Economic Policy Vignette

Pricing Package Delivery Services through Fully Distributed Cost… Say It Isn't So!

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In ordinary times, the pricing practices of firms and organizations are quietly executed by managers who seek to assure the financial viability of their organizations. These are, however, not ordinary times. No less than the President of the United States, Donald Trump, weighed in this year on the pricing practices of the United States Postal Service (USPS). Opining that the USPS was losing money on the packages it carries for Amazon, the President went on to argue that such prices be raised "four or five" fold.

A common interpretation of President Trump's advocacy is that it is simply a manifestation of his personal animus toward Jeff Bezos, the owner of Amazon. Needless to say, basing pricing decisions on personal animus is not routinely taught in leading business schools. So, rather than grounding his pricing advocacy on an unacceptable "because I don't like Amazon" argument, the White House has adopted the arguments that the USPS apply a pricing practice known as Fully Distributed Cost (FDC) for its package delivery services. FDC is a top-down costing approach that allocates both directly attributable and common unattributable costs across the various services provided by a firm or organization. Unfortunately, although FDC is clothed in the rhetoric of business, it is no more valid than basing pricing decisions on personal affinities or hatreds. To demonstrate this, we turn to a simple example.

Modern firms and organizations, like the USPS, often provide multiple goods or services. For simplicity, but with no harm to the resulting conclusions, consider a hypothetical organization that provides two services – package delivery and letter delivery. Suppose that the organization incurs two types of costs in the process of providing these services. First, the firm incurs costs, such as labor, sorting, and delivery that are directly attributable to either package delivery or letter delivery and vary with the amount of the service produced. Second, beyond these directly attributable costs, there are also costs that are not specific to each individual service. Assume that these institutional or overhead costs do not vary with the amount of each service produced.

For concreteness, suppose that the price of package delivery is $1.20, and its directly attributable costs are $1.00 per package delivered. Assume that the price of letter delivery is $0.50, and its directly attributable costs are $0.10 per letter. At prevailing prices, suppose that the organization delivers 3000 packages and 5000 letters. Finally, assume that the organization incurs $2600 in unattributable overhead costs.

Table 1 summarizes the current financial position of the organization.

Table 1 – Organization Financial Position Without FDC

	Quantity	Revenue	Attributable Costs	Unattributable Costs	Total Costs	Profit
Packages	3000	3600	3000	–	3000	600
Letters	5000	2500	500	–	500	2000
Total	8000	6100	3500	2600	6100	0

Table 1 demonstrates that each service provides an incremental positive contribution to profits by bringing in more revenue than the associated attributable costs. Collectively, these profit contributions are $2600, which happen in this instance to equal the amount of unattributable costs. The organization provides the services and covers all of its costs; financially breaking even.

Consider how the application of FDC alters this example. Specifically, the FDC approach requires the firm to allocate its unattributable costs--assigning a portion to each service produced. A common allocation method is based on the amount of each service produced. In this instance, this means that 3/8 of the unattributable costs are allocated to package delivery and 5/8 of the unattributable costs are allocated to letter deliveries. Table 2 provides the financial implications of the application of FDC to our example.

Table 2 – Organization Financial Position With FDC (Pre-Termination Decisions)

	Quantity	Revenue	Attributable Costs	Unattributable Costs	Total Costs	Profit
Packages	3000	3600	3000	975	3975	(375)
Letters	5000	2500	500	1625	2125	375
Total	8000	6100	3500	2600	6100	0

Note that with the application of FDC, package delivery services appear to be unprofitable for the organization. This appearance, however, is purely illusory. If package delivery is really losing money, then the financial well-being of the organization should improve if it were to terminate this service. But consider the financial status of the organization in the event that it does drops its financially "unprofitable" package delivery service. Once the "unprofitable" package delivery service is shuttered, the application of FDC requires that all the unattributable costs are now allocated to letter delivery service. Table 3 provides the financial implications of FDC in this situation.

Table 3 – Organization Financial Position With FDC (Post-Termination Decisions)

	Quantity	Revenue	Attributable Costs	Unattributable Costs	Total Costs	Profit
Packages	0	0	0	0	0	
Letters	5000	2500	500	2600	3100	(600)
Total	5000	2500	500	2600	3100	(600)

Table 3 reveals that terminating the "unprofitable" package-delivery service actually makes the organization less well off. In particular, the entire organization incurs a financial loss of ($600) per period. This outcome, then, could lead a "logical" manager using FDC to infer that the entire organization—including letter delivery—should be shut down. This FDC-based "logic", however, ignores the fact that the organization can financially break even with existing prices and quantities in the absence of FDC (as Table 1 indicates). The conclusion, of course, is that FDC provides misleading cost and pricing signals and can substantially distort otherwise sound economic decision-making.

We close by noting that while our example here underscores the inherently distortionary consequences of FDC, this insight is far from new: As early as the 1960s, economists offered harsh critiques of FDC; for decades, leading business schools have warned future business leaders of the distortionary consequences of FDC.[1] It is disappointing that a president who prides himself on his business acumen has championed such a universally criticized business practice. Even worse, as is apparent from our example, the consequence of adopting the White House's advice would likely do more harm to the financial condition of the USPS than any good.

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[1] See, e.g., Benjamin E. Hermalin "The Parable of Red Pens and Blue Pens" caselet from the Haas School of Business, University of California, Berkeley (1997). For a thorough modern discussion of the literature addressing FDC, see John C. Panzar "Protecting the Package Delivery Market and Economy from Distortions Resulting from Fully Distributed Cost Pricing," Georgetown Center for Business and Public Policy, Policy Paper, Georgetown University (October 2020).