Rapid appraisal of the vehicle spare parts supply system

by
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Introduction

The surge in vehicle ownership has led to a corresponding increase in automobile workshops and suppliers of spare parts. Government agencies maintain a substantial fleet that includes executive vehicles, pooled utility vehicles, and larger vehicles such as buses and trucks. To keep costs low, these agencies conduct annual procurement exercises to select spare parts suppliers. However, the diversity of vehicle types, the volume of spare parts, and the multitude of brands complicate this process, often resulting in suboptimal outcomes. There is a prevalent concern that government agencies frequently receive counterfeit or inferior-quality parts at inflated prices, undermining the objectives of the procurement process.

This rapid assessment aims to validate these concerns and explore alternative strategies that would benefit government agencies without compromising the role of private sector in this burgeoning business sector.

Methods & Materials

For this study, three commonly used vehicle brands within government fleets - Toyota Hilux, Isuzu D-Max, and Hyundai Creta - were selected. We randomly selected nine spare parts suppliers for each vehicle type for the study. We collected prices for 10 to 11 commonly changed spare parts from these suppliers and compared the highest, lowest, and average market prices against the 2024-25 annual procurement prices from the supplier selected by the Ministry of Industry, Commerce & Employment (MOICE).

Results & Discussion

The automobile industry generally recognizes three sources of spare parts:

i. **Original Equipment Manufacturer (OEM)** parts, made by the manufacturer or to their specifications by external companies.
ii. **Genuine parts**, supplied by the vehicle manufacturer in their packaging.
iii. **Aftermarket parts**, produced by other companies, often varying significantly in price and quality.

The spare parts market is predominantly populated by numerous aftermarket brands, which, while generally cheaper, often compromise on quality.

(i) Toyota Hilux

Spare parts for the Toyota Hilux are primarily sourced from Japan and Thailand. Notably, the quoted procurement prices for 2024-2025 are significantly lower than average market prices—some by as much

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as 90% (see Table I), raising doubts about the quality of the parts offered through the procurement system. Though in certain instances, average market prices are lower than procurement prices, it is due to low prices offered by some suppliers, which reduce average prices. For instance, grill radiator prices from Thailand range from Nu. 14,300 to Nu. 3,500, bring the average to Nu. 9,489.89 only.

Table I: Cost Comparison of Various Spare Parts for Toyota Hilux

Spare Part (Country of Origin)	**Highest Market Price (Nu.)**	**Lowest Market Price (Nu.)**	**Av. Market Price (Nu.)**	**Annual Proc. Price - 2024-25 (Nu.) (Source)**	**% Difference (Av. Market Price – APP)**
Brake Pad (Japan)	14,800	4,800	8,780	2,500 (Japan)	71.53
Brake Pad (Thailand)	12,000	4,500	9,566.86		73.87
Rear Brake Shoe (Japan)	12,800	3,800	7,866.67	2,300 (India)	70.76
Rear Brake Shoe (Thailand)	12,800	4,500	9,162.5		74.90
Clutch Plate (Japan)	16,500	7,200	16,595	13,000 (Japan)	21.66
Clutch Plate (Thailand)	12,000	7,800	9,800		-32.65
Diesel Filter (Japan)	2,400	1,950	2,175	200 (Japan)	90.80
Diesel Filter (Thailand)	2,400	1,950	1,518.75	200 (Japan)	86.83
Engine Oil Filter (Thailand)	1,800	650	1,077.77	200 (Japan)	81.44
Air Filter (Thailand)	4,000	2,150	3,016.66	2,500 (Japan)	17.13
Glow Plug (Thailand)	3,800	2,150	3,016.67	4,000 (Japan)	-32.6
Grill Radiator (Thailand)	14,309	3,500	9,489.89	12,000 (Japan)	-26.45
CV Joint Boot (Thailand)	1,600	1,150	1,318.75	1,500 (Japan)	-13.74

(ii) Isuzu D-Max

Annual procurement prices of a little less than half (45.45%) of spare parts were above the average market prices, with a few even surpassing the highest prevailing market prices (see Table II). On the other hand, prices for some parts appear unrealistically low, raising serious concerns about quality.

(iii) Hyundai Creta

Similar to the Toyota Hilux, the annual procurement prices for many parts are significantly lower than average market prices (see Table III), though in approximately 33% of spare parts, the procurement prices are higher than average market prices.

In general, for all types of vehicles, the annul procurement prices for most spare parts are significantly lower than prevailing market prices, some by almost 99 %. This substantial disparity raises concerns about the quality and authenticity of the supplied parts.

The significant price variations among suppliers indicate a large number of aftermarket parts manufacturers. Although the procurement system aims to provide goods at lower prices, the abundance of available brands complicates the comparison of price and quality. This makes it difficult for the procuring agency to determine whether it is getting the best value for money. Moreover, since annual procurement prices are significantly lower than average market prices in most cases, it raises serious concerns about the quality of the parts being offered. Consequently, it appears that the current procurement strategy is not delivering optimal deals, potentially leading to losses and inefficiencies.

Table II: Cost Comparison of Various Spare Parts for Isuzu D-Max

Spare Parts (Country of Origin)	Highest Market Price (Nu.)	Lowest Market Price (Nu.)	Av. Market Price (Nu.)	Annual Proc. Price for 2024-25 (Nu.) (Source)	% Difference: (Av. Market Price – APP)
Brake Pad (India)	7,800	3,200	6,250	2,500 (Japan)	60
Brake Pad (Thailand)	10,000	6,800	8,533.33		70.7
Front Brake Shoe (India)	6,500	2,800	4,775	100 (Japan)	97.9
Front Brake Shoe (Thailand)	6,800	4,800	5,862.5		98.3
Clutch Plate (India)	7,500	6,900	7,200	13,000 (Japan)	-80.6
Diesel Filter (Thailand)	1,300	750	1,000	200 (India)	80.0
Engine Oil Filter (Thailand)	1,200	550	875	1,400 (Thailand)	-60.0
Engine Oil Filter (India)	1,700	1,100	1,012.5		-38.3
Air Filter (Thailand)	3,800	3,500	3,650	3,200 (Japan)	12.3
Grill Radiator (Thailand)	9,800	6,500	9,775	12,000 (Japan)	-22.8
CV Joint Boot (Thailand)	1,800	1,200	1,412.5	1,500 (Japan)	-6.2

Table III: Cost Comparison of Various Spare Parts for Hyundai Creta

Spare Parts (Country of origin)	Highest Market Price (Nu.)	Lowest Market Price (Nu.)	Av. Market Price (Nu.)	Annual Proc. Price for 2024-25 (Nu.) (Source)	% Difference (Av. Market Price - APP)
Brake Pad (India)	5,150	3,550	4,670	1,000 (Japan)	78.59
Rear Brake Shoe (India)	4,800	4,450	3,447.14	2,000 (Japan)	41.98
Clutch Plate (India)	10,750	4,370	6,277	7,500 (India)	-19.48
Diesel Filter (India)	1,880	4,665	2,165	980 (Japan)	54.73
Engine Oil Filter (India)	850	250	495.71	980 (Japan)	-97.70
Air Filter (India)	650	450	508.75	1,500 (Japan)	-194.84
Glow Plug (India)	4,390	450	1,986.67	100 (Japan)	94.97
Grill Radiator (India)	7,500	4,980	6,111.43	5,500 (Japan)	10.00
CV Joint Boot (India)	2,250	350	1,456	1200 (India)	17.58

Recommendations

To completely mitigate the risk of receiving counterfeit or inferior spare parts, procurement agencies must prescribe detailed specifications for bidding, ensuring that only genuine or OEM parts are supplied. However, considering the vast array of aftermarket parts in the market, such a practice could be perceived as discriminatory. A more effective approach would be to require bidders to provide authenticity certificates for genuine or OEM products or quality certificates from recognized standards bodies for aftermarket parts.

Currently, there is no practice of mandating warranty periods for spare parts in official tenders. Visual inspections often fail to detect quality issues until after installation. Incorporating warranty periods for key components as an integral part of procurement criteria could incentivize suppliers to source and offer genuine or certified higher-quality products.

The use of poor-quality parts poses significant safety hazards. While restricting the import of non-genuine parts could help mitigate the issue of counterfeit or inferior quality spares, enforcement may prove challenging. However, the Bhutan Standards Bureau (BSB) could establish technical standards for essential parts, initially on a voluntary basis but transitioning to mandatory requirements over time. This would ensure that only genuine or OEM parts, as well as aftermarket parts meeting safety standards, are available.

For critical engine components, it may be prudent for government agencies to pursue separate tenders outside the annual procurement process, specifically targeting genuine or OEM parts. Although initial costs may be higher, this strategy is likely to ensure long-term value for money.

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