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The Socio-Economic Impact of Universal Postal Services in Indonesia: A Strategic Analysis of PT Pos Indonesia's Public Service Obligation

Riharsono Prastyantoro[1], Agus Purnomo[2], Arfyan Saputra[3]
[1] Science and Data Study Program, Universitas Logistik dan Bisnis Internasional, Bandung, Indonesia, email. soniriharsono@ulbi.ac.id.
[2] Department of Master Logistics Management, Universitas Logistik dan Bisnis International, Bandung, Indonesia, email. aguspurnomo@ulbi.ac.id
[3] PT. Pos Indonesia (Persero), Bandung, Indonesia, email. 995494484@posindonesia.co.id

Corresponding Author: soniriharsono@ulbi.ac.id [1]

Abstract: This study analyzes the socio-economic impact of the Universal Postal Service (Layanan Pos Universal/LPU) operated by PT Pos Indonesia (Persero) under the Public Service Obligation (PSO) scheme. A quantitative framework combining counterfactual analysis, Local Multiplier 3 (LM3), and input–output analysis was developed to assess benefits for the public, government, and MSMEs. In 2024, a government subsidy of IDR 392 billion generated IDR 1.88 trillion in travel cost savings, contributed 0.238% to GDP through social assistance distribution, and supported MSME output with a 17.5% contribution per 1% national growth. The findings highlight LPU's strategic value for sustainable, benefit-based funding.

Keyword: Universal Postal Service, Public Service Obligation, PT Pos Indonesia, Socio-Economic Impact

INTRODUCTION

The importance of universal access to public services has been receiving increasing attention, accompanied by the recognition that such access is not merely a functional necessity but a fundamental right of every citizen (Randini & Muslim, 2024). To realize this principle of social justice, governments in various countries implement Public Service Obligations (PSO) as a strategic instrument to ensure the equitable and affordable provision of essential services for all segments of society (Çelebi, 2020). In Indonesia, this mandate is implemented through the appointment of PT Pos Indonesia as the official operator of the Universal Postal Service (LPU), pursuant to the Decree of the Minister of Communication and Informatics No. 1670 of 2016. This assignment reflects the state's commitment to delivering fair and inclusive postal services amid complex geographical challenges, encompassing more than 17,500 islands as well as disadvantaged, remote, and frontier (3T) regions (Fitriningrum & Pulungan, 2021).

Indonesia's geographical complexity necessitates the availability of an efficient, reliable, and sustainable logistics and communication system. However, the implementation of the Universal Postal Service (LPU) faces various structural challenges, particularly the high

operational costs borne by PT Pos Indonesia. This situation underscores the need for government intervention in the form of subsidies to ensure service continuity, even though such subsidies may place additional fiscal pressure on the state and financial strain on the company's business model (Fitriningrum & Pulungan, 2021). The imbalance between public service obligations and business sustainability requirements has become more prominent as public demand for efficient and affordable postal services increases. This issue is further exacerbated by the absence of a systematic evaluation mechanism to objectively measure the social and economic benefits of LPU implementation (Nurdin & Muntaha, 2023). Without a structured evaluation framework, the tangible contributions of LPU remain difficult to ascertain, both for the government as regulator and for the public as service users (Randini & Muslim, 2024).

The need to develop a comprehensive measurement tool for assessing the social and economic impacts of the Universal Postal Service (LPU) has become increasingly urgent, particularly in an era of public service reform that demands efficiency, accountability, and inclusivity (Randini & Muslim, 2024). Existing literature emphasizes that universal public services should not only address immediate needs but also function as a means of social redistribution to build a more just and equitable society (Çelebi, 2020). Therefore, policy innovations and service models adapted from international practices must be tailored to Indonesia's geographical and socio-economic characteristics. Such an approach would not only bridge service gaps in remote areas but also strengthen the role of LPU as an instrument of inclusive development. Consequently, establishing a robust, evidence-based evaluation framework would not only support the fulfillment of PT Pos Indonesia's PSO mandate but also make a significant contribution to strengthening sustainable socio-economic development at the national level (Randini & Muslim, 2024; Nurdin & Muntaha, 2023).

The socio-economic impact of the Universal Postal Service (LPU) in Indonesia, particularly in relation to the Public Service Obligation (PSO) carried out by PT Pos Indonesia, remains underexplored, especially with regard to measuring the social and economic benefits of last-mile delivery. Most of the existing literature focuses on inefficiencies and cost-related challenges, while comprehensive evaluations that incorporate the perspectives of the public, government, and service operators are still limited. As a result, subsidy policies are often not based on objective justification (Pateiro-Rodríguez et al., 2024; Buko, 2023). In fact, postal services have been proven to contribute to socio-economic growth, reduce transaction costs, and improve infrastructure accessibility (Milutinović et al., 2020; Lazarević et al., 2020). Therefore, an integrated evaluative framework is needed to comprehensively assess the impact of LPU and serve as a basis for formulating more targeted public policy.

The main issue addressed in this study is the absence of a systematic approach to measure the social and economic benefits of the Universal Postal Service (LPU) operated by PT Pos Indonesia. The concrete impacts of the LPU on society, the government, and the operator have not been quantitatively documented, making it difficult to design proportional and evidence-based subsidy policies. Without a comprehensive evaluation framework, the LPU is often perceived merely as a fiscal burden rather than a long-term public investment. Therefore, this study aims to establish an empirical foundation for assessing the LPU's contribution to transaction cost efficiency, social assistance distribution, and MSME empowerment in support of the sustainability of universal public services.

This study aims to develop a measurable and multidimensional framework for calculating the benefits of the Universal Postal Service (LPU), taking into account various relevant social and economic aspects. The primary focus is directed toward an in-depth analysis of the LPU's impact on three key stakeholder groups: the public as beneficiaries, the government as regulator, and PT Pos Indonesia as the entity mandated to implement the Public Service Obligation (PSO). In addition, the study seeks to provide an objective basis for formulating funding policies for the postal sector's PSO, which has often faced constraints in data availability and strong economic justification. Through an evidence-based approach, this study

also aims to reaffirm the strategic value of the LPU in national development and the importance of ensuring its sustainable financing amid the dynamics of public service sector liberalization.

This study offers novelty by presenting the first quantitative formula specifically designed to comprehensively evaluate the benefits of the Universal Postal Service (LPU) in Indonesia. Beyond focusing solely on numerical data, the research integrates perspectives from multiple stakeholders—the public, the government, and PT Pos Indonesia—in order to build a holistic understanding of the utility of public services in the postal sector, which has often been assessed only in part. The analytical model developed has the potential to be replicated in other public service sectors that also operate under the Public Service Obligation (PSO) scheme and face sustainability challenges. From a scientific contribution standpoint, this research is conceptually relevant in developing policy evaluation models, while also being contextually aligned with the practical needs of the government and state-owned enterprises (SOEs) for objective data and arguments. The primary justification lies in the importance of making policy decisions based on tangible benefits amid fiscal constraints, thereby promoting more accountable and results-oriented public governance.

This study makes four significant contributions. First, conceptually, it develops a quantitative approach based on a multi-stakeholder benefit framework within the context of public services under the Public Service Obligation (PSO) scheme in the postal sector—an area that has thus far received limited exploration. Second, from a practical standpoint, it provides evidence-based recommendations that can be utilized by the Ministry of Communication and Informatics, the Ministry of Finance, and PT Pos Indonesia to determine more proportionate subsidy allocations and to design sustainable LPU financing strategies. Third, in terms of policy contribution, it offers strategic arguments that reinforce the position of the LPU as an essential instrument for strengthening social cohesion and supporting national development agendas. Fourth, at the global level, the study contributes to the achievement of the Sustainable Development Goals (SDGs), particularly Goal 9 on industry, innovation, and infrastructure, and Goal 10 on reducing inequalities.

Universal Postal Service (LPU) or Universal Service Obligation (USO) is generally regarded as a policy instrument to guarantee equal access to postal services for all citizens, based on the principles of affordability, sustainability, and spatial equity. (Cremer et al., 2001) emphasize that from an economic perspective, the USO comprises three key dimensions: the coverage constraint, the uniform pricing constraint, and the entry/license constraint, all of which ensure the continuity of service in high-cost areas. This perspective is reinforced by equity arguments, which highlight that without USO mechanisms, there is a risk of social exclusion, particularly in remote or high-cost regions, making regulatory intervention necessary to secure equal access (Poudou & Roland, 2017).

However, the literature also points out significant challenges in ensuring the financial sustainability of the USO. Uniform tariffs and universal coverage can create cost burdens for postal operators, particularly as markets enter phases of liberalization with increased competition (Andrzej Jakubowski, 2018). To address this issue, various compensation mechanisms have been introduced, such as net cost–based subsidy schemes that aim to balance social obligations with the economic viability of service providers (Mirabel et al., 2009). Thus, the USO is not only rooted in the mandate of universal access but must also be supported by flexible and adaptive policy designs to respond to market dynamics and geographical challenges.

The literature defines the Universal Postal Service (LPU) or Universal Service Obligation (USO) as a regulatory mandate to ensure that every citizen has access to postal services with full territorial coverage (ubiquity), uniform pricing, and certain measurable quality standards (Cremer et al., 2001). Within the European Union framework, this definition includes the obligation to provide at least one collection and delivery per working day across all points in the national territory, along with a minimum set of services such as letter delivery up to 2 kg,

parcel delivery up to 10 kg, and registered and insured services (Pateiro-Rodríguez et al., 2024). The USO's position as part of the Services of General Economic Interest (SGEI) underscores its role as an instrument for safeguarding public rights to essential services, particularly in the post-liberalization era of the postal sector (Andrzej Jakubowski, 2018). From an industrial economics perspective, the USO is formulated as a combination of three main constraints—coverage constraint, uniform pricing, and license/entry constraint—designed to prevent service exclusion in high-cost areas while maintaining spatial equity (Panzar, 2000).

Although normatively the USO is regarded as an essential instrument for ensuring equal access (Crew & Kleindorfer, 2005), several studies highlight that implementing the principles of uniform pricing and full territorial coverage can impose significant cost burdens on operators, particularly in remote areas (Jaag & Trinkner, 2011). This challenge is compounded by the risk of cream-skimming by competitors who serve only the most profitable segments (Cremer et al., 2001), creating potential tension between social objectives and financial sustainability. A synthesis of the literature suggests that rigid definitions of the USO should be adapted through cost-based compensation schemes or subsidy mechanisms proportionate to the benefits generated (Pateiro-Rodríguez et al., 2024), thereby preserving the principle of universal access without compromising the operator's economic viability. Thus, the definition of LPU/USO not only reflects a commitment to service inclusion but must also accommodate policy designs that are responsive to market dynamics and geographical realities.

The implementation of LPU/USO in developed countries is generally regulated through strict quantitative access thresholds and adaptive network designs. In France, regulations require that at least 95% of households in each département and 99% nationwide be located within a 10 km radius of a service point, while cities with populations exceeding 10,000 must have at least one service point per 20,000 residents (Beauvais & Bonnet, 2015). The United Kingdom applies the Urban Network Reinvention Programme, targeting 95% of the urban population to be within one mile of a post office; however, it has faced challenges such as the closure of around 2,400 branches due to changes in welfare payment methods and network restructuring (Mayo et al., 2005; Farrington, 2001). In Sweden, PostNord has expanded access through retail partnerships that increase the number of outlets and extend opening hours, while Poland maintains network density through state support to ensure affordable pricing obligations and broad coverage are met (Bohlin et al., 2014). In Australia, the USO is fulfilled through the Australia Post network, with 58% of its outlets located in regional and remote areas, generating an economic contribution of approximately AUD 6 billion and delivering significant social value in maintaining community cohesion (Deloitte Acces Economics, 2018).

Meanwhile, in developing countries, the implementation of LPU/USO tends to focus more on operational optimization and sustainable funding. In Chile, Correos de Chile has undertaken multi-criteria-based re-districting to balance workloads, improve last-mile efficiency, and adjust service area distribution in response to changes in the composition of letters and parcels (Marín et al., 2017). In Indonesia, Law No. 38/2009 on Postal Services designates the LPU as a form of PSO, with financing obligations that can be shared among postal operators based on principles of fairness and cost requirements, thus opening opportunities for the application of a net-cost-based compensation mechanism (Kurniawan, 2018). These practices show that while developed and developing countries adopt different approaches—developed countries tend to emphasize measurable access standards and network partnerships, whereas developing countries focus on operational innovation and funding support—the overarching goal remains the same: ensuring the affordability, quality, and universal reach of postal services amid market dynamics and digital transformation.

A variety of approaches have been employed to measure the benefits of LPU/USO, both from social and economic perspectives, often combining quantitative and qualitative methods. (Pindus et al., 2010) developed a framework for measuring the social value of LPU, categorizing benefits into eight areas—ranging from consumer benefits, business benefits,

security and safety, environmental benefits, support for government services, information exchange, social connectedness, to community identity and pride. The study recommends the use of representative surveys, willingness-to-pay (WTP) analysis, and case studies to compare actual conditions with alternative scenarios in which universal services are reduced or eliminated. (Ellison et al., 2016) applied WTP valuation using contingent valuation and discrete choice experiments to the post office network in the United Kingdom, producing annual value estimates between £4.3 and £9.7 billion, with the largest contribution coming from services categorized as part of the Services of General Economic Interest (SGEI). This method also calculates the specific value of each service, such as standard postal services, basic financial services, and licensing/identity services, thereby providing granular insights for policymakers.

In addition to direct valuation, several studies emphasize impact-based measurement focusing on community and local economic effects. (Rubin et al., 2006) measured the economic contribution of urban post offices using the Local Multiplier 3 (LM3) model, finding that every £10 of income generated £16.20 in local economic impact, while also highlighting the ripple effects of post office closures on local businesses, community groups, and access to public services. (Deloitte Acces Economics, 2018) study on Australia Post combined estimates of macroeconomic contribution (\~AUD 6 billion) with the perceived social value (\~AUD 185 million annually, excluding service prices), derived from national surveys and consumer surplus analysis. Other technical approaches employ spatial models such as the two-step floating catchment area (Mercier et al., 2021) and simulated annealing algorithms (Mostarac et al., 2022) to assess and optimize physical access, linking distance/travel time indicators with population distribution, particularly for vulnerable groups. Thus, measuring the benefits of LPU/USO can be achieved through a combination of monetary valuation, socio-economic impact analysis, and spatial evaluation—enabling policymakers to balance service inclusion objectives with operational sustainability.

METHOD

This study adopts a case study approach focusing on the provision of the Universal Postal Service (LPU) by PT Pos Indonesia as the designated Public Service Obligation (PSO) operator. This approach was chosen due to the contextual relevance of the LPU in Indonesia, which faces unique geographical and funding challenges, thereby requiring a tailored evaluation model. The research is designed to address the gap identified in the literature review—namely, the absence of a comprehensive quantitative formula to measure the social and economic benefits of the LPU.

The research stages begin with the development of a framework constructed through a gap analysis between the current state of LPU benefit measurement in Indonesia and international best practices. This framework formulates social and economic benefit indicators relevant to three key stakeholders: the public, the government, and PT Pos Indonesia. Subsequently, a benefit calculation formula is developed, incorporating three main approaches: Counterfactual analysis to estimate net benefits by comparing them to a scenario without the LPU, Multiplier effect analysis to measure economic spillover impacts using the Local Multiplier 3 (LM3) model, Input-output analysis to map the LPU's contribution to other economic sectors and the national GDP.

Analytically, this study explores LPU benefits through three primary domains. First, the contribution to improving transaction cost efficiency for the public, estimated by calculating the savings in travel costs and time due to geographical proximity to LPU post offices. The estimation compares the counterfactual costs that would be borne by the public if LPU offices were unavailable, then aggregates these into an annual economic value based on the distribution of offices and population mobility patterns.

The benefit value formula is expressed as follows:

$$M = \sum_{i=1}^{n} \left(T_i \times \left(\bar{C}_{counterfactual,i} - \bar{C}_{actual,i} \right) \right) \quad \text{.....} \quad Equation\ (1)$$

M represents the accumulated benefit value from all n kantor LPU offices, calculated as the product of the average cost savings for the community and the number of transactions T_i at each office within one year. The average cost savings are defined as follows:

M: Total annual benefit value from all LPU offices (in Indonesian Rupiah)

n : Number of LPU offices observed

T_i : Number of transactions at the i^{th} LPU office in one year

$\bar{C}_{counterfactual,i}$: Average transportation cost for the community to reach the nearest alternative post office if the i^{th} LPU office were unavailable

$\bar{C}_{aktual,i}$: Actual average transportation cost for the community to access the i^{th} LPU office

Secondly, the study examines the economic multiplier effect of distributing social assistance—both cash and non-cash—through the LPU network. To estimate the contribution of social assistance distribution to economic output, a multiplier analysis approach is applied. The multiplier coefficient (kkk) is calculated using the classical formula:

$$k = \frac{1}{1-c} \quad \text{.....} \quad Equation\ (2)$$

With *c* representing the value of the marginal propensity to consume (MPC). The estimation of *c* was carried out through two approaches: (1) a non-regression approach, which calculates the change in household consumption relative to the change in output (GDP), as developed by Fadli (2024); and (2) a regression approach using the Ordinary Least Squares (OLS) method on the consumption function $C = f(Y)$. The multiplier coefficient values obtained from these two approaches were then used to calculate the contribution of social assistance distributed through the Universal Postal Service (LPU) to the national Gross Domestic Product (GDP).

Third, this study applies an input–output (I-O) analysis to measure the contribution of Micro, Small, and Medium Enterprises (MSMEs) product distribution through the Universal Postal Service (LPU) to the output of other sectors in the economy. The simulation was carried out by injecting a final demand of IDR 848.9 billion into the wholesale and retail trade sector in the National I-O Table (BPS, 2016), in order to estimate the direct, indirect, and total output impacts on the economy.

The input–output (I-O) formula is used to calculate the total output x as follows:

$$X = (I - A)^{-1}.f \quad \text{.....} \quad Equation\ (3)$$

X : Vector of total sectoral output

I : Identity matrix

A : Input coefficients matrix, representing the ratio of inputs between sectors

$I - A$: Leontief inverse matrix, representing the output multiplier

f : Final demand vector injected into the model

Referring to international policy practices—particularly those in the European Union and the normative framework of the Universal Postal Union (UPU)—this methodological approach seeks to bridge the gap between public policy analysis and applied economic models. Furthermore, this study emphasizes the importance of empirical evidence as the basis for

formulating subsidy policies, designing equitable compensation schemes, and strengthening economic arguments to ensure the sustainability of universal public service financing in the future.

RESULTS AND DISCUSSION

Results

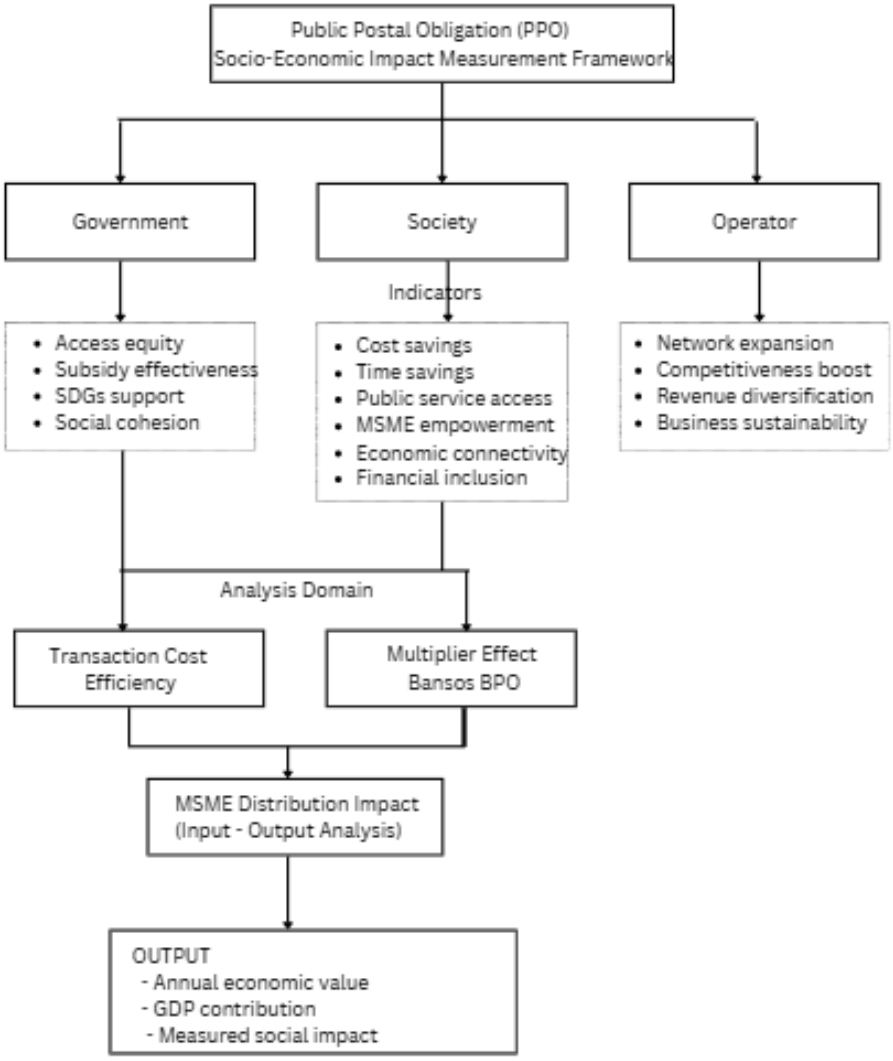

Figure 1. Research Framework

This framework is designed to measure the socio-economic impact of the Public Postal Obligation by considering three main stakeholders: the government, the public, and the operator (PosIND). The government focuses on equitable access, subsidy effectiveness, support for the SDGs, and social cohesion. The public benefits from cost and time savings, access to public services, MSME empowerment, economic connectivity, and financial inclusion. Meanwhile, the operator gains advantages through network expansion, enhanced competitiveness, revenue diversification, and business sustainability.

The analysis was conducted across three main domains. First, transaction cost efficiency, which measures the savings in both cost and travel time for the public. Second, the multiplier effect of social assistance distribution through the Public Postal Obligation (PPO) network. Third, the contribution of MSME product distribution to the economy using an input–output analysis approach.

The output framework encompasses the estimation of annual benefit values, contributions to Gross Domestic Product (GDP), and measurable social impacts. These results provide a foundation for evidence-based policymaking, ensuring proportional funding for the Public Postal Obligation (PPO), strengthening the sustainability of universal public services, and supporting inclusive development across Indonesia.

Based on the Decree of the Minister of Communication and Informatics No. 1670 of 2016 dated 26 September 2016, PT Pos Indonesia was assigned to operate the Universal Postal Service (LPU). The LPU is present across various cities and regencies. Table 1 presents the distribution of post offices implementing LPU and non-LPU across six operational regions of PT Pos Indonesia. Region I has the highest number of branch post offices (875 units), of which 663 are LPU-based, while Region II has the fewest LPU offices (48 units) despite having the widest coverage area (120.3 thousand km² per office).

The coverage ratio of each regional area was calculated by dividing the total area by the minimum distance of KCP LPU and non-LPU offices (at least 10,000 meters), and then dividing again by the number of KCP offices in each region. This calculation produced the percentage of coverage ratio in relation to the minimum requirement for establishing LPU and non-LPU offices. The results show that the average percentage value across all regions is 37.7%.

Table 1 Comparative coverage of the area with the minimum limit for KCP development and the number of KCPs

No	Regional	Number of LPU & non LPU KCP	Number of LPU KCP	Comparative coverage of area
1	I	875	663	20,6
2	II	159	48	120,3
3	III	311	116	8,4
4	IV	570	404	31,3
5	V	792	624	28,5
6	VI	771	567	16,9

Table 2 shows that the total number of transactions conducted at PT Pos Indonesia's branch post offices (KCP) designated as LPU reached 86,184,647 in 2024. The number of transactions at each LPU KCP serves as the multiplier for the difference between the average actual transportation cost and the counterfactual cost, as defined in Equation 1. From the total of 2,422 LPU KCPs across Indonesia, this study utilized data from 928 KCPs as the sample and extrapolated it proportionally. The estimation results indicate that the LPU generated travel cost savings for the public amounting to IDR 2.56 trillion in 2024.

Table 2 Number of Transactions of KCP Pos Indonesia with LPU status

No	Regional	Transaksi LPU
1	I	9.213.042
2	II	3.493.389
3	III	5.544.320
4	IV	20.660.900
5	V	27.310.180
6	VI	19.962.816

Table 3: Value of Cash Social Assistance distributed by Pos Indonesia in the period 2020 – 2024

Year	Social assistance distributed (Rp)
2020	29.231.315.100.000
2021	17.532.816.200.000
2022	57.348.403.400.000
2023	13.779.122.530.449
2024	15.682.044.065.290

In 2024, PT Pos Indonesia successfully distributed social assistance amounting to IDR 15.68 trillion. The cash transfers delivered through the LPU network are estimated to have increased economic output by IDR 31.25 trillion. Indonesia's real GDP in 2024 was IDR 13,086 trillion, meaning that the social assistance distributed through PT Pos contributed approximately 0.238% to national GDP. It should also be noted that the calculated MPC values fall within a range consistent with Fadli's (2024) findings, namely between 0.3 and 0.5.

Table 4. Multiplier Analysis of Cash Social Assistance Distributed by Pos Indonesia

Year	Household Consumption Expenditure (Million Rupiah)	GDP (Million Rupiah)	Social Assistance Distributed by Post (Successful)	MPC	Multiplier Coefficient	Social Assistance Multiplier	Percentage of Social Assistance Multiplier per GDP (%)
2014	4.650.050.463,09	8.603.635.973,43	-	-	-	-	-
2015	4.871.349.673,57	9.033.168.669,64	-	0,5152	2,0627	-	-
2016	5.116.953.959,47	9.498.833.001,28	-	0,5274	2,1161	-	-
2017	5.364.418.160,39	9.995.224.918,96	-	0,4985	1,9941	-	-
2018	5.636.736.173,94	10.537.736.552,49	-	0,5020	2,0079	-	-
2019	5.911.848.356,12	11.062.070.612,47	-	0,5247	2,1039	-	-
2020	5.803.284.240,52	10.837.540.833,02	29.231.315.100.000,00	0,4835	1,9362	56.596.931.492.808,00	0,5222
2021	5.936.587.744,10	11.239.387.945,28	17.532.816.200.000,00	0,3317	1,4964	26.236.005.371.294,70	0,2334
2022	6.240.915.191,37	11.840.158.388,85	57.348.403.400.000,00	0,5066	2,0266	116.222.093.888.778,00	0,9816
2023	6.550.418.575,14	12.439.449.618,31	13.779.122.530.449,00	0,5164	2,0680	28.495.699.198.462,80	0,2291
2024	6.872.699.169,04	13.086.300.998,46	15.682.044.065.290,00	0,4982	1,9929	31.253.434.618.030,30	0,2388

The 2016 Indonesia Input–Output (I-O) Table serves as one of the key references for economic analysis and projections in development planning, as well as a basis for improving classification, coverage, and estimation methods in the compilation of fundamental economic data. It is structured in a 185 × 185 product dimension, continuing from a similar publication issued in 2010.

Table 5. Simulation of 848.9 M Injection from MSMEs

Code	Sector	Simulasi 1	
		dFD	dX
1	Agriculture, Forestry, and Fisheries	-	14.61
2	Mining and Quarrying	-	10.53
3	Processing Industry	-	94.55
4	Electricity and Gas Supply	-	11.26
5	Water Supply, Waste Management, and Recycling	-	0.72
6	Construction	-	10.22
7	Wholesale and Retail Trade; Car and Motorcycle Repair	848.92	883.43
8	Transportation and Warehousing	-	39.72
9	Accommodation and Food and Beverage Provision	-	7.96
10	Information and Communication	-	28.56
11	Financial and Insurance Services	-	45.73
12	Real Estate	-	26.17
13	Corporate Services	-	26.23
14	Government Administration, Defense, and Compulsory Social Security	-	2.57
15	Education Services	-	1.16
16	Healthcare Services and Social Activities	-	1.38
17	Other Services	-	2.56
Total		1,207.35	

The simulation conducted represents an increase in final demand resulting from an injection into the specified sector, followed by an assessment of the total output generated from this increase. Simulation 1 involved an injection of IDR 848.9 billion into the Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles sector.

From the I-O table calculation, it was found that the multiplier of the IDR 848.9 billion injection into the MSME sector indicates a contribution of 17.5% for every 1% of national economic growth.

Table 6 Sectoral Impact of 848.9 M injection simulation

Code	Sector	Initial Output	Sim1 %dX
1	Agriculture, Forestry, and Fisheries	235,702.31	0.0062
2	Mining and Quarrying	55,407.85	0.0190
3	Processing Industry	10,710.16	0.8828
4	Electricity and Gas Supply	24,323.91	0.0463
5	Water Supply, Waste Management, and Recycling	2,324.36	0.0310
6	Construction	5,652.99	0.1809
7	Wholesale and Retail Trade; Car and Motorcycle Repair	7,220.34	12.2353
8	Transportation and Warehousing	13,036.46	0.3047
9	Accommodation and Food and Beverage Provision	430.40	1.8489
10	Information and Communication	137,585.45	0.0286
11	Financial and Insurance Services	7,087.11	0.6453
12	Real Estate	10,101.56	0.2590
13	Corporate Services	17,999.17	0.1457
14	Government Administration, Defense, and Compulsory Social Security	173.78	1.4768
15	Education Services	21,870.90	0.0053
16	Healthcare Services and Social Activities	133,867.89	0.0010
17	Other Services	6,992.93	0.0366
	Total	689,987.57	0.1750

Discussion

The findings of this study demonstrate that the implementation of the Universal Postal Service (LPU) by PT Pos Indonesia generates significant social and economic contributions for the public, the government, and the private sector. This is consistent with international evidence, such as Deloitte (2018) on Australia Post and nef (2006) through the Local Multiplier 3 (LM3) model. The results reinforce the argument that postal services function not only as communication infrastructure but also as a catalyst for local economic growth through transaction cost savings, social assistance distribution, and MSME empowerment.

First, from the public's perspective, the estimated travel cost savings of IDR 2.65 trillion in 2024 highlight the role of the LPU in reducing transaction costs and expanding access to public services, as discussed by Pindus et al. (2010) and Ellison et al. (2016). This figure indicates that without the LPU, citizens—particularly those in remote, frontier, and underdeveloped (3T) regions—would face significantly higher transportation expenses to access postal services. These findings are consistent with practices in developing countries such as Chile (Marín et al., 2017), which emphasize last-mile efficiency as a key component of optimizing universal service delivery.

Second, from the government's perspective, the distribution of social assistance through the LPU network has been proven to generate a multiplier effect on the national economy. With MPC values ranging between 0.3–0.5 and a social assistance multiplier reaching 2.02, the injection of IDR 15.68 trillion in 2024 was able to boost economic output to IDR 31.25 trillion, equivalent to 0.238% of GDP. These findings are consistent with the literature (Fadli, 2024; Pateiro-Rodríguez et al., 2024), which emphasizes the importance of efficient public distribution channels to maximize the fiscal impact on the economy.

Third, from the business perspective, the distribution of MSME products through the LPU contributes 17.5% for every 1% of national economic growth in the wholesale and retail trade sector. This finding reinforces the argument of Lazarević et al. (2020) that postal networks can serve as a logistics platform facilitating MSME integration into national markets.

The input–output simulation in this study further illustrates extensive cross-sectoral linkages—from trade to transportation and financial services—underscoring the role of the LPU within the broader economic value chain.

Compared to international studies, the findings of this research have unique policy implications for the Indonesian context. Unlike in developed countries, where universal postal service policies emphasize strict quantitative access standards (Beauvais & Bonnet, 2015; Mayo et al., 2005), Indonesia's LPU policy needs to prioritize sustainable funding and network optimization based on tangible economic benefits. These findings provide empirical evidence that LPU subsidies should not be perceived as a mere fiscal burden, but rather as a public investment that yields measurable economic and social returns.

CONCLUSION

This study concludes that the Universal Postal Service (LPU) implemented by PT Pos Indonesia holds significant strategic value in promoting equitable access to public services and fostering inclusive development in Indonesia. A government subsidy of IDR 392 billion for LPU in 2024 generated travel cost savings for the public amounting to IDR 2.65 trillion, demonstrating substantial efficiency in accessing postal services. In addition, the distribution of social assistance through the LPU network contributed 0.238% to national GDP, while MSME product distribution added 17.5% for every 1% of national economic growth in the wholesale and retail trade sector.

These findings reinforce the view that the LPU is not merely a public service obligation, but rather an instrument of economic development that delivers multidimensional benefits for society, government, and businesses. Therefore, LPU funding policies should be directed toward schemes based on tangible benefits and long-term sustainability, while taking into account the cross-sectoral linkages that have been proven to generate multiplier effects for the national economy.

Arah penelitian selanjutnya dapat difokuskan pada: Future research can be directed toward the following areas:

1. Classification of LPU social impact calculations based on categories of social and economic benefits.
2. GIS-based spatial analysis to identify regions with potential for optimizing the LPU network.
3. Longitudinal evaluation of LPU impacts in the post-liberalization era of the postal sector in Indonesia.

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