HARVARD Kennedy School
JOHN F. KENNEDY SCHOOL OF GOVERNMENT

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Case Number 2034.0

The Toliza Museum of Art

In early 2009, Juan Antonio Jimenez has just begun his new position as Executive Director of the Toliza Museum of Art ("Toliza"). Toliza is a beautiful art museum located in the city of Toliza, Spain. Toliza's art collection includes a wide variety of classic and contemporary art, all housed in a forty-room museum and sculpture garden in the heart of the city.

Toliza displays its art to the public in two ways: **Regular Exhibits** and **Special Exhibits**. Regular Exhibits are displayed throughout the year and feature pieces from the museum's permanent collection, which focuses on art from the Toliza area. Special Exhibits are limited-time only displays (often four to six weeks in duration) featuring pieces by renowned artists that are on loan from other museums.

When Jimenez was hired as Executive Director, the Board of Directors made it clear to him that his first priority should be to analyze the museum's finances. The Board was concerned about the museum's financial performance in 2008, when Toliza operated at a deficit despite putting on three well-received Special Exhibits.

Toliza's revenues came from: admissions fees, exhibits, annual memberships, donations and government grants. The expenses are primarily labor costs.

In addition to Jimenez, Toliza's senior management team includes one Director of Development and one Head Curator. Other employees include four administrative staff members, seventy professional curating staff and numerous security and maintenance staff who are paid on an hourly basis. There are currently eighty-nine individuals who work part-time on security.

As Jimenez strolled through one of the museum's special exhibition halls—currently featuring the early works of Pablo Picasso—he began to wonder what had caused the museum's deficit in 2008 and what financial results could be expected in 2009. Upon reaching his office, he set about to answer these questions, beginning with a review of the financial and operating data presented in Table 1.

This case was written by Linda Bilmes, Daniel Patrick Moynihan Senior Lecturer in Public Policy at the Harvard Kennedy School of Government. HKS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

Table 1: Audited Financial and Operating Statement, 2008 (in €)

Revenue	2008 Budget	2008 Actual
Museum Admissions	€ 10,000,000	€ 12,000,000
Special exhibit admissions	3,000,000	3,344,000
Annual memberships	1,560,000	1,335,000
Donations	7,500,000	7,224,500
Government grants	7,000,000	6,876,000
Total	€ 29,060,000	€ 30,779,500
Expenses		
Executive Director (salaried)	€ 250,000	€ 250,000
Director of Development (salaried)	150,000	150,000
Head Curator (salaried)	125,000	125,000
Administrative Staff (salaried)	120,000	120,000
Fringe for salaried employee @40% of salary	258,000	258,000
Curatorial Staff (paid hourly)	2,080,000	2,653,350
Security Guards (paid hourly)	2,028,000	3,304,100
Insurance	4,750,000	6,500,000
Maintenance	1,150,000	1,175,600
Utilities	3,450,000	5,236,500
Mortgage	12,000,000	12,000,000
Total	€ 26,361,000	€ 31,772,550
Total Surplus /(Deficit)	€ 2,699,000	(€ 993,050)
Operating Data		
Operations		
Museum admissions (# of visitors)	800,000	1,000,000
Special exhibit admissions (# of visitors)	150,000	167,200
Annual memberships sold (# sold)	20,800	17,800
Pieces of art work on display		
Regular Exhibits	200	210
Special Exhibits	100	105
Total pieces on display	300	315
Total hours worked by curators		
Regular Exhibits	72,000	76,681
Special Exhibits	32,000	62,969
Total curatorial hours	104,000	139,650
Total hours worked by security guards		
Regular Exhibits	100,000	107,101
Special Exhibits	35,200	71,449
Total security guard hours	135,200	178,600

QUESTION 1

a. Prepare the total revenue, expense and surplus/deficit variances using the template, and indicate whether each of the variances is favorable or unfavorable.

	Actual	Budgeted	Variance	F/UF
Revenue	30,779,500	29,060,000		
Expense	31,772,550	26,361,000		
Surplus/Deficit	-993,050	2,699,000		

b. Calculate the price, quantity, and total variance for "Museum Admissions" revenue (per visitor).

	Actual Price	Budgeted Price	Quantity	Variance	F/UF
Price variance					

	Actual Quantity	Budgeted Quantity	Price	Variance	F/UF
Quantity variance					

	Actual	Budgeted	Variance	F/UF
Museum admissions variance				

c. Calculate the price, quantity, and total variance for "Curatorial Staff" expense (per hour).

	Actual Price	Budgeted Price	Quantity	Variance	F/UF
Price variance					

	Actual Quantity	Budgeted Quantity	Price	Variance	F/UF
Quantity variance					

	Actual	Budgeted	Variance	F/UF
Curatorial Staff variance				

d. Based on your analysis in parts (b) and (c), how can you explain the difference between the actual and budgeted amounts for the following items?

i. Museum Admissions revenue

ii. Curatorial Staff expense

e. In an effort to increase revenue, Jimenez is considering increasing the discounted admission price that is available to students and senior citizens. In 2008, a total of 300,000 visitors paid the reduced admission price of €5, while a total of 700,000 visitors paid the regular admission price of €15. Jimenez would like to increase the applicable price for students and senior citizens to €10, but if he does so, he believes that the total number of visits by students and senior citizens would fall by 10%. Estimate the total impact on 2008 revenues had the discounted admission price been increased for all of 2008. (By how much would it increase/decrease had this change been in effect for all of 2008?) [Note: Use reverse of page if needed]

<u>QUESTION 2 (Parts a, b, c, d, and e)</u>

Jimenez wanted to conduct a more detailed analysis of the museum's cost structure. Specifically, he wanted to gain a better understanding of the cost to the museum of putting on Special Exhibits. Special Exhibits were often popular with the media and the general public, but Jimenez worried that they might be a financial burden on the museum.

To determine the cost of Special Exhibits, Jimenez decided to use activity-based costing. His first step was to compile a table listing the allocation of each expense category to one of four activities:

1) Regular Exhibits
2) Special Exhibits
3) Curatorial Activities
4) Security Activities

Jimenez could allocate certain costs directly to either Regular Exhibits or Special Exhibits, but many expenses could only be allocated to either the Curatorial Activities cost pool or the Security Activities cost pool. As a result, he needed to calculate the total cost of each cost pool and then use the appropriate cost driver to allocate the cost pool to either Regular Exhibits or Special Exhibits. He could then calculate the fully-loaded cost of Regular Exhibits and Special Exhibits and compare those costs to the revenue associated with each program. Table 2 outlines the information he has collected for his analysis.

Table 2: Activity Cost Pool Allocation (%)

	Regular Exhibits	Special Exhibits	Curatorial Activities	Security Activities
Executive Director & fringe	35%	30%	20%	15%
Director of Development & fringe	55%	35%	5%	5%
Curatorial Director & fringe	0%	0%	100%	0%
Administrative Staff & fringe	35%	30%	20%	15%
Curatorial Staff	0%	0%	100%	0%
Security Guards	0%	0%	0%	100%
Insurance	50%	50%	0%	0%
Maintenance	67%	33%	0%	0%
Utilities	50%	50%	0%	0%
Mortgage	67%	33%	0%	0%

a. Calculate the activity cost pool amounts and complete the table below.
(Use 2008 Actuals from Table 1.)

	Regular Exhibits	Special Exhibits	Curatorial Activities	Security Activities	Total
Executive Director & fringe	€ 122,500	€ 105,000	€ 70,000	€ 52,500	€ 350,000
Director of Development & fringe	115,500	73,500	10,500	10,500	210,000
Curatorial Director & fringe	0	0	175,000	0	175,000
Administrative Staff & fringe			33,600		
Curatorial Staff			2,653,350		
Security Guards			0		
Insurance	3,250,000	3,250,000	0	0	6,500,000
Maintenance	787,652	387,948	0	0	1,175,600
Utilities	2,618,250	2,618,250	0	0	5,236,500
Mortgage	8,040,000	3,960,000	0	0	12,000,000
Total			€ 2,942,450	€ 3,392,300	€ 31,772,550

b. Circle the most appropriate cost driver for the Curatorial and Security activity cost pools. Then, complete the table below.

Choose the best cost driver:

A. **Number of visitors**
B. **Number of staff hours worked**
C. **Number of special exhibits**

Activity cost pool	Curatorial Activities	Security Activities
Activity cost driver quantity		
Activity cost driver rate		€18.99

c. Calculate the total cost of Regular Exhibits and Special Exhibits.

	Regular Exhibits	Special Exhibits
Directly allocated costs		
Curatorial activities		
Security activities		
Total costs		

d. Jimenez knows that the total revenue (indicated in below table) attributable to Regular Exhibits is €20,385,250 while the total revenue attributable to Special Exhibits is €10,394,250. Based on these figures and the total costs that he calculated in parts 2(c), what can Jimenez conclude about the financial performance of each program?

	Regular Exhibits	Special Exhibits
Revenue	€20,385,250	€10,394,250
Total Costs (from 2c)		
Surplus / Deficit		

e. Based on the variance analysis and the activity-based costing analysis, what do you recommend on how to improve the financial performance of the museum?