

Inception Report

Estimating unit costs of products, services, and business unit categories: A comprehensive methodology for the Department of Posts, Sri Lanka





05th September, 2024

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1. Introduction

1.1 Background

Postal service was established in Sri Lanka as early as the late 1700s under Dutch rule, and was reorganised by the British who conquered the country in the 1800s. It is currently managed by the Department of Posts (DOP) which comes under the purview of the Ministry of Mass Media. DOP is one of the oldest government entities that possess a large networkof over 4,000 business units and a workforce of over 25,000. DOP is bound by the 'Post Office Ordinance' dating back to 1908, which has since been amended through various ordinances, acts, and laws to date (Department of Posts or Sri Lanka, 2016).

DOP provides over 60 different product and service lines which can be categorised under mail, philately, remittances, banking and insurance, social and obligatory services, utility collection, examination services, and reservation assistance (Department of Posts, 2015). It has an unmatched physical network in the Island that possesses a rich asset base (movable and immovable) and a workforce with experience and expertise, especially on locationrelated matters. Therefore, it is evident that DOP has the potential to expand into new business ventures in the industry of postage and delivery by utilising its well established abundant network.

The DOP administration has initiated an exercise to estimate the prevailing costs of its products, services and business units. Further, the management recognises the requirement of a formula to estimate these costs conveniently as and when changes take place in their cost factors, with a view to improve strategic management, build customer trust and loyalty, maintain a positive reputation, and ensure sustainable business growth.

1.2 World trends in the postal industry

The postal industry is experiencing significant changes driven by digital transformation and the rise of e-commerce. The Covid-19 pandemic accelerated digital transformation across postal services, with around 90% of postal operators now offering financial services either directly or through partnerships. This shift is expected to continue as e-commerce expands globally. E-commerce is a major driver of postal industry changes, with global e-retail revenues projected to grow significantly. This growth necessitates enhanced logistics and delivery capabilities within postal services.

Many postal operators are diversifying their service offerings to include financial services, leveraging their extensive networks to provide banking and payment services, especially in underserved regions. Postal services are increasingly focusing on sustainability, implementing measures to reduce carbon footprints and promote environmentally friendly practices in logistics and operations.

These trends reflect the industry's adaptation to new market demands and technological advancements, aiming to enhance service delivery and operational efficiency (UPU, 2023; UPU, 2022).

1.3 Objectives

- 1. To estimate the unit costs of the following product and service lines:
 - 1. Ordinary letter post
 - 2. Registered post
 - 3. Parcel post
 - 4. Stamp
 - 5. Franking machine
 - 6. Money order
 - 7. Personalized stamp
 - 8. Courier Service

a.	EMS (Expedited Mail Service) with,	
b.	SL Post Courier	
с.	COD (Cash On Delivery)	

- a. Pick up racking
- b. Proof of delivery
- c. Track & Trace

- 9. Admail (Advertising Mail)
- 10. Telemail
- 11. NSB (National Saving Bank)
- 12. Utility Bill Collection (Ceylon Electricity Board Bills)
- 13. OSF (On the Spot Fine)
- 14. Insurance premium collection (Sri Lanka Insurance)
- 2. To estimate the unit costs of the following business unit categories:
 - 1. Supra Grade Post Offices (delivery, non-delivery, and Regional Mail Sorting Centersor RMSCs);
 - 2. Grade I Post Offices (delivery and non-delivery);
 - 3. Grade II Post Offices (delivery and non-delivery);
 - 4. Sub Post Offices (delivery and non-delivery);
 - 5. the Central Mail Exchange or CME; and
 - 6. Philatelic Bureau.
- 3. To develop a standard formula or procedure to estimate the above unit costs.

2. Methodology

DOP desires to estimate unit costs of 14 product and service lines offered by them and 11 business unit categories, and develop a standard formula or procedure to estimate the above unit costs conveniently on demand, should one or more cost factors change. However, the complexity of cost apportionment, magnitude and the dissimilarity of the network, unavailability of volume-related information, and lack of in-house technical capacity have been identified as obstacles to the said exercise.

Product and service line-specific unit costs and business unit category-specific profitability will be methodically estimated using the final accounts and 'Activity-Based Costing' (ABC) technique. Accordingly, financial statements (profit and loss accounts) that include the estimated revenues, costs, and transaction volumes will be prepared for all product and service lines in question.

Step 1: Estimating the revenues of product and service lines and business unit categories

Revenues of product and service lines

The revenues of the following product and service lines will be extracted from the Income Statement:

- 1. Stamp;
- 2. Franking machine;
- 3. Money order;
- 4. Personalised stamp;
- 5. Courier service (Expedited Mail Service or EMS, SL Post Courier, and Cash on Delivery or COD with pick up racking, proof of delivery, and track & trace);
- 6. Advertising mail or admail;
- 7. Telemail;
- 8. Services related to National Saving Bank ;
- 9. Utility bill collection of Ceylon Electricity Board ;
- 10. On-the-spot traffic fine collection or OSF;
- 11. Insurance premium collection of Sri Lanka Insurance Corporation.

Since the revenue due to the ordinary letter post, registered post and parcel are not available in the income statement; their revenues will be estimated through a sample survey (Refer Annex I) which will be conducted at a business unit level. The schematic in 'Figure 1' will be considered to estimate the revenues of these service lines, as ordinary letter post and registered post revenues can be collected through both stamps and franking machines.



Figure 1. The relationship between revenue collection and ordinary letter post, registered post, and parcel post

Revenues of business unit categories

The revenues of the business unit categories will be estimated by segregating the product and service lines profitability into each business unit category, using financial statements and sample surveys.

Step 2: Estimating the costs of product and service lines and business unit categories (cost apportionment)

The costs of the product and service lines and business unit categories will be estimated by apportioning the direct and indirect (corporate) costs stated in financial statements into each product and service line and business unit category by identifying cost drivers that are listed below (Table 1). The cost apportionment will be carried out based on their, respective cost drivers. For example, the cost apportionment of salaries and wages for each product line can be estimated by a sample survey.

Vote #	Cost drivers	Data source	
	Personal emoluments		
1001	Salaries and wages	Time commitment for each	Survey
1002	Overtime and holiday	product and service line	
	allowances		
1003	Other allowances	_	
	Traveling expenses		
1101	Domestic	Based on the revenue	Financial statements
1102	Foreign	percentage of each product	
		and service line	
	Supplies		
1201	Stationery and office	Based on the revenue	Financial statements
	requisites	percentage of each product	
1202	Fuel	and service line	
1202	1'uei		
1203	Diets and uniforms	Time commitment for each	Survey
		service line	
	Maintenance expenditure		
1301	Vehicles	Utilisation according to	Sample Survey
		service lines	

Table 1. Cost drivers, their apportionment basis, and sources

1302	Plant, machinery and equipment	Utilisation based on the area	Methodology developed by
1303	Buildings and structures	Utilisation based on the area	IASSL
	Services		
1401	Transportation	Utilisation according to service lines	Financial statements and estimates
1402	Postal and Communication	Based on revenue percentage of each product and service	Financial statements
1403	Electricity and water	line	
1404	Rent and local taxes		
1406	Interest for leased vehicle	Utilisation according to service lines	Financial statements and estimates
1409	Others	Based on revenue percentage of each product and service line	Financial statements
	Transfers		
1505	Subscriptions and contribution fees	Based on revenue percentage of each product	Financial statements
1506	Property loans to public servants		
	Other recurrent expenditure		
1701	Losses and write offs	Based on revenue	Financial statements
1703	Implementation of office language	percentage of each product and service line	
	Human resourcesdevelopment		
2401	Staff training	Based on the revenue percentage of each product and service line	Financial statements
	Depreciation: buildings	Utilisation according to service lines	As DOP neither calculates nor includes depreciation
	Depreciation: vehicles		in their final accounting,
	Depreciation: plant and machinery		a suitable methodology to calculate depreciation in compliance with SriLanka Accounting Standards (SLAS)

Step 3: Estimating transaction volumes of 2023/2024 of product andservice lines

Annual transaction volumes of the following product and service lines will be estimated using 2023 DOP data:

1. Stamp			
2. Franking machine			
3. Money order			
4. Personalized stamp			
5. Courier Service			
a.	EMS (Expedited Mail Service) with,]	a. Pick up racking
b.	SL Post Courier	ł	b. Proof of delivery
с.	COD (Cash On Delivery)		c. Track & Trace
6. Admail (Advertising M	ail)		
7. Telemail			
8. NSB (National Saving I	Bank)		
9. Utility Bill Collection (Ceylon Electricity Board Bills)		
10 OSE (On the Spot Fine			

- 10. OSF (On the Spot Fine)
- 11. Insurance premium collection (Sri Lanka Insurance)

Transaction volumes of the ordinary letter post, registered post, and parcel post will be estimated through a sample survey which will be conducted at a business unit level.

Step 4: Calculating unit costs of product and service lines

Unit cost of each product and service line will be calculated as follows

 $Estimated \ unit \ cost = \frac{Total \ Cost}{Transaction \ volume}$

Total cost of each product and service line will be estimated as described in 'Step 2'. **Transaction volume** of each product and service line will be estimated as described in 'Step 3'.

Step 5: Estimating profitability of product and service lines

Profitability of product and service lines will be calculated as follows.

Step 6: Compilation of separate profit and loss statements (partial accounts) for product and service lines using the estimated data

Profit and loss statements for product and service lines will be prepared for the year 2023 using the outcomes of the previous steps (1 to 5).

Step 7: Compilation of separate profit and loss statements (partial accounts) for business unit categories

Profit and loss statements for business unit categories will be prepared for the year 2023 redistributing the outcomes of the previous steps (1 to 5) to business unit categories.

Step 8: Developing formulae and a standard procedure to estimate the units costs of product and service lines

The outlined methodology provides a structured approach to estimating unit costs of products, services, and business unit categories. Formulae and a standard procedure will be developed with this approach embedded, to be used by the DOP to re-estimate them on demand. Such demand may arise when changes take place in cost factors of these unit costs.

Break even analysis

Apart from the objectives of the TOR, IASSL wishes to perform a breakeven analysis. Breakeven for each product and service line in question will be calculated in terms of revenue.

Geographic mapping of post office distribution and integrated data visualisation

Apart from the objectives of the TOR, IASSL wishes to create a map of business unit distribution of DOP (mainly post offices), using Geographic Information Systems (GIS), through the integration of diverse datasets to an insightful map of Sri Lanka.

These maps would typically include:

Post office distribution: mapping the spatial distribution of post offices across Sri Lanka, highlighting their locations and service coverage areas;

Logistics and infrastructure: incorporating logistic-related data, such as transportation networks, distribution centres, and key infrastructure points critical for postal operations; and

Secondary data integration: incorporating secondary data, such as population density, household numbers, urban-rural classifications, and demographic trends to understand service demand and spatial distribution.

Data validation

Unit costs and profitability of products, services, and business unit categories will be validated through a comprehensive and systematic approach to ensure accuracy, reliability, and credibility. Data validation includes a methodology review to verify the appropriateness

of revenue distribution and cost apportionment, which comprises a calculation accuracy validation to verify their mathematical correctness.

The distribution of unit costs and profitability by products, services, and business unit categories will be discussed in terms of central tendency and dispersion measures. A consistency check compares the results with historical data and industry benchmarks to ensure their reasonableness and consistency.

Peer reviews will be used to obtain an independent perspective and objective assessment of the methodology, calculations, and results. Sensitivity analyses will be used to test the robustness of the results against changes in key assumptions. All steps, assumptions, and methodologies used in the analysis will be documented for transparency and accountability.

Work Plan

Timeline		Month 01			Month 02			Month 03			Month 04				Month 05				Month 06			Month 07			
Activity	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25
Initial Discussion (FGD)																									
Literature review / In-depth interviews																							i T		
Research design																									
Inception report																									
Agreement signing																									
Questionnaire development (Census & Sample survey)																									
Questionnaire pre- testing																									
Research awareness program																									
Collecting data via Questionnaires (Census & Sample surve	ey)																								
Secondary data collection																									
FGD: responsible persons from each division/product.																							i T		
Data analysis																									
Draft report for approval																									
Final report																									
Staff training																									
Remarks	Со	mple	ted																						

Annex I Sample Survey

As secondary data on the volumes of ordinary letter post, registered post, and parcel post across different business units within DOP are not available, a sample survey will be conducted to estimate them.

Sampling method

Stratified random sampling using business unit categories (incl. delivery /non-delivery) and provinces as strata, will be employed.

Sample size determination

Business unit categories, which include both delivery and non-delivery types, will serve as the primary strata for sampling. Additionally, these business units are geographically distributed across provinces. For each business unit category, at least 5% of the units will be randomly selected to ensure a fair representation of each category. All the business units will be selected and surveyed where the total number of business units in a province is less than 3. This approach ensures that each category is adequately represented in the sample while accounting for geographic distribution across provinces. Accordingly, 140 delivery units will be selected from the total of 2105 delivery units while 105 non-delivery units will be selected from the total of 1885 non- delivery units resulting the total sample size of 245.

	De	livery	Non-delivery				
Province	Population	Sample	Population	Sample			
Western Province(South)	13	6	2	2			
Western Province(North)	4	2	-	-			
Central Province	7	2	-	-			
Southern Province	5	2	-	-			
Northern Province	4	2	-	-			
Eastern Province	4	2	-	-			
North WesternProvince	5	2	-	-			
North Central Province	2	2	_	-			
Uva Province	3	2	-	-			
Sabaragamuwa Province	3	2	-	-			
Totals	50	22	2	2			

Table 2: Sampling of Supra Grade Post Offices

Table 3: Sampling of Grade I Post Offices

	Deli	very	Non-delivery				
Province	Population	Sample	Population	Sample			
Western Province(South)	27	3	14	1			
Western Province(North)	19	2	1	1			
Central Province	41	4	4	1			
Southern Province	36	4	-	-			
Northern Province	31	3	1	1			
Eastern Province	21	2	2	2			
North WesternProvince	29	3	-	-			
North Central Province	19	2	-	-			
Uva Province	19	2	-	-			
SabaragamuwaProvince	25	3	-	-			
Totals	267	28	23	6			

Table 4: Sampling of Grade II Post Offices

	Deliv	very	Non-de	elivery
Province	Population	Sample	Population	Sample
Western Province(South)	24	2	12	1
Western Province(North)	27	2	3	1
Central Province	44	4	6	2
Southern Province	44	4	7	1
Northern Province	15	1	2	2
Eastern Province	27	2	3	2
North WesternProvince	28	2	2	2
North Central Province	16	1	1	1
Uva Province	22	2	2	2
SabaragamuwaProvince	21	2	4	2
Totals	268	22	42	16

	Deli	very	Non-d	elivery
Province	Population	Sample	Population	Sample
Western Province(South)	78	3	211	10
Western Province(North)	84	4	145	7
Central Province	234	9	276	11
Southern Province	161	6	340	14
Northern Province	92	4	171	8
Eastern Province	110	5	110	5
North WesternProvince	246	12	169	8
North Central Province	164	8	111	5
Uva Province	165	8	87	4
SabaragamuwaProvince	186	9	198	9
Totals	1,520	68	1,818	81

Table 5: Sampling of Sub Post Offices

Data collection

Enumerators will be deployed to each business unit to count volumes of ordinary letter post, registered post, and parcel post within a week, on randomly selected days based on transaction volumes. Additionally, customer suggestions and feedback regarding DOP will be obtained by the enumerators through a structured questionnaire.

Data accuracy

Data collection will be supervised by the coordinators during field visits of divisions/ business units. .

Annex 2 Estimating DOP employee time allocation by product and service lines

Complete enumeration will be carried out to collect data (using Google form) from all employees of DOP to estimate their time involvement by product and service lines. These data will indicate the time spent by employees on different product and service lines on a daily basis. Employees will include those who are directly involved in these product and service lines and corporate staff members.

Scope of enumeration - Population

Total staff carder includes both direct and corporate staff members working in DOP, attached to Supra Grade Post Offices (delivery, non-delivery, and Regional Mail Sorting Centers or RMSCs), Grade I Post Offices (delivery and non-delivery), Grade II Post Offices (delivery and non-delivery), Sub Post Offices (delivery and non-delivery), the Central Mail Exchange or CME; and Philatelic Bureau, and administrative offices

Scope of enumeration - product and service lines

All product and service lines mentioned in the TOR will be considered for this exercise, i.e.,

- 1. Stamp;
- 2. Franking machine;
- 3. Money order;
- 4. Personalised stamp;
- 5. Courier service (Expedited Mail Service or EMS, SL Post Courier, and Cash on Delivery or COD with pick up racking, proof of delivery, and track & trace);
- 6. Advertising mail or admail;
- 7. Telemail;
- 8. Services related to National Saving Bank or NSB;
- 9. Utility bill collection of Ceylon Electricity Board or CEB;
- 10. On-the-spot traffic fine collection or OSF; and
- 11. Insurance premium collection of Sri Lanka Insurance Corporation.

Data collection

Primary data on working hour allocation to each product and service lines during a typical week by each employee will be collected through a Google feedback form. These Google feedback forms are expected to be filled by the heads of business units and corporate offices. As there may be cases where employees manage multiple product and service lines, the heads of business units and corporate offices are required to indicate the percentage of their employee contributions against the product and service lines in question. When an employee manages only one product or service line, the contribution would be 100% for that product orservice line.

Table 6. Contents of the Google feedback form distributed to the heads of business units and corporate offices to collect primary data on employee working hour allocation to relevant product and service lines

e								Serv	vice/ F	roduc	t line				
Emp. Referenc	Designation	Grade	Location	P1	P2	S 1	S2	S3	S 4	S5	S 6	S7	S 8	S9	Tot

P1 = stamp; S1 = franking machine; S2 = money order; P2 = personalised stamp; S3 = courier service (Expedited Mail Service or EMS, SL Post Courier, and Cash on Delivery or COD with pick up racking, proof of delivery, and track & trace); S4 = advertising mail or admail; S5 = telemail; S6 = services related to National Saving Bank or NSB; S7 = utility bill collection of Ceylon Electricity Board or CEB; S8 = on-the-spot traffic fine collection or OSF; S9 = insurance premium collection of Sri Lanka Insurance Corporation

Data collection process will be monitored with reminders and follow-up to ensure response rate and accuracy. Data will be validated through field visits of business units and corporate offices.