+/-0.7%)

4. *() figures in brackets relate to accuracy levels at 95% confidence*
5. *Total number of effective observations – 23,590*
6. *Dublin County consists of the administrative areas of the Dublin City Council, Fingal County Council, South Dublin County Council and Dun Laoghaire – Rathdown County Council.*

4. METHODOLOGY

The method of monitoring is in full accordance with European and Irish Standard, I.S. EN 13850: 2002, 'Postal Services – Quality of Service – Measurement of transit time of end-to-end services for single piece priority mail and first class mail'.

4.1. Calculation Of Transit Time

From the 1st September 2005 onwards mail posted on Saturday and Sunday are treated as mail posted on Monday. This change reflects the fact that there is no longer a weekend collection service. The Last Time of Posting (LTOP) for next-day delivery is clearly displayed on pillar-boxes and states that 'mail posted at any post-box/location on a Saturday, Sunday or Public Holiday will be delivered nationally on the second working day'. Any test mail items posted on a Saturday, Sunday or Public Holiday, delivered on the next working day will be treated as a J+0 item. J+0 items are included in the J+1 figures for the purposes of calculating next-day delivery.

4.2. Sample Design

The sample design corresponds with the most accurate and up-to-date estimates of real mail flow and discriminant characteristics provided by An Post. The sample employs strict proportionality across all key characteristics. Discriminant characteristics are defined as:

- Method of posting
- Method of addressing
- Envelope colour
- Envelope size
- Method of payment
- Day of week of posting

Regional mail flows are quota controlled with weighting used to restore proportionality.

4.3. *Geographical Distribution*

Stratified random sampling is employed to achieve the required panel geographical distribution. All addresses are verified with panellists for accuracy and completeness.

4.4. *Calculation Of Results*

Accuracy of the transit time is assessed by calculating the variance of the estimator and the design factor, taking into account:

- number of points of induction and receiving
- correlation of test items

5. PROJECT TEAM

Damian Loscher, Managing Director, TNS mrbi

Maura Murphy, Associate Director, TNS mrbi

Aisling Byrne, Research Consultant, TNS mrbi

Sinead Welby, Research Assistant, TNS mrbi

6. INDEPENDENT AUDIT BY DR. MYRA O'REGAN

Audit Report on Quality of Postal Service Monitor

The aim of the project is to review the study carried out by TNS/MRBI to monitor the quality of postal service in the Republic of Ireland with reference to the European and Irish Standard I.S. EN 13850: 2002, 'Postal Services - Quality of Service-Measurement of transit time of end-to-end services for single piece priority mail and first class mail'. This document will be referred to as the Standards from herein. Documents describing in detail the conduct of the study were received. These documents together with the Standards provided the basis for conducting the review.

Methodology

In order to estimate the quality of service, approximately 23,000 pieces of mail were posted using a panel of private homes and businesses. The study included 221 private homes located throughout the country roughly in proportion to the density of the population and 143 businesses. Each of these induction points were required to send and receive items of mail. Private residences sent on average a pair of items a week and received on average 3 items per week. Businesses sent on average 3 pairs of items and received 2 items per week.

The type of mail was characterised by method of posting, method of addressing, envelope colour, envelope size, method of payment and day of week of posting where the distribution of each characteristic was determined by the relevant % in the population. The data are record and returned to the Dublin office where a number of quality control procedures were undertaken. The above methodology is considered to be appropriate and was implemented very effectively and thoroughly. At all stages a number of checks were carried out resulting in a large dataset. The panels were treated well with various incentives e.g. a magazine subscription.

Calculation of Estimates

Based on these data the percentage of mail delivered within one, two or three days was computed. The overall figures were 72% for the next day delivery and 97% for delivery within 3 days. The following formula was used to calculate the variance of these estimates:

$$\sqrt{\frac{\hat{p} * (1-\hat{p})}{A} * (r_1 + r_2) + \frac{\hat{p} * (1-\hat{p})}{n}}$$

where A is the no. of induction points \hat{p} is the estimated proportion

r_1 and r_2 are the estimated correlations between on-time indicator variables for postal items sent from the same induction points to different receiving points and between on-time indicator variables for postal items sent from different induction points to the same receiving points respectively. These were both set to 0.02. The resulting 95% confidence interval was $\pm 1\%$. Various other estimates are also provided.

It is suggested that the variance of the estimates follow the procedure outlined in the Standards (page 21-29). Briefly this involves assigning each piece of mail to one strata. The strata could be defined as:

Dublin County to Dublin County
 Dublin County to Outside Dublin
 Outside Dublin to Dublin County
 Outside Dublin to Outside Dublin

The formula for a stratified sample with h strata is:

Estimate for proportion mail delivered on time in population

$$\hat{p} = \sum_h W_h \hat{p}_h$$

Variance of the estimate :

$$V(\hat{p}) = \sum_h W_h^2 V(\hat{p}_h) \text{ var}$$

where W_h is the proportion of mail in that stratum in the population

The procedure for the calculation of the terms in the above equation is documented in the Standards document. One of the outcomes of the calculation are the figures r_{1h} (correlation between on-time indicator variables for postal items sent from the same induction points to different receiving points) and r_{2h} (correlation between on-time indicator variables for postal items sent from different induction points to the same receiving points). In the calculations to date these have been set to 0.02. The data are available to calculate these figures. These calculations only affect the width of the confidence interval. The overall figures of 72% for the next day delivery and 97% for delivery within 3 days will not change.

Dataset

One final comment relates to the dataset gathered in the course of this study. It is suggested that further use is made of this dataset, for example, to investigate further the reasons for the late delivery of mail.

Conclusion

In my considered opinion the study titled Quality of the Postal in the Republic of Ireland in 2006 was carried out thoroughly and effectively. Some suggestions are provided with regard to the calculation of the variance of the estimates and further uses of the data collected.

Dr. Myra O' Regan