

Estimates of Transfer-Facilitated Savings: Concept, Methodology, Estimates & Interpretation

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Credit transfers generate savings: How much?

Concept:

Transferring credit from lower-tuition to higher-tuition institutions generates savings for students.

Methodology:

Savings are estimated as the product: $H \times TD$
 H is the number of upward transferred hours, &
 TD is the difference in hourly tuition between higher-tuition and lower-tuition institutions.

Interpretation:

Estimated savings amounted to \$82.0 million in FY2012.
The amount represents extra dollars students would have paid if transferred hours were taken at higher tuition institutions.

Transfers: The driver of savings

- Savings for students: Lower tuition bill
 - Completing credit at lower-tuition institutions and transferring hours to higher-tuition institutions generates savings for students.
- For savings to be realized, credits must transfer among institutions.
- Statewide transfer guarantees are a crucial element for generating transfer-facilitated savings.

Why estimate transfer-facilitated savings?

- The state of Ohio has a long and distinguished history of facilitating credit transfers.
 - Ohio Transfer Module (OTM) and the Transfer Assurance Guide (TAG) together ensure that credits in general education, and pre and beginning major courses transfer in a seamless manner, and apply to meeting degree requirements in receiving institutions. Similarly, Career Assurance Guides (CTAG) ensure the transferability of technical level courses.
- Estimates of transfer-generated savings are a powerful illustration of the returns to public investments (through articulation and transfer).

Methodology:

How do we estimate the savings?

- Savings are estimated as a product of two elements
 - **H** , the number of hours transferred from lower-tuition institutions to higher tuition institutions
 - **TD** , the difference in hourly or per credit tuition between the higher-tuition and the lower-tuition institutions.
- Estimated savings = **H × TD**

First element of savings estimation: Upward transferred hours

- Upward transfers hours: Credits completed at lower-tuition institutions and transferred to higher-tuition institutions.
- Higher-tuition and lower-tuition institutions defined:
 - Institutions fall into three broad sectors: 2-year institutions, 4-year regional campuses, and 4-year main campuses.
 - 4-year main campuses charge the highest tuition, followed by 4-year regional campuses, and 2-year institutions, in that order.
- Upward transferred hours, therefore, are the following:
 - Credits completed at 2-year institutions and transferred to 4-year regional or main campuses.
 - Credits completed at 4-year regional campuses and transferred to 4-year main campuses.

Identifying upward transferred hours: When students (physically) transfer

- Students complete courses at 2-year institutions and transfer to 4-year main campuses (in the following year).
- Students complete courses at 2-year institutions and transfer to 4-year regional campuses (in the following year).
- Students complete courses at 4-year regional campuses and transfer to 4-year main campuses (in the following year).

Identifying upward transferred hours: When students do not (physically) transfer

- Students attend 4-year main campus but also complete credit simultaneously at 2-year institutions.
- Students attend 4-year main campus but also complete credit simultaneously at 4-year regional campuses.
- Students attend 4-year regional campus but also complete credit simultaneously at 2-year institution.

Identifying upward transferred hours: Not all hours count

- Only general education, baccalaureate, and technical level courses are included in the calculation.
 - Remedial education hours are not counted.
- Hours completed in earlier years (more than one year prior to the transfer) are also not counted.
 - Considering only one year of upward transferred hour allows us to calculate annual savings. Because students typically (upward) transfer credits completed in multiple years, our estimates serve as a conservative benchmark of the amount of savings.

The other element of savings estimation: Tuition difference

- We obtain pairwise differences in average hourly tuition between
 - 4-year main campuses and 2-year institutions
 - 4-year main campuses and 4-year regional campuses
 - 4-year regional campuses and 2-year institutions
- We need average hourly tuition by sector; i.e.,
 - For 4-year university main campuses
 - For 4-year university regional campuses
 - For 2-year institutions
- We have data on fall-term tuition* by institution; i.e.,
 - Fall-term tuition for each 4-year main campus (13 of them)
 - Fall-term tuition for each 4-year regional campus (24 of them)
 - Fall-term tuition for each 2-year institution (23 of them)

*The tuition data are obtained from the Annual Tuition Survey of the Ohio Board of Regents.

The steps of calculating differences in hourly tuition

- **Step 1: Calculate sector-average fall-term tuition**
 - Obtain fall-term tuition value for each campus from the tuition survey.
 - Count the number of students in each campus using enrollment records.
 - Use the number of students in each campus as weights to calculate the average fall-term tuition for each of the three sectors.
- **Step 2: Convert fall-term tuition for the sector to hourly tuition**
 - Divide term-tuition for each sector by the number of hours in the fall term in that sector.
 - How many hours are there in the fall term in each sector? Each campus reports the minimum number of hours in the term for which the term-tuition is applicable. We take this value and obtain the sector-average using the enrollment numbers as weights.

Obtaining average fall tuition: An illustration with 4-year main campuses

| 4-year main | 2011 Fall Tuition* | 2011 Fall** Enrollment | Enrollment Shares | Weighted Tuition |
|---|--------------------|------------------------|-------------------|------------------|
| Akron | \$4,773 | 17,145 | 0.0905 | \$432 |
| Bowling Green | \$5,022 | 13,711 | 0.0724 | \$364 |
| Cincinnati | \$3,473 | 18,232 | 0.0963 | \$334 |
| Cleveland State | \$4,501 | 8,305 | 0.0438 | \$197 |
| Central State | \$2,836 | 2,256 | 0.0119 | \$34 |
| Kent State | \$4,673 | 18,358 | 0.0969 | \$453 |
| Miami | \$6,540 | 14,159 | 0.0748 | \$489 |
| Ohio State | \$3,245 | 39,628 | 0.2092 | \$679 |
| Ohio University | \$3,312 | 17,216 | 0.0909 | \$301 |
| Shawnee State | \$3,381 | 3,802 | 0.0201 | \$68 |
| Toledo | \$4,463 | 14,377 | 0.0759 | \$339 |
| Wright State | \$2,690 | 11,932 | 0.063 | \$169 |
| Youngstown | \$3,725 | 10,295 | 0.0544 | \$203 |
| Average 2011 fall tuition in 4-year university main campuses | | | | \$4,062 |

Source: * Annual Tuition Survey, Ohio Board of Regents.

** Enrollment table, Higher Education Information (HEI) data

Obtaining average number of hours: Illustration with 4-year main campuses

| 4-year main | Academic Calendar | Hours | Normalized Hours | 2011 Fall Enrollment | Enrollment Shares | Weighted Hours |
|---|-------------------|-------|------------------|----------------------|-------------------|----------------|
| Akron | Semester | 12.0 | 12.0 | 17,145 | 0.0905 | 1.086 |
| Bowling Green | Semester | 12.0 | 12.0 | 13,711 | 0.0724 | 0.8688 |
| Cincinnati | Quarter | 12.0 | 8.0 | 18,232 | 0.0963 | 0.7704 |
| Cleveland State | Semester | 12.0 | 12.0 | 8,305 | 0.0438 | 0.5256 |
| Central State | Semester | 12.0 | 12.0 | 2,256 | 0.0119 | 0.1428 |
| Kent State | Semester | 11.0 | 11.0 | 18,358 | 0.0969 | 1.0659 |
| Miami | Semester | 12.0 | 12.0 | 14,159 | 0.0748 | 0.8976 |
| Ohio State | Quarter | 12.0 | 8.0 | 39,628 | 0.2092 | 1.6736 |
| Ohio University | Quarter | 11.0 | 7.3 | 17,216 | 0.0909 | 0.6666 |
| Shawnee State | Semester | 12.0 | 12.0 | 3,802 | 0.0201 | 0.2412 |
| Toledo | Semester | 12.0 | 12.0 | 14,377 | 0.0759 | 0.9108 |
| Wright State | Quarter | 11.0 | 7.3 | 11,932 | 0.063 | 0.462 |
| Youngstown State | Semester | 12.0 | 12.0 | 10,295 | 0.0544 | 0.6528 |
| Average number of hours in the fall term at 4-year university main campuses* | | | | | | 9.9641 |

*The hours are relevant to the calculation of average tuition values only.

Pairwise difference in hourly tuition: An illustration with the fall 2011 tuition

| Average hourly tuition: Fall 2011 | | Pairwise difference in hourly tuition | |
|--------------------------------------|-------|--|----------------------------------|
| 4-year main campuses | \$407 | 4-year main less 2-year institutions | $\$407 - \$138 = \mathbf{\$269}$ |
| 4-year regional campuses | \$234 | 4-year main less 4-year regional | $\$407 - \$234 = \mathbf{\$173}$ |
| 2-year institutions | \$138 | 4-year regional less 2-year institutions | $\$234 - \$138 = \mathbf{\$96}$ |

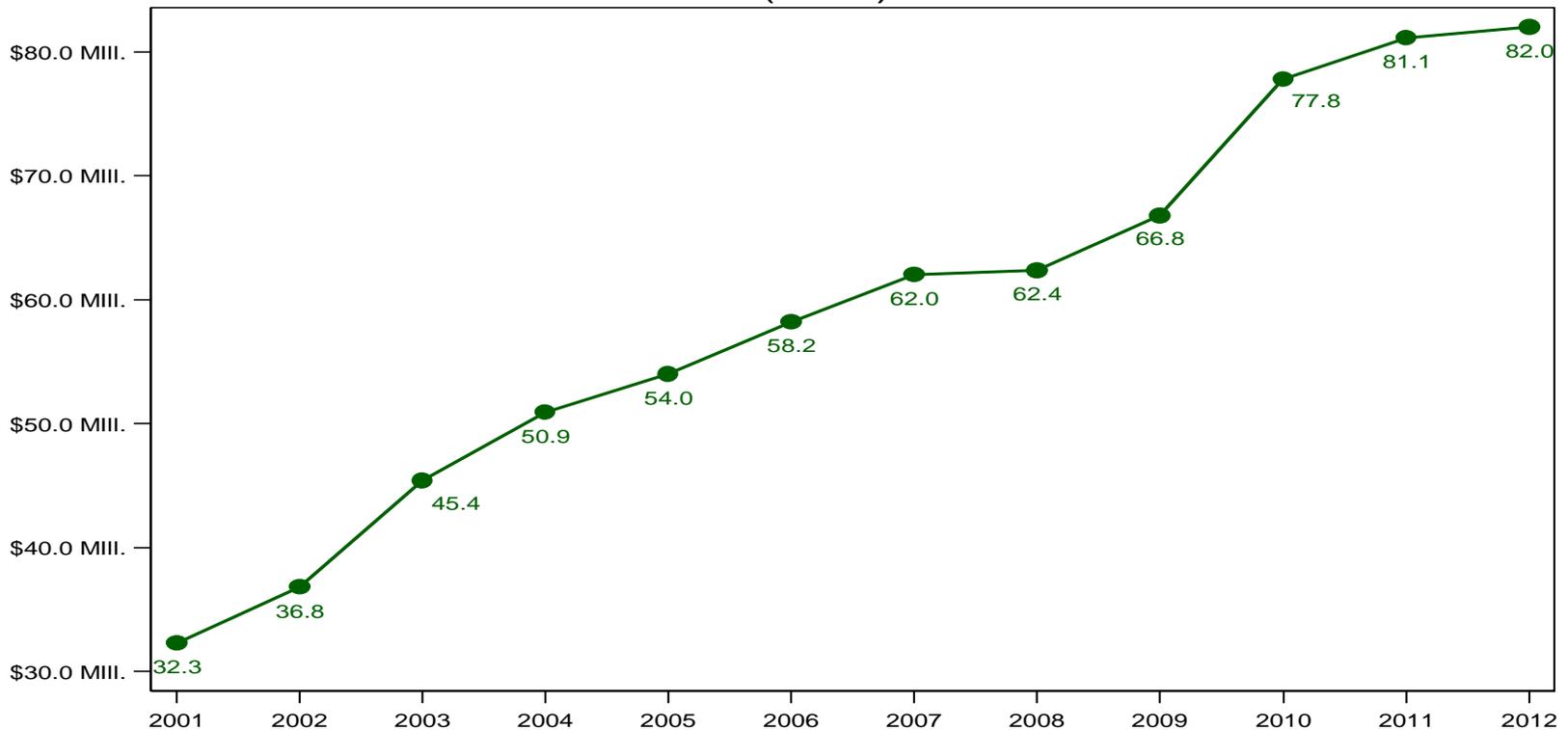
Estimation of annual savings: An illustration with FY2011-12 values

| Upward transferred hours (H) | | Tuition difference (TD) | | Estimated savings (H × TD) |
|---|---------|--|-------|---|
| From 2-Year to 4-year main | 202,993 | Between 4-year main and 2-year institutions | \$269 | 202,993 × \$269 = \$54,732,425 |
| From 2-year to 4-year regional | 26,351 | Between 4-year regional and 2-year institutions | \$96 | 26,351 × \$96 = \$2,539,937 |
| From 4-year regional to 4-year main | 166,236 | Between 4-year regional and 4-year main campuses | \$173 | 166,236 × \$173 = \$28,798,618 |
| Nominal Value of Total Estimated Savings in FY2011-12* | | | | \$86,070,980 |

*Estimated FY2011-12 nominal savings are converted to \$81,974,883 in 2010 prices.

Estimated annual savings: FY2001 to FY2012

Estimated Transfer Facilitated Tuition Savings
In Constant (2010) Million Dollars



Growth of estimated savings: FY2001 to FY2012

| | Estimated Savings (in 2010 prices) |
|---|---------------------------------------|
| FY2000-01 | \$32,294,508 |
| FY2011-12 | \$81,974,883 |
| Overall growth: Between FY2001 & FY2011-12 | \$49,680,375 |
| Percentage growth | 153.8% |
| Average annual rate of growth | 14.0% |

The sources of the growth of estimated savings

| | From 2-Year inst. to 4-Year main | | From 2-Year inst. to 4-Year regional | | From 4-Year regional to 4-Year main | |
|---|----------------------------------|--------------------|--------------------------------------|--------------------|-------------------------------------|--------------------|
| | Hours | Tuition Difference | Hours | Tuition Difference | Hours | Tuition Difference |
| FY2001 | 135,038 | \$129 | 11,814 | \$56 | 110,732 | \$73 |
| FY2012 | 202,993 | \$270 | 26,351 | \$96 | 166,236 | \$173 |
| Average annual rate of growth: FY2001 to FY2012 | 4.6% | 10.0% | 11.2% | 6.6% | 4.6% | 12.5% |

What do the estimates represent?

- The estimated savings represent the extra amounts students would have to pay in tuition if they had completed the transferred hours at the higher-tuition institution.
- Consider the following:
 - A student completes hours at a 2-year institution.
 - The following year, the student transfers to a 4-year main campus with the lower-cost hours under her belt.
 - Given the transferability of credit, those hours are not repeated, saving student tuition at the higher-cost institution.
 - However, because the student had already paid the lower-tuition, her savings is the difference between the higher and the lower tuition values.

Are there any qualifications?

- Yes, we do not consider tuition discounting
 - Institutions do not charge all students the exact sticker price for each course. In fact, students receive discounted tuition on mostly merit considerations; tuition discounting is a form of financial aid.
- The estimated savings, therefore, represent the **potential annual maximum amount of additional tuition payments** students would have made if there were no tuition discounting.
- Transfers may help students save even larger amounts because room & board and other expenses are typically larger at 4-year university main campuses (relative to 2-year institutions or 4-year regional campuses).

What do learn?

- These estimates put a dollar value on one specific contribution of transfer movements to the University System of Ohio.
- The estimates, by construction, are the potential maximum amount of the annual transfer-generated tuition savings. The estimates would equal the actual value of annual savings if there were no tuition discounting by institutions.
- The estimated values, however, serve also as conservative benchmarks of the annual amount of savings because only hours completed in the year previous to the transfer are included in calculation. In reality, students save on tuition bills by transferring hours that were completed in the previous two, three or more years.