Advisories

1. The general approach used is termed a bill-of-goods impact assessment, which disaggregates expenditures and assigns unique multipliers to them. The alternative would have been to assume that Ohio University’s expenditures perfectly match the spending activity of a typical university, as defined in BEA data. The bill-of-goods approach is far more precise.

2. Total expenditures for budgeted OHIO items balance against system totals by function and classification, as given to us by the finance department or, for capital expenditures, the FY12 Audit.

   a. For the separate traditional economic impact estimate of the Intercollegiate Athletic Department (ICA), a separate set of adjustments were made such that all adjustments were wholly internal to ICA, by department of sport.

   b. The major caveats to this point are a function that OHIO labels as a blank function and noncapital spending related to a category labeled Expended for Plant. Blank function consists largely of indirect cost expenses that, methodologically, should be considered as an external expenditure and thus included in impact assessment. Similarly, much of the spending under Expended for Plant leaves OHIO and is spent in the wider economy.

3. Any expenditure that was not assigned to a campus in the budget was assigned to the Athens Campus in the impact assessment.

4. For compensation and operational spending, the total amount of expenditures actually included in the impact assessment is less than the OHIO budget, as expenditures to internal units were not included. Only expenditures that left the OHIO system were considered to result in economic impact.

5. Since the assessment is for Ohio University, expenditures that ultimately trace back to the Foundation were assessed in terms of OHIO or the affiliate enterprises, not the Foundation. There is no separate line item for the Foundation. (In addition to the conceptual emphasis on Ohio University, apportioning these monies away from the University back to the Foundation would be highly complex.)

6. Separate impact totals will be reported for
   a. Total economic output impact,
   b. Total jobs impact, and
   c. Total earnings impact.

   Each of these impact totals will be reported by campus impact region (Ohio and southeast Ohio include all campuses and affiliate enterprises; campus specific regions include only the related campus)

   a. Compensation and benefits,
   b. Operational spending (including the blank function expenditures),
   c. Capital spending,
   d. Student off-campus spending,
   e. Retiree spending
   f. Affiliate Enterprises, and
   g. Visitor spending

The following discussion describes key specific assumptions (those that affect significant dollar amounts) for each expenditure type.

Compensation and Benefits

1. This assessment involved two data sets: the operational budget and the personnel database.

2. The basic technique involved using salary or wage data, or employee count data for some categories of benefits, for each budget natural account that is associated with the compensation and benefits budget classification in the operational budget. This allowed TPMA to estimate the geographic dispersion of various types of compensation spending. The major assumptions involved determining what types of employees were appropriately associated with what type of natural account. Discussions with OHIO’s data experts allowed these employee associations to be well-informed.

3. Part-time classified employees were assumed to work 1,040 hours per year. Note that this does not affect the actual expenditure run through the impact assessment; only the actual budget amounts were used for the impact assessment. The assumption affects only the apportioning of various expenditures across geography.

4. The target of employee compensation was assigned to industries based on PUMS data from the U.S. Bureau of the Census’ Consumer Expenditure Survey, or to obvious corollary industries (e.g., health insurance providers for health insurance benefits).
Operational Spending

1. The assessment involved two data sets: the operational budget and the procurement database. The procurement database determined our understanding of which industries were the target of expenditures within natural accounts (by campus and department), whereby NAICS industry codes were assigned to expenditures in the procurement database.

2. When industry data for a given supplier in the procurement database was impossible to find, the industry code and expenditure multipliers for public universities was used. In other words, in such cases, the assumption was that the industry profile of this subset of suppliers matched the assumptions of the BEA for a typical university.

3. Blank function and Expended for Plant expenditures were included in the assessment, even though they are not included in OHIO’s reported final operational spending data, because they involve external spending.

4. Depreciation was not included in the assessment, even though it figures into OHIO’s operational spending final totals, as depreciation costs do not actually involve expenditure into the regional economy.

c. In the cases of library and equipment capital expenditures, a significant share was included in the operational budget data. For final expenditures, the audit was used; for the detailed profile of that spending, the operational budget’s proportions-of-total were used. In other words, the operational budget data was inflated to match the FY12 audit data for library and capital equipment spending.

d. The profile of expenditures on art and historical artifacts was assumed to match the profile of capital library expenditures, and then applied to the expenditure level of the FY12 Audit.

e. For the remaining categories of capital expenditure (e.g., construction, buildings, and infrastructure), the data from the facilities planning department was used to determine NAICS industry codes and then apportioned to the categories in the final FY12 Audit expenditures.

Capital Spending

1. The assessment involved four data sets: the FY12 Audit of OHIO (Note 5), the budget database, the database of capital projects from facilities planning, and approved capital projects actual expenditures from the State of Ohio’s Office of Budget and Management for FY12.

2. To compensate for the nature of the detailed data, the following assumptions were used:
   a. The FY12 Audit data is the actual expenditure amount.
   b. Each campus’s share of the various categories of expenditures conforms to the Office of Budget and Management data. Assuming the Foundation and other sources support a higher proportion of capital activity at the Athens Campus than at the regional campuses, this technique will tend to underestimate the Athens Campus expenditures and exaggerate impacts at the regional campuses.

c. The profile of expenditures on art and historical artifacts was assumed to match the profile of capital library expenditures, and then applied to the expenditure level of the FY12 Audit.

d. The industry-based spending patterns of students were estimated through the microsample data of the Consumer Expenditure Survey.

e. Spending levels for e-learning students were slightly deflated.

Student Off-Campus Spending

1. The assessment involved three sources of data: the database of school and home address ZIP codes with student type, level, and campus detail; matching data from the database of student cost estimates; and microsample data from the Consumer Expenditure Survey of the Bureau of Labor Statistics.

2. Student spending was capped at the level of OHIO student cost estimates.

3. It was assumed that students living at home had housing costs of zero, and had reduced board expenditures.

4. The industry-based spending patterns of students were estimated through the microsample data of the Consumer Expenditure Survey.

5. Spending levels for e-learning students were slightly deflated.

6. E-learning students’ expenditures were assigned to the Athens Campus, because the e-Learning program is housed there.
7. For the larger impact chapters and for the separate traditional economic impact analysis of the Intercollegiate Athletics Department, unique sets of assumptions were used.
   a. For the larger impact chapters, student compensation was used in lieu of off-campus student spending estimates as calculated according to the above procedures. Thus, the student portion of the impact analyzed in those chapters reflects only a subset of student spending associated with them.
   b. For the separate ICA analysis, student compensation associated with undergraduate or graduate student employees of ICA’s administration was used in lieu of student off-campus spending as calculated above, as data provided allowed the study to narrow in on the specific ICA impact.
   c. For the separate ICA analysis, off-campus spending of graduate assistants and student-athletes on individual teams was calculated according to the procedures described above. However, because the remainder of OHIO was treated as an external entity to ICA, those students’ tuition, fee, and room and board payments to OHIO were included in the impact estimates. To calculate the total payments to OHIO, several characteristics were first estimated.
      i. Using roster data from ICA for the 2011–12 athletic seasons, the share of teams comprising in-state freshmen, out-of-state, and out-of-state freshmen were identified.
      ii. All freshmen were assumed to live in on-campus housing, in accordance with OHIO policy.
      iii. Using information from the central University’s administration, the share of non-freshmen who lived in university housing was calculated and applied to non-freshmen student-athletes.
      iv. Graduate assistants were assumed to live off-campus.
      v. The appropriate tuition, fee, and room and board payments were assigned to the number of student-athletes or graduate assistants estimated for each type of student explained above.

Retiree Spending

1. This assessment involved three data sources: a partial subset of recent retirees by ZIP code of residence used as the base of the analysis, as well as the Consumer Expenditure Survey of the Bureau of Labor Statistics and the American Community Survey microsample data of the Bureau of the Census.
2. The retiree database appears to undercount the true number of retirees, which helps to keep the overall estimate conservative.
3. The geographic distribution of retirees was based on the retiree database.
4. The average income of retirees was based on microsample data from the American Community Survey for retirees whose last industry of employment was a university. Average self-employment or wage income was excluded from the estimates.
5. The consumption patterns resulting from estimated income were apportioned to industries based on the Consumer Expenditure Survey.

Affiliate Enterprises

1. This assessment involved two data sources: the audited receipts and expenditures data for Housing for Ohio, Inc., Ohio University Inn, and the Russ Research Center; and the detailed receipts and expenditures data for University Medical Associates.
2. Both health and malpractice insurance expenditures of University Medical Associates were considered as compensation and benefits.
3. Depreciation and amortization was not included in any assessments, even though some affiliates included them as operational costs, because neither involves external spending.
4. The compensation support provided by the College of Medicine to University Medical Associates was apportioned to OHIO, as were all OHIO expenditures or support to UMA.
5. Foundation support to affiliate enterprises was apportioned to the affiliate enterprises.
Visitor Spending

1. This assessment involved a wide range of data sources from various entities at OHIO; the General Services Administration (for hotel and meal costs); the National Collegiate Athletic Administration (for athletic and coaching staff team size estimates); and the Environmental Protection Agency, Ford Motor Company, and Nissan North America (for travelers’ fuel efficiency estimates).

2. Expenditures were estimated for six major visitor categories:
   a. Athletics
   b. Facilities and attractions
   c. Social events
   d. Academic events
   e. Entertainment events
   f. Varied on-campus events (e.g., conferences).

3. No data was available for a number of various activities that bring visitors. However, to the extent that visitor impact is typically the category that is most likely to yield exaggerated economic impact (and is extremely difficult to estimate at its true level without rigorous and regular visitor surveys), the partial amount of data that was given is likely to provide a closer, more conservative estimate of the true economic impact.

4. The assumption was that spending occurred in only three categories: travel costs (gasoline only), hotel stays, and meal costs, which were interpreted as absorbing the totality of the GSA’s per diem allowances. No estimations were conducted for expenditures on retail goods because truly rigorous data on retail spending by visitors to universities was unavailable, and because significant shares of retail purchases by visitors are likely to be made at University-owned or -supported stores, which would create a double count of visitor receipts’ subsequent expenditure by OHIO.
   a. Unless data were provided otherwise (e.g., prospective student activity), hotel expenditures were estimated by:
      i. Assuming that only visitors who were from outside both the Southeast Ohio and individual campus regions actually stayed in a hotel.

ii. Determining a visitor’s home region based on ZIP codes in most instances, with a radius proxy for the “various on-campus” events category.

iii. Basing hotel costs-per-room on the conservative GSA rate of $90.67 per night (including taxes), and various estimates of visitors-per-room. All exceptions are explained below.

b. For travel expenditures:
   i. Visitors’ ZIP codes were used (except when a proxy radius was necessary), with the distance from a visitor to a campus based on circumferential globe distance, rather than road distance, which enhanced the conservatism of the estimate.
   
      1. ZIP codes were used for:
         a. Visiting teams
         b. Visiting families of students
         c. Families for graduation
         d. Orientation
         e. Prospective student visits
      2. County data was used for Ohio Athletics events
      3. A proxy point estimate was used for:
         a. Bird Arena, inferred from the data provided on hotel night stayers
         b. Remaining entertainment events, based on dean’s guests numbers
         c. General campus events, based on hotel night data
   ii. All visitors were assumed to drive to a campus.
   iii. Final expenditure was based on the share of a tank of fuel for a given vehicle that would be consumed at EPA combined mileage estimates for a one-way trip to a campus. The visitor was then assumed to purchase this amount up to a maximum of one tank, at $4 per fuel gallon.
   iv. Division I athletic teams were assumed to travel on a charter bus. Athletic teams visiting regional campuses were assumed to travel on a 15-passenger van from Ford Motor Company. All others were assumed to travel in a Nissan Altima, chosen for its high fuel efficiency to enhance the conservatism of the final vi. The alternative, less conservative approach to this issue is to use the GSA mileage rate;
however, this approach radically exaggerates local fuel purchasing by visitors, and includes vehicle maintenance that is almost never purchased locally.

c. For meal costs:
   i. It was assumed that hotel stayers purchased one meal more than the number of days they resided in a hotel.
   ii. For non-hotel stayers, it was assumed that two meals were purchased for each day-visit.
   iii. The cost of three meals was estimated at the conservative GSA rate of $46.
   iv. The meal purchases of visitors were included only if the visitor was outside the region for which impact was measured. For example, for the impacts on the state of Ohio, only meal expenditures by visitors from outside the state were assessed for impact; for the impacts on Athens County, all meal expenditures by visitors from outside the county were assessed for impact.

5. Athletics
   a. Visitor impact for athletics was calculated for the Athens Campus and for the regional campuses in OCCRA. Three categories of visitors were identified for each: the expenditures of the visiting team, team associates (e.g., parents of visiting athletes), and fans who come to games.
   i. Division I teams were assumed to stay at a hotel the night before the competition and to leave the day of the competition. Non-Division I teams were assumed to travel only on the day of competition, except in the instance of a multiday conference tournament.
   ii. The number of associate visitors, which generally refers to dedicated team supporters who travel (e.g., a parent of an athlete), was based on a ratio provided by Bird Ice Arena for DI Hockey teams. The number of associate visitors for non-DI teams was based on the difference between the midpoint and maximum of travel squad size, as provided by the Lancaster Campus’s athletic department. In other words, if the average travel squad size was given as 8 to 12, it was assumed that the size of the team (plus coaches) was 10, and the number of associate visitors was 2.
   iii. For teams and associate visitors, it was assumed that two individuals stayed in a hotel room, except for coaches, for whom it was assumed one individual per room.
   iv. Football was assumed to use three chartered buses, while all other DI teams were assumed to use one bus per contest.
   v. The home residences of fans of the Ohio University Bobcats were based on the survey conducted by the athletic department for the 2009 economic impact study. The average number of fans at each game was based on data from the Athletic Department.
   vi. The number of visiting fans per hotel room was tied to the average number of tickets per purchaser data from the Athletic Department.
   vii. For the regional campuses that are members of OCCRA, it was assumed that all fans of the OHIO campus home team were in-county.

b. When an OHIO regional campus played another regional campus, the team expenditures were not included (as they would have been present in OHIO budget data) in the assessment; however, the expenditures of associate visitors were included in the assessment.

6. Facilities attractions (Bird Ice Arena only): All estimates were based on unique data provided by Bird Ice Arena.

7. Social events (e.g., Sibs Weekend)
   a. The number of visitors for social events was provided by OHIO.
   b. An assumption was made that all social event visitors were from a border state or the state of Ohio; this enhanced the conservatism of the estimates by diminishing average distance and increasing the proportion of visitors who were local or from the various regions.
   c. Because the initial analysis for Homecoming and Parents Weekend generated expenditures below the fan expenditures for Homecoming and Parents Weekend football games, it was assumed that all impacts from those two weekends were expressed by the expenditures generated for football.
8. Academic events
   a. The home residences of visitors to graduations were based on the home ZIP code profile of students at each campus.
   b. The number of visitors per graduates was equal to 3.3 (i.e., based on a ratio of 4.3 individuals per nuclear family).
   c. The home residences of prospective students were provided separately by OHIO, as was hotel and meal activity for prospective visits and orientation.

9. Entertainment events: Data was provided by the Kennedy Museum of Art and the Ohio Valley Theater.

10. Various on-campus events
   a. The basic assumption was that the Athens Campus was different from the regional campuses with respect to on-campus event activity as a result of its research status, while the regional campuses would be similar to each other, if adjusted for size.
   b. Detailed data was provided by the Athens and Chillicothe campuses, including nonlocal and hotel-stay status.
   c. For the remaining regional campuses, the expenditures for Chillicothe were inflated or deflated by the ratio of each campus’s enrollment to the Chillicothe Campus’s enrollment.