



UNIVERSITY of NORTH CAROLINA
ASHEVILLE



Developing a Program Margin Report: Assessing Costs and Revenues of Degree Programs



History and Context

- In spring 2024, because of decreasing enrollments, UNC Asheville began an Academic Portfolio Review.
- In addition to academic productivity indicators (declared majors, graduates, student credit hours), the administration wanted to understand financial implications.
- A consultant was hired (thankfully, project not given to IR!)

Conceptually—how would you do this?

- There are revenues (tuition and fees, appropriations) and costs (direct—salaries and benefits, operating and indirect-overhead and administration) associated with student enrollment.
- Each student enrolled in a class has associated revenue and cost. There are many, many choices to be made for measuring each.
- Could compile by department, by prefix, by declared major, by graduating major, by instructor, etc. and make comparisons.

Caveats—no matter what approach you take.

- This is only one data point and should not be used as the sole driver for decision making.
- There are multiple measures of value beyond financial analysis that are not captured here.
- By definition, some will be above average and some below. Some of this is inherent to disciplines—which differ from expectations?

Consultant approach:

- Revenues: Gross tuition and fees and state appropriations
 - Tuition and fees spread evenly across courses by credit hour
 - Appropriation (resident students) using funding model values
- Costs: Anything charged to the department's fund number with a 101 purpose code (Instruction)
 - Faculty and staff salary and benefits
 - Operating expenses, E&T allocations
 - No effort to allocate indirect costs (wise choice!)
- Compile by department prefixes and by declared major for each of the prior three years to identify departments that were well below university averages and thus “warrant review”

Results of the Consultant's report:

- Results *informed* decisions to terminate or curtail programs. Other factors mattered (e.g., number and trends in majors and graduates), and not every program “warranting review” was affected.
- BUT: Because of perceived shortcomings, many faculty members doubted the validity of the analysis.
 - *You didn't account for our contributions to general education!*
 - *You didn't account for our two medical leaves!*
 - *What about all of our university service contributions?*

Perceived shortcomings in the Consultant's approach:

- Based on prefix rather than home department.
- No accounting for reassigned time or leave for non-departmental purposes
- Costs allocated on the basis of credit hours rather than contact/workload hours (under-counts costs of labs and studios)
- Faculty and staff with joint appointments assigned to primary department only

My response: Challenge Accepted!

- I decided to construct my own Program Margin report that was in-house and replicable and accounted for perceived shortcomings.
- Revenue: Each student's gross tuition and fees each term allocated across courses by credit hours. If a resident student, state appropriation determined using the incremental value of the funding model, but applied to all credit hours.
- Instructional Cost: Salaries and benefits for instructors, ***after adjustment for non-departmental assignments or medical leave***, distributed across all ***workload hours*** after ***accounting for team-teaching and cross-listing***.

My response: Challenge Accepted!

- Non-instructional Cost: Operating budgets, E&T allocation, chair stipends, staff salaries and benefits (***divided if split assignment***), and salaries and benefits for non-teaching faculty (professional development leave, mostly).
 - I removed ***student workers*** and ***grant-funded staff***, who aren't funded by the general fund.
 - Divide across all ***workload hours*** generated by the department.
- Result: Each student in each class has associated revenue, instructional cost, and non-instructional cost, adjusted for all of the perceived shortcomings of the Consultant's report.

My response: Aggregation

- By department with courses assigned *by instructor affiliation*, not by prefix.
- By *graduating major*, with all courses taken by graduates since matriculation (limited to F16 and later due to data).
- All used *five years of data averaged* together to smooth variation.
- BONUS: By instructor. Do this at your peril.
- IN ALL APPROACHES: Normalize around the overall average.

By Department, FY21-25	
Difference in Revenue/Cost Ratio	
	%difference
All	0%
Mathematics	38%
Psychology	34%
Languages & Literatures	29%
Soc & Anth	19%
English	17%
New Media	15%
Mass Comm	8%
Physics	7%
Art & Art History	6%
History	5%
Envr Science	5%
Africana Studies	5%
Health Sciences	2%
Business	2%
Interdisciplinary Studies	-3%
Computer Science	-11%
Religious Studies	-12%
Philosophy	-12%
Ancient Mediterranean Studies	-14%
Political Science	-16%
Economics	-19%
Chemistry	-19%
Biology	-19%
Music	-27%
Drama	-36%
Atmospheric Sci	-39%
Education	-48%

By Degree, FY21-25	
Difference in Revenue/Cost Ratio	
	%difference
All	0%
PSYC	16%
ARTH	12%
SOC	10%
NM	10%
HS	9%
MCOM	9%
ANTH	8%
LL	6%
WGSS	6%
BUS	5%
IST	2%
CSCI	1%
ENVS	0%
HIST	-1%
ART	-1%
RELS	-1%
ACCT	-1%
MATH	-2%
POLS	-3%
PHYS	-5%
ENGL	-6%
BIOL	-8%
ECON	-9%
PHIL	-9%
AMS	-13%
MUSC	-15%
CHEM	-19%
MUST	-21%
JCM	-23%
ATMS	-25%
DRAM	-31%

This data is not confidential, but it is sensitive—please do not share.

- Negative values imply below average, not “losing money.”
- Again, look for those that differ from expectations
- Note differences in the two reports (Math, English, Physics). What explains this?
- Yellow programs were curtailed

Insights

- There is value in both the department view (by department affiliation rather than prefix) and the degree program view. Use both approaches.
- Be VERY clear about the limitations and value of this analysis.
- My findings were similar to the findings of the Consultant, despite a more comprehensive and detailed approach. The most important differences were due to (a) smoothing over time and (b) accounting for extra-departmental assignments and family/medical leave. Accounting for extra-departmental teaching didn't really matter.

Insights

- I accounted for everything I could, building spreadsheets and code to handle perceived shortcomings. Was it worth it?
- Better reception by the faculty because of accounting for perceived shortcomings.
- I conclude that having an *in-house* report that is *replicable* and *credible* made it worth it.