



PUBLIC INVESTMENT IN PRIVATE HIGHER EDUCATION:

**Estimating the Value of Nonprofit College
and University Tax Exemptions**

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“Universities and colleges have a special role to play, to contribute to the betterment of society [...] We have to reaffirm this social compact in whatever community we find ourselves. The social compact is what has allowed U.S. higher education to thrive for the past 100 years. If we want to be global and national, we have to be local. We need to be more in tune with the needs expressed to us than we have been. That is where I see our real opportunity: rebuilding our social compact.”

– Joseph Aoun, President, Northeastern University¹

Introduction

The “social compact” – between post-secondary institutions of higher learning and the broader public – that Northeastern University president Joseph Aoun recently reaffirmed before his colleagues on the College Board is readily evoked in higher-educational circles but rarely analyzed in any depth. The pollster Daniel Yankelovich, writing in the *Chronicle of Higher Education* last year, has highlighted how most college and university presidents have failed to grapple adequately with “an impending crisis in this nation’s powerful, if unwritten, social contract.”² Although it may go unwritten, the social contract is premised on a tacit understanding about mutual obligations between colleges and the public: that higher education is a public good underwritten generously by taxpayers who rely upon colleges and universities – whether public or private – to provide a public service for the benefit of society as a whole. It is refreshing to see President Aoun challenging his peers to rebuild higher education’s “social compact,” which has been eroding in recent years, according to many analysts.³

Few phenomena embody higher education’s social contract with the public more concretely than annual taxpayer support, through direct payments, grants, and contracts and indirectly through tax incentives, subsidies, and exemptions. Over the last half decade, tax incentives for higher education have come under heightened scrutiny, as the crisis of college affordability has intensified and unemployment among college graduates has more than doubled.⁴ The compounding trends of recession, unemployment, federal and municipal budget shortfalls, continually increasing college costs and staggering student debt loads have prompted experts and politicians on the Left and Right alike to re-examine public subsidies for private, non-profit college and universities. The public debate is unfolding on several stages, from the opinion pages of the *New York Times*, where editors have asked, “Do Wealthy Colleges Deserve Their Tax Breaks?” to hearings on Capitol Hill where tax incentives for higher education have recently been the subject of examination.⁵

At a recent Senate hearing, focused on higher-education tax incentives such as deductions for college gifts and expenses, Senator Charles Grassley (R-Iowa) framed the question of tax incentives far more broadly than the Committee had, arguing that “[a]ll education related tax expenditures should be examined to ensure that students and families, in addition to taxpayers, are getting the most bang for their buck.”⁶ He highlighted the often unacknowledged benefits that colleges receive from endowment investments that can grow without being subjected to capital-gains taxes and from their privileged access to low-interest debt through tax-exempt bond markets, among others.

At the local level, colleges, along with nonprofit hospitals, are among the largest beneficiaries of property tax exemption. Consequently, cash-strapped municipalities have increasingly turned to colleges and other major nonprofit institutions to make so-called Payments in Lieu of Taxes (PILOTs) in order to offset the lost revenues associated with their exempt property. According to the Lincoln Institute of Land Policy, PILOTs have now been established in 154 jurisdictions across 27 states, and colleges have been major objects of PILOT programs in cities such as Boston, Massachusetts, Pittsburgh, Pennsylvania, and Providence, Rhode Island.⁷

While many politicians and policymakers may be raising these issues as part of a wider quest for potential sources of revenue in times of fiscal strain, the issue of non profit tax exemption clearly goes to the heart of the nature of the social contract that colleges have with the communities in which they operate and with the broader tax-paying public that generously subsidizes their operations and investments.

However, it is striking how little we know about the actual value of this public investment in higher education. While the federal government tracks direct federal aid and expenditures, the indirect support that colleges and universities receive from tax exemption remains poorly understood and largely unquantified. Beyond rough

estimates of sales-tax exemptions, few states commit the resources needed to monitor the value of the state tax exemptions that colleges receive. Similarly, with the exception of municipalities developing PILOT programs, few local governments even bother to keep nonprofit college property valuations updated because there is little incentive to conduct regular property assessments that do not ultimately generate revenue. The result is widespread underestimation of the value of colleges' exempt property and the associated foregone revenues.

Economists at the Congressional Research Service have made efforts to estimate the value of tax exemption for the nonprofit sector as a whole, but not for nonprofit higher educational institutions in particular, at least not in a comprehensive way. The Joint Committee on Taxation has recently studied tax incentives for higher education, but focused more on the benefits that individuals and families receive, most notably for charitable contributions to colleges and the deductibility of higher-education expenses, than those that colleges receive from their federal, state and local tax exemptions. The Congressional Budget Office has estimated the value associated with the so-called "indirect tax arbitrage" that colleges make by tapping low-interest, tax-exempt debt while leaving their endowments fully invested in higher-yielding instruments.⁸

What we lack is a clear, standardized approach to quantifying the benefits associated with the tax exemptions from which any individual college or university benefits. Understanding the full nature of the public investment in any individual school opens up opportunities to aggregate school-specific data into wider analyses of the private, nonprofit higher-educational sector, at the local, state, regional or national levels. Instead of relying upon less precise sectoral estimates, analysts, policymakers and stakeholders can build, institution by institution, a more accurate picture of the public investment in higher education that tax exemptions provide. This paper aims to provide a working solution to the challenge of how to estimate the value of the numerous tax exemptions that individual colleges and universities receive.

At the microeconomic level, it should be said that economist Richard Vedder, director of the Center for College Affordability and Productivity, a professor of economics at Ohio University, and adjunct scholar at the American Enterprise Institute, has recently estimated the value of tax exemption that a wealthy, private university such as Princeton receives, and he found that it far exceeds the public support for a neighboring public university like the College of New Jersey.⁹ How-

ever, as we discuss more fully below, Vedder's estimates for Princeton are rapid back-of-the-envelope calculations, relying upon underlying assumptions that are not adequately explained. Vedder also includes approximations of the benefits that donors to Princeton receive from their charitable gifts to the university – an important tax incentive for higher education, but one that accrues to the donor more than the institution itself.

In contrast to higher education, the value of tax exemption for hospitals has been subject to this sort of scrutiny for more than a decade, thanks to the work of scholars such as Nancy Kane at the Harvard School of Public Health. Unlike colleges, nonprofit hospitals are required to calculate their community benefits as a condition of receiving federal tax-exempt status, so estimating the value of hospital tax exemptions allows for neat cost-benefit analyses. The estimation technique we use for colleges builds upon the methodological work of Kane and William Wubbenhorst, adapting it to the specificities of higher-educational institutions. Our approach is also informed by insights drawn from policy analysts on Capitol Hill and in municipal government and from our own research on higher-education finance.

Unfortunately, raising the specter of college tax exemption has been seen by many analysts as an attack on private, nonprofit higher education. In response to Richard Vedder's critique of Princeton's generous tax exemptions, for example, Anthony Carnevale, director of the Georgetown University Center on Education and the Workforce, defended college tax exemption by insisting that "the need for a special tax status for our colleges goes beyond mere dollars and cents. College educations have become crucial to the social contract in democratic capitalism."¹⁰

In order to have a more well-informed conversation about the social contract that higher education involves, we need a clearer understanding of the size of the public investment in nonprofit colleges and universities. Indeed, tax exemption is an important embodiment of the social contract that the taxpaying public has with the nonprofit post-secondary educational sector. Quantifying the benefit that schools receive from tax exemption helps us to understand more fully and transparently the scale of that public investment. Naturally, it would be wrong to reduce discussions of higher education's social contract to mere quantifiable cost-benefit analyses. The mutual obligations between colleges and the public involve many intangible civic, social and cultural benefits that cannot readily be quantified.

At the same time, it seems problematic to dismiss the very effort of analyzing the public's fiscal investment in nonprofit colleges, as Richard Doherty, the president of the Association of Independent Colleges and Universities in Massachusetts, reportedly did in a recent interview with the *Boston Globe*. According to the *Globe*, Doherty "said the benefits of higher education should be so obvious as to render new, number-heavy analyses unnecessary."¹¹ To the contrary, even if quantifying the full cost of tax exemptions and the scale of public investment in private colleges may provide an insufficient approximation of what such a social contract entails, we believe data-driven analyses need to be part of a much broader public debate about the public purpose of higher education. For the many observers who have noted the erosion of the social contract and the wider

crisis of stewardship plaguing higher education, it is far from obvious that the benefits of private, nonprofit college are being delivered broadly to the public.

What we therefore offer in this paper is a bottom-up methodology to estimate the public tax expenditure resulting from non-profit colleges and universities' tax exemption. Our approach employs and expands on methodologies developed through comparable research on hospitals and the nonprofit sector more broadly in order to arrive at a methodology appropriate for estimating the public investment in individual private, non-profit schools. Northeastern University provides a demonstration case for developing the underlying estimation techniques, the application of which we present at the federal, state, and local levels.

Northeastern University: A Publicly Supported Private University

Founded in 1898, Northeastern University is a private research university "engaged with the world." Although based in Boston, the university is expanding its physical footprint to include regional graduate campuses across the country, with Charlotte, North Carolina, and Seattle, Washington, serving as the first of several US cities where Northeastern will have a presence. Through its long-standing co-op program, the university prides itself on being "a leader in worldwide experiential learning, urban engagement, and interdisciplinary research that meets global and societal needs."¹²

Northeastern enrolls more than 20,000 full-time undergraduate and graduate students and an additional 10,000 part-time degree and non-degree students. Average full-time tuition, fees, room and board for undergraduates ran in excess of \$53,000 per year during the most recent 2011-12 academic year, a nearly 20-percent cost increase since fiscal year 2008, according to the *Boston Business Journal*. Of the nearly 2,350 faculty members and tenured administrators at the university, more than half are part-time. The university also counts more than 2,100 other staff among its employees. Northeastern's endowment of \$611 million, at the end of fiscal year 2011, has yet to recover its losses from the period of the financial crisis of 2007-09. The university also recently announced a new sale of more than \$50 million in bonds that would bring its comprehensive debt to more than \$830 million.¹³

Like many nonprofit institutions of higher education, Northeastern, although a private university, is heavily supported by public funding, both directly and through the effective public subsidies that accompany its tax-exempt status. Although the university does not disclose the amount of this effective public support, we have estimated its value using publicly available data from three primary sources: the University's Consolidated Financial Statements for Fiscal Year 2011, its IRS Form 990 for Fiscal Year 2010 (the most recent available at the time of our analysis), and property information from the City of Boston Assessing Department. In addition to our estimates of the value of its various forms of local, state, and federal tax exemption, information on direct public support is drawn from the federal Office of Management and Budget's online database at USAspending.gov.

Because the publicly available data do not provide a clear presentation of either the value of tax exemptions or the inputs needed to make these calculations, the valuation we have developed should be seen as an estimation tool that depends on simplifying assumptions. We explicitly highlight these assumptions and describe persisting gaps that make our estimate, in the final analysis, a conservative understatement of the full value of the benefits of tax exemption that the university receives. The approach that we take throughout this analysis is to estimate the value of the effective public

subsidy that the school receives as a fiscal transfer or a “tax expenditure.” We do not attempt to re-engineer Northeastern’s financials as if it were a taxable corporation. If a school were taxable, it would naturally act in a very different manner, seeking to maximize profits and shielding itself from all manner of tax liabilities. Modeling those differences in financial behavior would involve extensive conjecture, so our approach instead estimates the current value of the university’s tax exemption based on its current activities using available data.

Based on our analysis, we estimate that Northeastern University received \$181.7 million in public support in fiscal year 2011. Although the university received \$87.3 million in direct support, most of the taxpaying public’s investment in the school (\$94.4 million) came through largely undocumented subsidies provided by federal, state, and local tax exemptions, as Figure 1 highlights.

The direct support Northeastern received consists of \$67 million in federal grants and contracts and nearly \$20 million in payments from the US Department of Education through student financial aid programs, including Pell grants, work-study, and supplemental educational opportunity grants. Because direct support is transparently disclosed, our focus here is primarily on the undisclosed values of tax exemption, which require estimation. Given how large a share of the public investment in Northeastern stems from these undisclosed tax exemptions, our analysis highlights the real need for greater transparency about the value of the benefits schools receive from tax exemption. Our effort here should therefore be understood as a contribution to the development of a transparent, standardized methodology for valuing these undocumented tax benefits, particularly at the state and federal levels. Each of the three main levels of tax exemption is described more fully below.

Figure 1. Total Public Support of Northeastern University

Direct Federal Support		(\$ in millions)
Grants and Contracts		\$67.45
Direct Payments (Pell, Work-Study, FSEOG)		\$19.88
	Direct Support Subtotal	\$87.33
Value of Tax Exemption		
Federal Exemption		\$32.84
State Exemption		\$22.92
City Exemption		\$38.64
	Tax Exemption Subtotal	\$94.40
Total Government Support		\$181.73

Local Tax Exemption

In Northeastern’s case, the school’s largest public subsidy comes from its local exemptions from property taxation granted by the City of Boston. We estimate that the university benefits from \$38.6 million in local tax exemptions.

Property Tax

Our analysis of Northeastern’s property tax exemption is based on the City of Boston Assessing Department’s PILOT data. Because Boston’s PILOT program is among the most comprehensive in the country, data

needed to determine the foregone tax revenue associated with the university’s property tax exemption are readily available. As Figure 2 presents, we estimate the value of Northeastern’s property tax exemption by first calculating the full tax liability the university would have had on its \$1.3 billion of exempt property if it were taxable. With a 3.104 percent commercial property tax rate, the would-be property tax liability for the university is nearly \$40 million. We then subtract the \$31,000 payment-in-lieu-of-taxes the university made in fiscal year 2011 and \$1.2 million in additional taxes

Northeastern reportedly paid on exempt property outside of the PILOT program. After these deductions, the value of Northeastern's property tax exemption falls to an estimated \$38.6 million.

Because Northeastern is participating in the City of Boston's new PILOT program that began in fiscal year 2012, the university will gradually see its public subsidy diminish as it makes larger PILOTs. Initiated by Mayor Thomas Menino, the program establishes a standardized system for Boston nonprofits to make voluntary PILOTs, which had previously been negotiated on a case-by-case basis resulting in highly varied payment

amounts. Under the new program, the City requests that each nonprofit make a PILOT of 25 percent of its would-be property tax liability.¹⁴ The City allows a credit of up to 50 percent of that 25 percent payment for certain qualifying benefits that the nonprofit provides to the Boston community, such as scholarships to students from Boston and donated use of facilities to community groups. The new PILOTs are being phased in with incremental payment increases over the next four years. Taking the community benefit credit into account, Northeastern's PILOT is projected to reach approximately \$4.3 million in fiscal year 2015, when the program is fully implemented.

Figure 2. Calculation of Northeastern University's City Property Tax Exemption

(\$ in millions)	
FY2011 Total Assessed Value of University's Tax-Exempt Property	\$1,285.48
City of Boston Commercial Property Tax Rate	x3.104%
Total Would-be Property Tax Liability	\$39.90
FY2011 PILOT	-\$0.03
FY2011 Additional Taxes Paid on Tax-Exempt Property	-\$1.23
Value of Boston Property Tax Exemption	\$38.64

S tate Tax Exemption

We estimate the exemptions from state-related taxes, including subsidies associated with tax-exempt debt, are worth \$22.9 million to the university, the smallest subsidies that Northeastern receives.¹⁵

Income and Excise Tax

To estimate the value of Northeastern's exemption from Massachusetts' state income and excise tax, we apply the Commonwealth's 8.25 percent corporate income tax rate to the university's net operating revenue drawn from its fiscal year 2011 financial statements. Net operating revenue, alternatively termed increase in net assets, represents the university's revenues or income less its expenses for the 2011 fiscal year. As such, net operating revenue serves as a proxy for taxable income throughout our analysis. We then apply the Massachusetts 0.26 percent excise tax to the University's net assets, a proxy for corporate net worth, and as Figure 3 presents, arrive at a total of \$10.6 million in state income and excise tax exemptions.¹⁶

Figure 3. Calculation of Northeastern University's State Income and Excise Tax Exemption

(\$ in millions)	
FY2011 Net Revenue	\$97.54
MA corporate income tax rate	x8.25%
Value of MA Income Tax Exemption	\$8.05
Northeastern Net Assets	\$986.43
MA Excise Tax Rate on Net Worth	x0.26%
Value of MA Excise Tax on Net Worth Exemption	\$2.56
Total Value of MA Income and Excise Tax Exemption	\$10.61

Sales Tax

We calculated the value of Northeastern's state sales tax exemption by applying the Massachusetts sales tax rate of 6.25 percent to the university's taxable expenses. Northeastern's fiscal year 2010 tax filing with the IRS

Figure 4. Calculation of Northeastern University's State Sales Tax Exemption¹⁸

(\$ in millions)	
FY2010 Total Taxable Expenses	\$48.91
% Change in CPI between 2010 and 2011	x3.2%
Total taxable expenses adjusted for FY2011	\$50.48
MA Sales Tax Rate	x6.25%
Value of MA Sales Tax Exemption	\$3.15

(the Form 990) provides the most recent disaggregated expense data available, so we applied a 3.2 percent Consumer Price Index inflator to the 2010 values in order to estimate fiscal year 2011 expenses. The university's fiscal year 2010 taxable expenses included purchases of office supplies, books, subscriptions, and equipment.¹⁷ As Figure 4 presents, we estimate Northeastern's state sales tax exemptions were worth \$3.2 million.

Tax-Exempt Bonds

Northeastern had more than \$658 million in tax-exempt bonds outstanding in fiscal year 2011, issued on the school's behalf by the Massachusetts Health and Educational Facilities Authority.¹⁹ The Authority (now part of MassDevelopment) is a state agency that, among other things, issues bonds on behalf of public and private institutions in the education and healthcare sectors. To estimate the value that the tax-exempt status of those bonds represents to Northeastern, we calculated the average for the reported range of interest-rate spreads between the university's taxable Series 2010B bonds and its exempt Series 2010A bonds (1.39 percent). The 2010A and 2010B bond series are identical in terms of issue date and term; they only differ in tax treatment, thus providing a straightforward demonstration of the effect of tax exemption on the university's

cost of capital. We then applied this average spread to the university's total outstanding exempt debt in fiscal year 2011 to arrive at a \$9.2 million estimate of the total subsidy the university receives as a result of its ability to issue tax-exempt municipal bonds.²⁰ For schools that have not issued taxable and tax-exempt bonds simultaneously in this way, estimating the subsidy of tax-exempt debt would require more challenging simplifying assumptions about the spread between tax-exempt bonds and equivalently graded taxable debt.

Applying the average interest rate spread for a single set of bonds across all of Northeastern's outstanding exempt bonds is admittedly a somewhat coarse approach. To calculate the subsidy the school receives from its exempt debt more precisely, it would be ideal to use comparable spread data for each exempt bond in the university's debt portfolio since the spread between each exempt bond and its theoretical taxable equivalent could conceivably vary, based on such characteristics as when the bond was issued, the university's bond rating at issuance, and the maturity of the debt. Lacking spread data for other bonds, we elected to make the simplifying assumption that the spread we do observe between the 2010 taxable and exempt bonds is comparable to the other spreads for the rest of the tax-exempt bonds in the university's portfolio.

Figure 5. Calculation of Northeastern University's Tax Exemption on State-Issued Bonds

(\$ in millions)	
Total Tax Exempt Bonds Outstanding in FY2011	\$658.37
Interest Rate Spread Between Series 2010A and 2010B Bonds	1.35% - 1.43%
Average Interest Rate Spread	x1.39%
Value of Exemption on State-issued Bonds	\$9.15

Federal Tax Exemption

We estimate Northeastern's exemptions from federal taxes to be worth \$32.8 million, based on the combined benefits the school receives for its exemption from income tax on both its net operating revenues and its investment income.²¹ Unlike property tax exemptions, the value of federal tax exemptions is much more opaque and consequently is frequently overlooked.²²

Income Tax on Operating Revenues

For federal tax exemption, we again use the university's

net operating revenues of \$97.5 million as a proxy for taxable income. Because state and local taxes are eligible deductions for federal corporate income tax, we deduct Northeastern's estimated state income and excise tax as well as its estimated city property tax liabilities from net revenues to arrive at the university's would-be federal taxable income of \$45.1 million. To this taxable income, we then apply the 35 percent federal corporate tax rate, arriving at a \$15.8 million estimation of Northeastern's exemption from federal income tax.²³

Figure 6. Calculation of Northeastern University's Federal Income Tax Exemption

(\$ in millions)	
FY2011 Net Revenue	\$97.54
State Income Tax Deduction	-\$10.61
City Property Tax Deduction	-\$38.64
State Sales Tax Deduction	-\$3.15
Would-be federal taxable income	\$45.13
Federal corporate income tax rate	x35%
Value of Federal Income Tax Exemption	\$15.80

Figure 7. Calculation of Northeastern University's Federal Investment Income Tax Exemption

(\$ in millions)	
FY2011 Total Gains from Investments	\$83.03
Estimated Percent of Gains Realized	x46%
Estimated Realized Gains for FY2011	\$38.19
FY2011 Yield on Investments	\$10.50
Total Investment Income (Yield + Gains)	\$48.69
Federal corporate income tax rate	x35%
Value of Investment Income Tax Exemption	\$17.04

Investment Income Tax

Northeastern's endowment and other net asset investments are an additional source of income for the school. In its financial statements, Northeastern reports \$10.5 million as its yield from investments in fiscal year 2011, which would be taxable at the 35 percent corporate tax rate, as with other income. Although the university reports over \$83 million in investment gains for the same fiscal year, Northeastern does not report how much of these capital gains were realized from its investments. (Only realized capital gains would be subject to taxation.) To estimate the proportion of realized gains, we therefore rely upon a simplifying assumption about the ratio between realized and unrealized gains based on an historical analysis of capital gains by economists at the Congressional Research Service, who estimate that 46 percent of investment gains are realized on average each year.²⁴ We consequently calculate \$38 million in estimated realized capital gains that would be subject to investment income tax, as Figure 7 shows. We then apply the 35 percent corporate income tax rate to the university's estimated total combined investment income of \$48.7 million to arrive at a \$17 million estimate for Northeastern's total exemption from tax on its investment income.²⁵

Public Support and Community Benefit

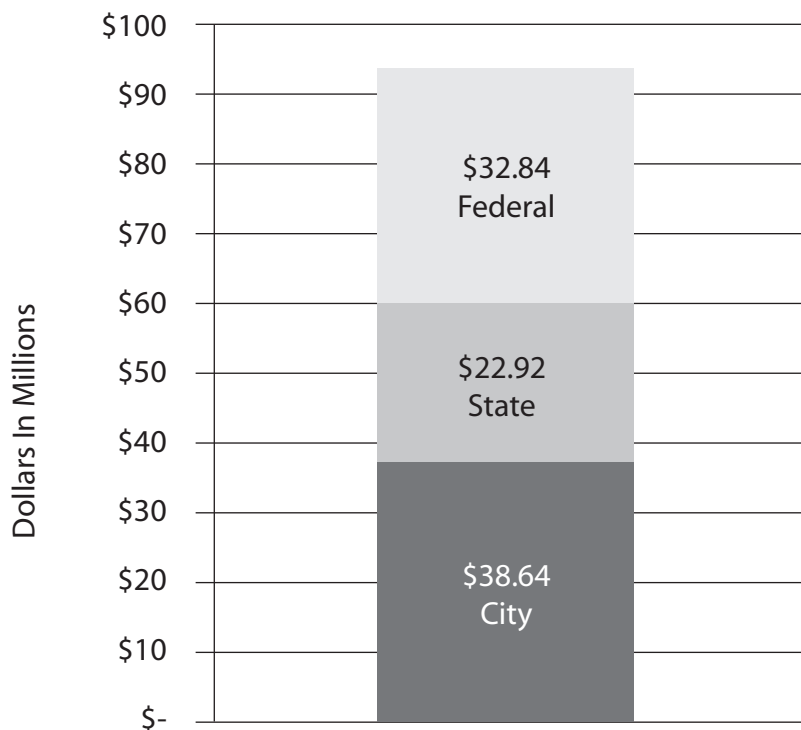
As Figure 8 makes clear, Northeastern University’s exemption from Boston property tax is the most valuable exemption the school received in 2011. Though the University is escalating its payments-in-lieu-of-taxes to the City, even after the new PILOTs are in full effect, Northeastern’s property tax exemption will continue to represent a large, if not the largest, portion of the university’s tax exemptions, highlighting the considerable subsidy provided by taxpayers in the surrounding community. In return for these benefits, the university provides community benefits to the City of Boston. Indeed, as part of the City of Boston’s PILOT program, the university must quantify the value of the community benefits that it delivers – an amount that serves as a partial credit to the university’s PILOT.

In a recent article in the *Boston Globe*, Northeastern stated that it provides in community benefits each year “at least twice” the \$181.7 million in total public support that we estimate the university receives both directly from federal funding and indirectly through tax exemptions.²⁶ Northeastern first floated this \$340.5 million figure as an estimate for the community benefits it provides to the Boston region in its 2008 Community Services Report to the City of Boston’s PILOT Task Force. However, the City ultimately rejected this inflated figure because Northeastern had tried to claim credit not only for public service benefits it provided to Boston residents but also for its local business expenses such as payroll for Boston-resident employees (\$45 million) and institutional purchases from Boston-based firms (\$146 million). These kinds of economic impacts are simply not the same as community benefits, which the City defines as activities that “directly benefit City of Boston residents” and “support the City’s

mission and priorities,” including partnerships with public schools or public health initiatives.²⁷ Consequently, the City of Boston disqualified the overwhelming majority of the estimated benefits that Northeastern had tried to claim.

In a more recent report for the PILOT program, Northeastern revised the figure for the community benefits that it delivered in fiscal year 2011-12, including only those expenses that qualify as community services under the City’s PILOT program. The revised statement of benefits to the Boston community totals \$19.8 million, drastically lower than the initial 2008 estimate, by more than an order of magnitude, and notably less than the value of property tax exemption the City continues to grant the university. That the university’s spokesman would leave the impression with the *Globe* that Northeastern’s dated and inflated regional economic impact estimates of more than \$340 million remain synonymous with the public benefits it delivers despite the substantial downward revisions the school has been forced to make in the value of its claimed community benefits, highlights just how badly higher education’s social compact needs to be rebuilt.

Figure 8. Northeastern University FY2011 Federal, State, City Tax Exemption Summary



Conclusion

In the case of Northeastern University examined here, we find that more of the public's investment in the school derives from largely undisclosed subsidies associated with the school's many tax exemptions than from the direct federal support paid to the school in more transparent ways.

One key conclusion to be drawn from our research is that far more investigation and analysis need to be undertaken on the value of tax exemptions that nonprofit colleges and universities receive. Much of the current literature on valuing tax exemption focuses on hospitals, but we found the methodological techniques developed with hospitals in mind to be less comprehensive than the approach we develop here because we include the public subsidies associated with the lower cost of capital from issuing tax-exempt municipal bonds and with tax exemption for income derived from contributions. Although the Congressional Research Service, in its attempts to quantify the value of tax-exemption nationwide, has reviewed the nonprofit sector as a whole, its use of broad simplifying assumptions does not necessarily pertain to the analysis of individual higher education institutions. We have therefore constructed a new, straightforward bottom-up methodology that aims

to provide as comprehensive an estimation as possible of the value of tax exemptions received by any single university.

Nevertheless, given the lack of transparency in existing, publicly available data sources about numerous issues related to specific areas of exemption, our estimation still understates the full value of public support the university receives, as we describe repeatedly above. Better disclosure and transparency of the data needed to make these calculations would enable more accurate and precise analysis along these lines.

Ultimately, higher education is about much more than what any quantitative cost-benefit analysis might reveal. Higher education's "social contract" involves deeper obligations than what the monetary value of tax expenditures may imply. Yet without a clear sense of the scale of the public taxpayer support that colleges receive, it remains difficult to have a well-informed debate about our policy priorities, the value of higher education, and the nature of the social contract that not only strengthens the dynamics of "democratic capitalism" but also binds colleges to their students, stakeholders, and communities, and to the public at large.

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Endnotes

- ¹ Cited in “Northeastern University President Joseph Aoun Opens Colloquium 2012,” College Board Connection, February 2012, available at <http://www.connection-collegeboard.com/home/membership-matters/1043-northeastern-university-president-joseph-aoun-opens-colloquium-2012> (accessed August 2012).
- ² Daniel Yankelovich, “College Presidents Are Too Complacent,” *Chronicle of Higher Education*, May 15, 2011, available at <http://chronicle.com/article/College-Presidents-Are-Too/127529/> (accessed August 2012). See also Yankelovich, “How Higher Education Is Breaking the Social Contract and What to Do about It,” *Forum Futures 2009*, 25-28, available at <http://net.educause.edu/ir/library/pdf/ff0906s.pdf> (accessed May 2012).
- ³ In addition to Yankelovich, see Robert L. Woodbury, “Hardening Class Lines: The Erosion of the Social Contract in Higher Education,” *Connection* (fall 2005), 25-28; and Larry Faulkner, “The Social Compact of Higher Education and Its Public,” in *The Tower and the Cloud: Higher Education in the Age of Cloud Computing* (Educause, 2008), 90-97.
- ⁴ See the recent discussion of unemployment by Lawrence Mishel, “In What Way is a College Degree Valuable in a Recession?” Economic Policy Institute, August 17, 2012, available at <http://www.epi.org/blog/valuable-college-degree-economy/> (accessed August 2012).
- ⁵ Six experts responded to the *New York Times* question in the Room for Debate series in the Opinion Pages, available at <http://www.nytimes.com/roomfordebate/2012/04/18/do-wealthy-colleges-deserve-their-tax-breaks/> (accessed August 10, 2012). The Senate Committee on Finance hearings took place on July 25, 2012.
- ⁶ Senator Grassley’s statement was issued in a press release on July 25, 2012, available at http://www.grassley.senate.gov/news/Article.cfm?customel_dataPageID_1502=41948 (accessed August 9, 2012).
- ⁷ Daphne A. Kenyon and Adam H. Langley, “Payments in Lieu of Taxes: Balancing Municipal and Nonprofit Interests,” Urban Institute, Conference on State and Local Budget Pressures: The Charitable Property Tax Exemption and PILOTs, Washington, DC, May 21, 2012, available at http://www.urban.org/taxandcharities/upload/panel-3-Kenyon_May_21_2012.pdf (accessed August 9, 2012).
- ⁸ Jane Gravelle and Molly Sherlock, “Tax Issues Relating to Charitable Contributions and Organizations,” Congressional Research Service, January 18, 2011, available at <http://www.pgdc.com/pgdc/crs-examines-tax-issues-relating-charitable-contributions-and-organizations> (accessed April 2012); Joint Committee on Taxation, “Background and Present Law Relating to Tax Benefits for Education,” Report prepared for a Public Hearing before the Senate Committee on Finance, July 25, 2012, available at <https://www.jct.gov/publications.html?func=startdown&id=4474> (accessed August 2012); and Congressional Budget Office, “Tax Arbitrage by Colleges and Universities,” A CBO Study, US Congress, April 2010, available at <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/112xx/doc11226/04-30-taxarbitrage.pdf> (accessed August 2012).
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- ¹² As described in its Mission Statement at <http://www.northeastern.edu/ata glance/mission.html> (accessed August 2012).
- ¹³ Data are drawn from Northeastern University Fact Book: 2011-2012, Office of Institutional Research (2012), available at http://iris.lib.neu.edu/nu_fact_books/10/ (accessed August 2012); and Craig Douglas, “Northeastern University Preps Bond Sale amid Tuition Cost Concerns,” *Boston Business Journal*, July 30, 2012, available at <http://www.bizjournals.com/boston/news/2012/07/30/northeastern-university-preps-bond.html?page=all> (accessed August 2012).
- ¹⁴ For more information on the City of Boston’s PILOT program, see the program website, available at <http://www.cityofboston.gov/assessing/pilotprogram.asp> (accessed August 23, 2012); and the *Mayor’s PILOT Task Force Final Report & Recommendations*, City of Boston, December 2010, available at http://www.cityofboston.gov/Images/Documents/PILOT_Task_Force_Final_Report_WEB_tcm3-21904.pdf (accessed August 23, 2012).

¹⁵ Our analysis of state subsidies does not include the value of Northeastern's exemption from Massachusetts' Motor Vehicle Excise Tax due to the fact that Northeastern's Financial Statements and Form 990 do not disaggregate the value of the University's vehicles, although one presumes that the school's motor vehicle fleet benefits from it in ways that could theoretically be quantified.

¹⁶ Massachusetts also taxes tangible property at a rate of 0.26%, but neither Northeastern's financial statements nor its IRS Form 990 provide sufficient detail on the University's assets to disaggregate the value of its tangible property. The tangible property excise tax is therefore absent, leading to underestimating effects in our analysis.

¹⁷ This estimate does not include potential sales tax liability on Northeastern's \$16.1 million meal plan and food expense because the University's meal plan provider is a for-profit corporation. It is possible that the University may benefit from its exemption in the purchase of prepared foods through a pass-through arrangement with its meal plan provider, but the terms of the University's meal plan contract are not public.

¹⁸ All calculations were made in thousands of dollars (the unit of measure used in Northeastern's FY2011 Financial Statements), but figures are presented throughout the report in millions for greater clarity. In this table, the \$3.15M in sales tax is a preservation of the integrity of the calculation in thousands, rather than the rounded \$3.16.

¹⁹ Northeastern University, Consolidated Financial Statements, June 30, 2011, available at <http://www.northeastern.edu/neuhome/pdfs/financials-FY2011.pdf> (accessed August 2012).

²⁰ It should be noted that in their study of hospital tax exemption, Nancy Kane and William H. Wubbenhorst disregard tax-exempt debt for what remain unclear reasons to us; however, they acknowledge that in doing so, they are clearly understating the value of tax-exemption that a nonprofit receives from its ability to issue tax-exempt debt at muni-bond rates. Kane and Wubbenhorst, "Alternative Funding Policies for the Uninsured: Exploring the Value of Hospital Tax Exemption," *Milbank Quarterly* 78, no. 2 (June 2000): 185–212.

²¹ Our analysis of federal tax subsidies does not include the benefits that Northeastern receives as the recipient of charitable gifts, which can be deducted from donors' taxable income. In this sense, we too understate certain benefits Northeastern derives from non-profit fiscal policy, but it is the donor rather than the university that most benefits from this tax incentive. Richard Vedder recently included estimates of this benefit of charitable giving in his analysis of Princeton University, but he did not provide a clear explanation for his underlying assumptions. See Vedder, "Princeton Reaps Tax Breaks as State Colleges Beg."

²² The Joint Committee on Taxation's recent report "Background and Present Law Relating to Tax Benefits for Education," prepared for the recent US Senate Committee on Finance hearing on July 25, 2012, completely omitted universities' federal income tax exemption from its estimates of total federal tax expenditures on education. Economist Richard Vedder's analysis of public support received by Princeton University included an estimate of the value of the school's investment income tax exemption, but did not analyze other forms of federal income tax exemption.

²³ Note that Nancy Kane and William Wubbenhorst, in their estimation of hospital tax exemptions, also deduct contributions from net revenues, but this technique is based on an assumption that we find problematic, namely, that a taxable entity would not receive contributions. Many organizations can and do receive contributions, regardless of their tax status. Consider, for example, the kinds of non-tax-deductible contributions that trade groups or super-PACs receive to support lobbying or political activity or government contributions that for-profit companies receive as incentives to do business in certain jurisdictions. Therefore, we estimate the value of Northeastern's tax exemption, based on its actual revenues. Simply put, contributions are major sources of revenue, so we include them in our analysis, following our broader aim of quantifying the effective public subsidy that the school receives. Cf. Kane and Wubbenhorst, "Alternative Funding Policies for the Uninsured," 185–212.

²⁴ See Jane Gravelle "Limits to Capital Gains Feedback Effects," Congressional Research Service, March 15, 1991. It should be noted that Gravelle's estimation technique relies on Flow of Funds Accounts and capital gains realizations data from 1949-1987. Gravelle and Molly Sherlock's more recent papers with the Congressional Research Service on tax benefits received by non-profits, including "An Overview of the Nonprofit and Charitable Sector" in 2009 and "Tax Issues Relating to Charitable Contributions and Organizations" in 2011, are based on Gravelle's 1991 research but use a rounded 50% estimate of realized gains. Our analysis utilizes the original 46% estimate from the 1991 paper. Ideally, this estimate would be updated with more recent data drawn specifically from the kind of illiquid, high-risk, high-return investments college endowments have increasingly made over the last two decades.

²⁵ Alternatively, one might use Northeastern's realized capital gains stated in their FY2010 IRS Form 990 and apply a Consumer Price Index inflator to arrive at an estimate of the University's FY2011 realized gains. We believe this method would vastly understate the university's capital gains in 2011.

²⁶ See Carmichael, "Reports Aim to Put a Dollar Figure on Value of Colleges."

²⁷ *Mayor's PILOT Task Force Final Report & Recommendations*, City of Boston.

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