In-Class Discussion

**9.63 Allocations for estimating capacity costs (LOI**). Color Graphics (CG) specializes in printing glossy magazines. CG currently has orders for four magazines, with each magazine being issued on its own cycle. With the four magazines, CG’s capacity is 100% utilized from Thursday through Sunday, every week. The press run 14 hours for each of these days, and CG’s management believes that it is counterproductive to run the machines any longer than 14 hours (i.e., two shifts) in a day. However, CG has considerable excess capacity from Mondays through Wednesdays.

CG prices at an average rate of $0.07 per page. Variable costs amount to $0.02 per page. CG groups its fixed costs into two main pools- Machinery and Support Staff. The four color printing machines cost 4 million two years ago, and are expected to last another two years at the current rate of usage. Currently, CG uses each machine for approximately 3,000 hours per year, meaning that an average machine has a useful life of 12,000 hours, printing 20,000 pages per hour. Support staff and other indirect costs amount to an additional $2 million per year.

1. CG’s marketing manager wants to bid for a catalog. The job will consume 20 hours and contain 400,000 pages. The customer has some flexibility regarding delivery dates, meaning that CG could print the job during weekdays. This is a one-time job as the store’s regular printer had an unexpected machine malfunction.

**What is the minimum price that CG can charge for this job, without lowering their profit?**

1. Suppose CG enters the catalog market. The marketing manager argues that the catalogs are merely using up extra capacity. Even including machining costs, she argues that any price over $0.0325 a page is “pure profit.” She wants to move aggressively and price the product at $0.06 a page, which is substantially below the current price of $0.07 a page.

**Evaluate the merits of this argument, being sure to show how the marketing manager might have arrived at her estimate.**

1. The firm’s accountant argues that the catalogs are consuming capacity and must be charged for it. He expects machine usage to increase from 3,000 hours to 4,000 hours per year if the firm pursues that catalog business. In addition, while existing personnel can handle some of the work associated with printing catalogs, more people need to be hired, increasing the cost of support staff by $250,000. He believes that CG should take the total support staff cost and allocate it to both magazines and catalogs sing the machine hours as the allocation basis. Calculate the cost per page for the catalogs per the accountant’s proposal. Determine the price per page, if the firm adds a 10% markup and rounds to the nearest 1/100 of a penny.

**Evaluate the merits of the accountant’s argument.**

1. The marketing manager sees some logic in the accountant’s argument, although she is not happy with the implied cost for printing catalogs. However, she also sees a positive aspect. She wants to reduce the price per page for printing magazines because now the cost to print magazines has decreased. She wants to use the lower cost to justify a price concession that would relieve her of some the intense price pressure in the market place.

**Evaluate the merits of this argument.**