



UNIVERSITÀ
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DI BERGAMO

Dipartimento
di Scienze Aziendali

Activity Based Costing

Exercise 2



Gallatin Carpet Cleaning is a small, family-owned business operating out of Bozeman, Montana. For its services, the

company has always charged a flat fee per hundred square feet of carpet cleaned. The current fee is \$28 per hundred square feet. However, there is some question about whether the company is actually making any money on jobs for some customers—particularly those located on remote ranches that require considerable travel time. The owner's daughter, home for the summer from college, has suggested investigating this question using activity-based costing. After some discussion, she designed a simple system consisting of four activity cost pools. The activity cost pools and their activity measures appear below:

Activity Cost Pool	Activity Measure	Activity for the Year
Cleaning carpets	Square feet cleaned (00s)	20,000 hundred square feet
Travel to jobs	Miles driven	60,000 miles
Job support	Number of jobs	2,000 jobs
Other (organization-sustaining costs and idle capacity costs)	None	Not applicable



The total cost of operating the company for the year is \$430,000, which includes the following costs:

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Wages	\$150,000
Cleaning supplies	40,000
Cleaning equipment depreciation	20,000
Vehicle expenses	80,000
Office expenses	60,000
Presidents compensation	<u>80,000</u>
Total cost	<u><u>\$430,000</u></u>

Resource consumption is distributed across the activities as follows:

	Cleaning Carpets	Travel to Jobs	Job Support	Other	Total
Wages	70%	20%	0%	10%	100%
Cleaning supplies	100%	0%	0%	0%	100%
Cleaning equipment depreciation	80%	0%	0%	20%	100%
Vehicle expenses	0%	60%	0%	40%	100%
Office expenses	0%	0%	45%	55%	100%
President's compensation	0%	0%	40%	60%	100%

Job support consists of receiving calls from potential customers at the home office, scheduling jobs, billing, resolving issues, and so on.



Requirements

1. Prepare the first-stage allocation of costs to the activity cost pools
2. Compute the activity rate for the activity cost pools
3. The company recently completed a 500 square foot carpet-cleaning job at the Flying N Ranch – a 75 mile round-trip journey from the company's offices in Bozeman. Compute the cost of this job using the ABC system
4. The revenue from the Flying N Ranch was \$ 140 (500 square feet x \$ 28 per hundred square feet). Calculate the customer margin earned on this job.
5. What do you conclude concerning the profitability of the Flying N Ranch job? Explain
6. What advice would you give the president concerning the pricing jobs in the future?



1. The first-stage allocation of costs to activity cost pools appears below:

	Distribution of Resource Consumption Across Activity Cost Pools				Total
	Cleaning Carpets	Travel to Jobs	Job Support	Other	
Wages	70%	20%	0%	10%	100%
Cleaning supplies	100%	0%	0%	0%	100%
Cleaning equipment depreciation	80%	0%	0%	20%	100%
Vehicle expenses	0%	60%	0%	40%	100%
Office expenses	0%	0%	45%	55%	100%
President's compensation	0%	0%	40%	60%	100%

	Cleaning Carpets	Travel to Jobs	Job Support	Other	Total
Wages	\$105,000	\$30,000	\$ 0	\$ 15,000	\$150,000
Cleaning supplies	40,000	0	0	0	40,000
Cleaning equipment depreciation	16,000	0	0	4,000	20,000
Vehicle expenses	0	48,000	0	32,000	80,000
Office expenses	0	0	27,000	33,000	60,000
President's compensation	0	0	32,000	48,000	80,000
Total cost	<u>\$161,000</u>	<u>\$78,000</u>	<u>\$59,000</u>	<u>\$132,000</u>	<u>\$430,000</u>

Example:
70% of \$150,000 = \$105,000

Other entries in the table are determined in a similar manner.



2. The activity rates are computed as follows:

	(a) Total Cost	(b) Total Activity	(a) ÷ (b) Activity Rate
Activity Cost Pool			
Cleaning carpets	\$161,000	20,000 hundred square feet	\$8.05 per hundred square feet
Travel to jobs	\$78,000	60,000 miles	\$1.30 per mile
Job support	\$59,000	2,000 jobs	\$29.50 per job



3. The cost for the Flying N Ranch job is computed as follows:

	(a) Activity Rate	(b) Activity	(a) × (b) ABC Cost
Cleaning carpets	\$8.05 per hundred square feet	5 hundred square feet	\$ 40.25
Travel to jobs	\$1.30 per mile	75 miles	97.50
Job support	\$29.50 per job	1 job	29.50
Total			<u>\$167.25</u>



4. The margin earned on the job can be easily computed by using the costs calculated in part (3) above.

Sales		\$140.00
Costs:		
Cleaning carpets	\$40.25	
Travel to jobs	97.50	
Job support	<u>29.50</u>	<u>167.25</u>
Margin		<u><u>\$(27.25)</u></u>





5. Gallatin Carpet Cleaning appears to be losing money on the Flying N Ranch job.

However, caution is advised. Some of the costs may not be avoidable and hence would have been incurred even if the Flying N Ranch job had not been accepted. An in depth analysis will be more appropriate starting point.

Nevertheless, there is a point at which travel costs eat up all of the profit from a job. With the company's current policy of charging a flat fee for carpet cleaning irrespective of how far away the client is from the office, there clearly is some point at which jobs should be turned down.





6. The company should consider charging a fee for travel to outlying customers based on the distance traveled and a flat fee per job.

At present, close-in customers are in essence subsidizing service to outlying customers. With fees for travel and for job support, the fee per hundred square feet can be dropped substantially.

This may result in losing some low-volume jobs in outlying areas, but the lower fee per hundred square feet may result in substantially more business close to Bozeman. (If the fee is low enough, the added business may not even have to come at the expense of competitors. Some customers may choose to clean their carpets more frequently if the price were more attractive.)

