Should the Philadelphia Property Tax Classification System Be Modified?

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This article reviews issues related to proposed changes to the Philadelphia taxation system. There are two proposed plans. The City plan proposes modest cuts to the wage tax and to the net income portion of the business income and receipts tax (BIRT). The plan proposed by the Philadelphia Growth Coalition includes larger cuts in these taxes combined with an increase in the property tax on commercial real estate. The increase in the property tax on commercial real estate is intended to make up for losses of revenue from the tax cuts and is proposed to create a property tax classification system in which different classes of property are taxed at different rates. These proposals have been studied by Econsult Solutions (2015), and their findings are scrutinized in this article. Also, this article includes information on the main example of a property tax classification system in Cook County, Illinois, as a cautionary tale.

The Philadelphia Growth Coalition has recently proposed increasing the property tax rate on commercial property in the City of Philadelphia along with reductions to the wage tax and the business income and receipts tax (BIRT). The proposed increase is from 1.4% of property value to 1.61% of property value, to take effect in the next tax year after adoption. We calculate that, by including the business use and occupancy tax imposed by the School District of Philadelphia, Philadelphia already effectively imposes

COMMONWEALTH, Volume 20, Issue 1 (2018). ISSN 2469-7672 (online). http://dx.doi.org/10.15367/com.v20i1.179.

higher property tax on commercial real estate of 1.8% of assessed value.[1] The proposed increase would result in a tax rate of 2.01% on the assessed value of commercial real estate compared to the 1.4% on assessed value of residential property. The Central Philadelphia Development Corporation commissioned a study of the proposal from Econsult Solutions, a local economic consulting firm. That study is examined in this article.

The idea of raising the property tax rate only on commercial real estate (and not on residential real estate) caught our attention. The primary and most relevant example is the property tax classification system that has been in place in Cook County, Illinois, for many years. Cook County is the central county in the Chicago metropolitan area and contains the City of Chicago as well as numerous near-in suburbs. Cook County is surrounded by a set of counties, known as the "collar counties," which do not employ a classification system. Philadelphia is, of course, a separate county. In contrast to the Cook County case, all municipalities outside the City of Philadelphia are in other counties.

This study produced five tentative conclusions. First, reducing reliance on the wage tax is a good objective and moves Philadelphia closer to an optimal mix of taxes. The issue is identifying sources of revenue to replace any wage tax revenue losses. However, we would also point out that the wage tax on nonresidents is a method for taxing employers, including nonprofit institutions, that are exempt from property taxation (such as the city's primary drivers of its economy, the "meds and eds").

Second, replacement of a portion of the wage tax with an increase in the property tax on commercial real estate seems to be based on the belief that the commercial property tax base is relatively immobile (at least compared to jobs). This is not necessarily correct in the long run because an increase in the property tax rate reduces the market value of property immediately and has the long-run effect of discouraging real estate development. Evidence of these points is provided by studies of Cook County, Illinois.

Third, the empirical evidence from Cook County shows that the negative impact of a higher property tax on commercial property is greatest outside of the downtown area and nearer to the collar counties, where substitute real estate is readily available for tenants. This finding suggests that larger negative impacts of a property tax in Philadelphia may be in the remote portions of the city, away from Center City.

Fourth, the experience of Cook County should be a cautionary tale for a jurisdiction considering a classification system for the property tax that involves a higher tax on commercial property compared to the tax in the adjacent counties.

Finally, we believe that the proposed set of changes in tax policy needs further study. While a proposed increase in the property tax on commercial real estate may be needed to offset the loss of revenue from cuts in the wage and business net income taxes, a greater increase in the property tax on commercial real estate runs the risk of discouraging commercial real estate development in the city.

Taxes and Tax Reform in Philadelphia

The City of Philadelphia relies on four sources of tax revenue:

1. The wage tax is an income tax on all workers regardless of where they reside. The rate is currently at 3.91% for those who live and work in Philadelphia. For those who work in Philadelphia but do not live in its borders, the rate is 3.48%. At its highest (1993–1995), the Philadelphia wage tax was 4.96% for residents and 4.31% for nonresidents. There have been steady reductions in the wage tax since the mid-1990s.
2. The real estate tax is imposed at a rate of 0.6317% on the values (ad valorem) of both residential and commercial property.[2]
3. The BIRT is imposed on all businesses at rates of 0.14% on gross receipts and 6.39% on net business income.
4. The City uses a combination of other taxes, which include sales, parking, and real estate transfer taxes. These taxes make up 14% of total tax revenue, and are not part of the proposed tax reform package.

Revenue for the City of Philadelphia from each source for fiscal year 2016 is illustrated in Table 1.

Table 1. City of Philadelphia Revenue by Source, FY 2016

Source	Revenue ($, in millions)	Percentage of General Fund
Wage tax	1,742	53.8
Real estate tax	581	18.0
BIRT	454	14.0
Other taxes	460	14.2
Total	**3,237**	**100.0**

Source: Econsult Solutions (2015).

The Philadelphia tax structure has undergone several changes in its major taxes since the turn of the century. The first change is gradual wage tax reduction. Philadelphia was the first major city to implement a wage tax in 1939, then at a rate of 1.5%. What was intended to be a temporary tax to provide fiscal stability in the wake of the Great Depression became a permanent fixture in Philadelphia's taxation system. The negative impact of the wage tax on employment in the city has been documented by numerous studies since 1980. Luce and Summers (1987) estimated that the increase in the wage tax from 1.625% in 1964, to 2.0% in 1969, and to 4.3125% in 1983 resulted in 91,000 to 136,000 jobs lost, or roughly 60% of the total jobs lost in the city during those years. They concluded:

> It is very likely that a significant portion of the wage tax is, indeed, paid by businesses rather than commuters or city residents (in the form of higher wages that must be paid). The wage tax is, therefore, an inappropriate instrument being used to pursue an appropriate policy goal—matching the costs of public services to the beneficiaries. (Luce and Summers 1987, 59)

Given the documented negative impact of the wage tax on employment, it is understandable that reducing the wage tax has long remained an important goal. Since the mid-1990s, gradual decreases in the wage tax have been made. Due to the recent economic crisis, the wage tax remained constant at 3.928% for residents and 3.4985% for nonresidents between 2010 and 2013, after which gradual rate reductions recommenced. Unlike most municipal governments that rely heavily on real estate taxes, the City of Philadelphia relies on the wage tax for 54% of its tax revenue.

The second major change in the Philadelphia tax system was in the real estate tax due to the implementation of the Actual Value Initiative (AVI), an overhaul of the property assessment system. It had long been understood that there were inequities in Philadelphia's property assessment system across the entire city as the amount of tax paid was severely misaligned with the value of the property. AVI's purpose was to correct this imbalance by bringing property assessments to their "actual value," or true value of a property on the market. This ambitious plan sought to put into place three major changes simultaneously: (1) change the market value of each property parcel; (2) change the manner of how assessments are used to calculate tax bills; and (3) address how property owners would manage the tax increases as a result of the new system (Pew Charitable Trusts 2012). A study by the City of Philadelphia, Office of the City Controller (2013) before AVI's implementation found

that 107,603 properties would receive property value decreases and 343,191 properties would increase. The AVI process was intended to be revenue neutral, but it shifted the share of taxable value by property type. A report by Pew Trusts on AVI (2013) shows that the share of taxable value of residential property increases from 53.9% to 59.9% of all property taxes collected, and the share for all other property decreases from 46.1% to 40.0%. This change in shares means a significantly higher yield in tax revenue from residential properties and a loss of revenue from other properties. Data presented below show that the property taxes on office buildings did decline.

It is worth noting that approximately 10% of Philadelphia's real estate stock is owned by nonprofit institutions and is exempt from property taxes. These exemptions are controversial as nonprofit institutions hold some of the city's most valuable real estate and are some of the city's largest employers. In 1994, Philadelphia implemented a Payment in Lieu of Taxes (PILOT) program that allowed nonprofits to contribute voluntarily to the city's general fund to assist in the provision of basic services such as street repair and trash pickup (City of Philadelphia 1994). The program required the property owner to make a five-year commitment or risk having its tax-exempt status reviewed and possibly revoked. Prior to the commitments expiring, the Commonwealth enacted Act 55, the Institutions of Purely Public Charities Act, which allowed most of the nonprofits to safely allow their PILOT commitments to expire. Since 2000, the City essentially abandoned its PILOT program. A 2012 report from the Lincoln Institute of Land Policy shows that 218 jurisdictions in 28 states have implemented PILOT programs since 2000 (Langley, Kenyon, and Bailin 2012). There are 30 jurisdictions in Pennsylvania that collected $10 million in total in PILOT revenue in FY 2011, the largest being Erie ($2.8 million) and Pittsburgh ($2.6 million). Philadelphia's PILOT revenue was $491,860 or roughly 0.11% of its total property tax revenue. In the last year, there has been great political pressure to acquire more revenue from nonprofits, particularly the city's medical and educational institutions.

The third major change to Philadelphia taxes is the BIRT, which is a tax levied on all businesses in the city and which is divided into two parts: a tax on gross receipts and a tax on net income. Currently, the rate is 0.1415% on gross receipts and 6.39% on net income. This tax was previously called the Business Privilege Tax until its most recent reform in 2011 that resulted in two major changes: (1) businesses are now exempted from tax from the first $50,000 in gross receipts in 2014, $75,000 in 2015, and $100,000 in 2016 and in subsequent years, and (2) the tax rate on taxable net income would slowly be phased down to 6.0% by 2023. The impetus for these recent reforms stemmed from complaints that Philadelphia small businesses were at a competitive

disadvantage relative to small businesses outside of the city that were subject to lower taxes.

The School District of Philadelphia heavily relies on local tax and nontax revenue for its general fund in addition to funding from the state and federal government. The property tax is 1.39998% of assessed value, of which 0.6317% goes to the city's general fund and 0.7681% goes to the school district. In addition, the business use and occupancy tax is levied on the assessed value of commercial real estate at a statutory rate of 1.21% (with a number of exemptions and exclusions provided). In short, some commercial real estate is taxed at a statutory rate of 2.61% of assessed value, minus any exemptions and exclusions. The sources of revenue for the School District of Philadelphia for FY 2016 are illustrated in Table 2.

According to the Econsult Solutions (2015) report, the real estate tax revenue for the City of Philadelphia of $581 million consists of $361 million (62.1%) collected from residential property and $220 million (37.9%) collected from commercial property.

The breakdown of total real estate taxes into municipal, school district, residential, and commercial components is shown in Table 3. The computations are as follows. Commercial real estate tax collections for the City of Philadelphia are $220 million with a tax rate of 0.6317%, so the effective commercial real estate tax base is $220 million/0.006317 = $34.83 billion. The tax base computed in this manner is not equal to the total market value of property because of exemptions and exclusions in the determination of the tax due. Given this tax base, the commercial real estate tax collections for the school district are $34.83 billion × 0.007681 = $267 million.

Table 2. School District of Philadelphia Revenue by Source, FY 2016

Source	Revenue ($, in millions)
Local Tax Revenue	
Property tax	707
Business use and occupancy tax	141
Sales tax	120
Other local taxes	161
State Revenue	1,327
Local Nontax Revenue	131
Federal Revenue	11
Total	**2,599**

Source: School District of Philadelphia (2016).

Table 3. Real Estate Taxes in Philadelphia, FY 2016

Sector	Real Estate Tax Revenue ($, in millions)	Tax Rate	Tax Base ($, in billions)
City	581	0.6317	91.98
Residential	361		57.15
Commercial	220		34.83
School District	707	0.7681	91.98
Residential	439		57.15
Commercial	267		34.83
Total	1,287	1.3998	91.98
Residential	800		57.15
Commercial	487		34.83

Sources: Econsult Solutions (2015) and School District of Philadelphia (2016).

In addition, the school district collected $141 million for the business use and occupancy tax assessed on commercial real estate. The effective tax rate for the business use and occupancy tax can be found as B in:

$$\$34.83 \text{ billion } (0.007681 + B) = \$141 \text{ million} + \$267 \text{ million}$$
$$= \$408 \text{ million}$$

The solution for B is 0.004 (0.4%), which is the effective tax for the business use and occupancy tax, far lower than the statutory rate of 1.21%, likely because of the exemption of $165,300 of assessed value and several exclusions (hotels, vacant space, living space, nonprofit business space, and port-related property).

Considering Two Tax Reform Proposals: The City of Philadelphia Plan and the Growth Coalition "Levy-Sweeney" Plan

Let us consider two tax reform scenarios: one proposed by the City of Philadelphia and one proposed by the Growth Coalition. The City of Philadelphia proposal plans to reduce the wage tax on residents from 3.91% to 3.52% and on nonresidents from the current 3.48% to 3.13% over a period of 10 years. The City believes that wage tax revenue will continue to grow even as the wage tax rate is cut.

On the other hand, the tax reform proposal by the Growth Coalition as laid out in an Econsult Solutions (2015) report has four major elements.

First, reduce the wage tax from 3.91% to 3.0% on residents and from 3.48% to 2.5% on nonresidents over a period of 10 years, instead of the planned smaller reductions to 3.52% and 3.13%. Second, increase the real estate tax on commercial property to 1.61% immediately in 2017, and hold the tax rate on residential property at 1.3998%. The revenue generated from the increase in the real estate tax rate initially is to be devoted entirely to the City of Philadelphia to make up for the decline in other taxes. Third, reduce the net income tax part of BIRT from 6.39% to 3.0% over a period of 10 years (instead of the planned reduction to 6.00%), and keep the gross receipts part of BIRT at 0.14%. Finally, make no changes to the other tax rates.

The proposal to increase commercial real estate taxes to lower business and wage taxes has been dubbed the "Levy-Sweeney Plan" after the plan's two most vocal proponents, Philadelphia Center City District CEO Paul Levy and Brandywine Realty Trust CEO Jerry Sweeney. As it stands, a property tax classification system in Philadelphia would be feasible only if politics allow. Article VIII, Section 1 of the Pennsylvania State Constitution (best known as the taxation "uniformity clause") contends: "all taxes must be uniform, upon the same class of subjects, within the territorial limits of the authority levying the tax, and shall be collected and levied and collected under general laws." This clause has been subject to rather strict interpretation by the Pennsylvania State Supreme Court, which has made tax categorization systems and varying rate taxation difficult to implement. A Philadelphia property tax classification system would require a constitutional amendment that includes the passage of legislation by the General Assembly during two consecutive legislative sessions and then approval by voter referendum. Philadelphia City Council approved a resolution during the summer of 2015 that called on Harrisburg to draft such legislation, which was eventually drafted and passed by the General Assembly.

What is the expected change in tax revenue derived from the proposed increase in the tax rate on commercial real estate, assuming no other change in tax rates? If the entire increase in the tax is passed forward to tenants, then the value of the tax base remains at $34.83 billion. Tax revenue would increase from $487 million to $561 million, an increase of 15.2%. The share of revenue going to the City of Philadelphia would increase from $220 million to $293 million. However, suppose that none of the increase in the tax is passed forward to tenants because the market for commercial space is perfectly competitive across the metropolitan area. The basic equation for the value of rental real estate is:

$$V = (R - tV)/\rho = R/(\rho + t)$$

Here V is value, R is net rent excluding real estate tax (tV) at rate t, and ρ is the overall capitalization rate. Written in natural log form,

$\ln V = \ln R - \ln(\rho + t)$, and

$d\ln V = d\ln R - d\ln(\rho + t)$, with $d\ln R = 0$

Suppose that the overall capitalization rate ρ is 6.5% (0.065). Insert the alternative values for t of 1.3998% and 1.6098% and compute the change in $\ln(\rho + t)$. The change in $\ln(\rho + t)$ is –0.0262, so the value V declines by 2.6% from $34.83 billion to $33.92 billion. Tax revenue at the higher tax rate is $546 million. The share of revenue going to the City of Philadelphia is $279 million (a $59 million increase). In short, whether the increase in the tax is passed forward to tenants makes little difference to the increase in tax revenue. The City of Philadelphia might expect to obtain about $63 to $70 million in increased real estate tax revenue, a figure that matches the estimate obtained by Econsult Solutions (2015).

Property Tax Rates in Philadelphia's Surrounding Counties

The lament over Philadelphia's "tax gap" relative to its suburban neighboring counties in Pennsylvania and New Jersey is well documented. The good news for Philadelphia is that it has closed its tax disadvantage significantly in the new millennium. A Pew Trusts report (2012) comparing the tax burdens of hypothetical families in Philadelphia and its neighboring counties found that the city has closed its tax disadvantage by 3% in the Pennsylvania suburbs and 2% in the New Jersey suburbs. The hypothetical family's tax burden in Philadelphia (after considering state income taxes) *fell* from 10.7% to 9.8% while the burden increased both in the Pennsylvania suburbs (9.8% to 12.2%) and New Jersey suburbs (9.9% to 11.3%). The Pew study finds that the increased tax burden among Pennsylvania suburban counties was mostly due to property and wage taxes while the rise in New Jersey counties was mostly due to sales and property taxes.

Philadelphia's median property tax rates are lower than the surrounding counties in Pennsylvania and New Jersey, based on data for residential property (Table 4). If the median property tax rate for commercial real estate also is 0.91% of actual value (as opposed to assessed value), the addition of 0.40% from the business use and occupation tax makes the effective rate 1.31%. An increase in the property tax rate on commercial real estate in Philadelphia of 0.21% would bring the rate to 1.52% and place the City above the rates in Montgomery, Chester, and Bucks Counties.

Table 4. Median Effective Property Tax Rates in Delaware Valley Region by County: 2017	
County	**Median Effective Property Tax Rate (%)**
Philadelphia	0.91
Chester	1.25
Montgomery	1.29
Delaware	1.67
Bucks	1.27
Camden	2.50
Gloucester	2.27
Burlington	2.06
Source: tax-rates.org.	

Overview of the Philadelphia Commercial Real Estate Market

Commercial real estate in Center City Philadelphia has been growing steadily and is an inviting target for increased taxation. Nonresidential commercial real estate is broken down into four categories: office, industrial, hotel, and retail. Reports on the office and industrial markets are readily available, but detailed reports on the hotel and retail markets are not. This section is a brief overview of commercial real estate in Philadelphia.

Table 5 is a summary of the office market for Philadelphia and for the metropolitan area. The office market in Philadelphia contains 36% of the total square feet of office space in the metropolitan area (and 34% of the Class A office space). Philadelphia is dominated by the central business district (95% of the total space). The vacancy rate in the city is lower than the vacancy rates in the rest of the metro area and this pattern is typical in that central business districts have lower vacancy rates than suburban office markets. As one would expect, asking rents are higher in the City as well.

The Savills Studley (2015a) report on office rents in Center City shows that building owners have been doing well since 2011, the year of the bottom of the cycle for this market. Specifically, office-based employment increased by 2.5% in 2014 over 2013, which gave landlords the ability to increase rents. Furthermore, the recent citywide property reassessment gave a significant reduction in property taxes for commercial buildings. The average property tax per square foot on Class A buildings had been $3.10 from 2008 to 2012, then jumped to $3.98 in 2013, and fell to $2.36 in 2014. This is a 24% reduction for 2014 compared to 2012. Landlord effective rent on new leases in Class A

Table 5. The Office Market in Philadelphia and Suburbs						
Location	Total Square Feet (msf)	Vacancy Rate (%)	Asking Rent ($ per sf per year)	Class A Square Feet (msf)	Vacancy Rate (%)	Asking Rent ($ per sf per year)
Philadelphia	47.1	11.9	27.53	29.4	11.8	29.65
Suburbs in PA	54.6	18.9	24.71	39.4	16.7	25.74
Delaware	13.5	16.7	23.50	10.2	12.3	25.91
S. New Jersey	15.5	17.9	20.62	7.2	16.6	21.65
Total	**130.7**	**16.1**	**24.67**	**86.2**	**14.5**	**26.29**
Source: Savills Studley (2015b).						

buildings increased from $8.21 per square foot per year in 2012 and $8.57 in 2013 to $13.82 per square foot per year in 2014.[3] At the same time tenant effective rent increased from $29.90 per square foot per year in 2012 and $30.23 in 2013 to $34.74 for 2014. With landlord effective rent of $13.82 and an overall capitalization rate of about 6.5% as reported by CBRE (2016), the total value of the office buildings in Philadelphia is an estimated $9.6 billion. Given the prominence of the office market in Philadelphia and the fact that property taxes have been reduced, it should come as no surprise that there is a proposal to increase the property tax rate on Philadelphia's commercial real estate.

Table 6 provides a snapshot of the industrial market. We see that Philadelphia is not a prominent part of the industrial market, with 92 million square feet, just 19% of the total space in the metropolitan region. The vacancy rate in the city is higher than the average for the metro area, and quite a bit higher than the vacancy rate in the industrial market in the region's suburbs in

Table 6. Industrial Real Estate in Philadelphia and Suburbs			
Location	Total Square Feet (msf)	Vacancy Rate (%)	Asking Rent ($) (triple net)
Philadelphia	92.4	10.5	4.04
Flex Space	4.4	n.a.	9.20
Warehouse/Manufacturing	88.0	n.a.	3.78
Suburbs in PA	275.3	7.2	5.42
Delaware	28.5	20.6	4.58
S. New Jersey	97.8	9.2	4.20
Total	**494.0**	**9.0**	**4.85**
Source: Newmark Knight Frank (2015).			

Pennsylvania. Furthermore, asking rents in the city are lower than all the suburban markets. The industrial market is divided into three parts: warehouse space, manufacturing space, and higher-quality "flex" space that includes more than a minimal amount of office space. However, flex space is a very small portion of industrial supply in the city. Triple net asking rent is $4.04 per square foot, so landlord effective rent may be about $3.50 per square foot. According to CBRE (2016), the overall capitalization rate for industrial space in Philadelphia is 6.5%, which would yield a value of $54 per square foot. This estimate of value means that the stock of industrial space in the city is worth about $5 billion.

The hotel market in Philadelphia as of 2014 includes 43 hotels in Center City with 11,210 rooms. Center City District (2015) reports an average daily rate of $173 per occupied room with occupancy of 75.5%, which means revenue per available room of $131 and total revenue of $1.47 million per day for the Center City hotels ($536 million for the year). Other hotels are located near Philadelphia International Airport.

Philadelphia has a large retail sector. Center City District (2015) provides data on retailing between Girard Avenue and Tasker Street (as the respective north and south boundaries) and from the Delaware River to the Schuylkill River (as the respective east and west boundaries). In 2014, there were 3,193 store fronts consisting of 1,080 retail stores, 958 restaurant and food and drink establishments, and 1,155 service businesses. A detailed report for the Market East retail submarket for 2014 by CoStar (2015) shows an inventory of 482 buildings with 4.36 million square feet, a vacancy rate of only 5.5%, and average asking rent of $23.81 per square foot per year. Rent along Walnut Street is reported to be as high as $225 per square foot per year. Several big-box stores and other retail establishments are found along Columbus Boulevard next to the Delaware River as well.

Considering Tax Reform Proposals in the Growth Coalition "Levy-Sweeney" Plan

The Econsult Solutions (2015) report includes projections out to 2026 for the City only (not including the school district) under two "dynamic" scenarios: one with the smaller changes in tax rates and one with the larger changes in tax rates that includes the increase in the property tax. Table 7 shows a summary of the projections. We review those projections by comparing the two scenarios with the aim of understanding the long-run effects of the property tax increase.

Table 7. Tax Revenues under Two Scenarios ($)
(Tax revenue in millions, tax base in billions)

		Smaller Tax Change (City Scenario)			Larger Tax Change (Growth Coalition)		
Year	**2016**	**2017**	**2021**	**2026**	**2017**	**2021**	**2026**
Wage Tax Revenue, Residents	1,045	1,076	1,168	1,318	1,061	1,126	1,199
Tax Rate	3.91%	3.90%	3.70%	3.52%	3.82%	3.455%	3.0%
Tax Base	26.73	27.59	23.58	37.44	27.77	32.59	39.97
Wage Tax Revenue, Nonresidents	697	717	778	879	707	751	799
Tax Rate	3.48%	3.474%	3.30%	3.13%	3.385%	2.99%	2.5%
Tax Base	20.30	20.64	29.36	28.08	20.89	25.12	34.50
Real Estate Tax Revenue, Residential	361	366	411	454	369	437	483
Tax Rate	0.63%	0.63%	0.63%	0.63%	0.63%	0.63%	0.63%
Tax Base	53.78	57.94	65.06	71.87	58.41	69.18	76.46
Real Estate Tax Revenue, Commercial	220	225	263	305	296	352	415
Tax Rate	0.63%	0.63%	0.63%	0.63%	0.84%	0.84%	0.84%
Tax Base	34.83	35.62	41.63	48.28	35.17	41.82	49.30
BIRT Gross Receipts	118	121	139	163	122	145	182
Tax Rate	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%	0.14%
Tax Base	84.29	86.43	99.29	116.43	87.14	103.57	130.0
BIRT Net Income Receipts	336	340	393	447	324	331	315
Tax Rate	6.39%	6.35%	6.15%	6.00%	6.05%	4.7%	3.0%
Tax Base	5.26	5.35	6.39	7.45	5.35	7.04	10.5
Other taxes	460	469	559	672	479	590	732
Total	**3,237**	**3,314**	**3,711**	**4,238**	**3,358**	**3,732**	**4,125**
Employment (1000s)	804	805	815	822	813	845	883

Source: Econsult Solutions (2015). Smaller tax change as proposed by City, larger tax change as proposed by the Growth Coalition.

Comparison of the scenario with the smaller tax changes with the one with the larger tax changes shows that the wage tax on residents is being reduced from 3.70% to 3.455% in 2021 and from 3.52% to 3.0% in 2026. These are reductions of 6.62% and 14.77%, respectively. Revenue is projected to fall by 3.6% in 2021 and by 9.0% in 2026 as a result of shifting to the larger tax changes. The wage tax on nonresidents is reduced from 3.30% to 2.99% in 2021 and from 3.13% to 2.5% in 2026, which are cuts of 9.39% and 20.1%. Revenue is projected to fall by 3.47% in 2021 and by 9.1% in 2026 compared to the scenario with the smaller changes in tax rates. Employment is projected to increase from 815,000 to 845,000 in 2021 (3.68%) and from 822,000 to 883,000 in 2026 (7.42%).

The property tax rate on commercial property is increased from 1.3998% to 1.6098% in 2017 and held at that level. This is an increase in the tax rate of 15%. Revenue in 2021 for the City based on its new tax rate of 0.8417% is projected to increase by 33.84% in 2021 and 36.07% in 2026 compared to the scenario with the smaller tax changes, which includes no change in the property tax rate. The tax on net business income is reduced from 6.15% to 4.7% in 2021 and from 6.0% to 3.0% in 2026. Revenue is projected to fall by 15.78% for 2021 and by 29.53% for 2026 compared to the scenario with smaller tax changes.

The cuts in tax rates on wages and business net income increase the tax bases and reduce tax revenue, which is the normal outcome. The findings for commercial real estate are very different. The combined impact of the changes in tax rates, including the increase in the commercial property tax, is essentially no change in the tax base for 2021 and 2026. The tax is increased in 2017 from 0.6317% to 0.8417%, which means an immediate increase in tax bills and not enough time to change the supply of real estate. If the entire increase in the tax bill is passed along to tenants, an unlikely outcome, the value of property (i.e., the tax base) will remain constant. The more likely outcome is that property values tend to decline. The Econsult Solutions (2015) report estimates that the tax base will decline by 1.3% immediately in 2017 (and increase slightly in 2021 and 2026). Given that the tax rate increases by 33.2%, tax revenue is projected to increase from $225 million to $296 million (31.6%) in the first year, an increase of $71 million. Recall that our estimate is only slightly lower.

Table 7 provides an answer to the question whether the larger tax changes proposed by the Growth Coalition are revenue neutral—whether total tax revenue rises, falls, or remains constant given the changes. Comparing the two scenarios, Table 7 shows that total tax revenue for the City remains roughly

constant. In addition, the tax revenue from the four taxes that are changed (resident and nonresident wage tax, property tax on commercial real estate, and BIRT net income tax) does not change in 2017 or 2021. However, the revenue collected from these four taxes with the smaller tax changes is $2,949 million in 2026 and $2,728 million with the larger tax changes in 2026, a shortfall of $221 million.

Consider the other taxes on businesses in Philadelphia that are part of the City and Growth Coalition plans for reducing taxes, which include changes to wage taxes and the BIRT. Table 7 shows these taxes generated $2,078 million in 2016 on a base of $52 billion for a rate of 4%. Projections for 2026 for the two versions of tax cut plans are shown in Table 8. The dynamic version of the City plan collects $2,664 million on a base of $72.99 billion for a rate of 3.62%. The overall cut in the rate on this base from 4.0% to 3.62% is a cut in the rate of 0.38% (or 9.5% of 4.0%). The Growth Coalition plan cuts the overall tax rate to 2.81% on a base of $82.43 billion. The cut in the rate is 1.19% (or 29.75% of the original 4.0%). In other words, the tax cut proposed by the Growth Coalition is three times the size of the tax cut proposed by the City.

Table 8. Comparison of Tax Scenarios ($ figures in millions)

	Wage Tax, Residents	Wage Tax, Nonresidents	Business Net Income	Total Wage and Business Net Income	Commercial Real Estate
2016 Base					
Rate	3.9102%	3.48285	6.39%	4.00%	1.4%
Revenue	$1,045	$697	$336	$2,078	$220
Base	$26,725	$20,013	$5,258	$51,996	$15,714
2026 City Static (Smaller Tax Change)					
Rate	3.5165%	3.1322%	6.00%	3.63%	1.4%
Revenue	$1,263	$842	$447	$2,550	$293
Base	$35,916	$26,882	$7,450	$70,248	$20,929
2026 City Dynamic (Smaller Tax Change)					
Rate	3.5162%	3.1322%	6.00%	3.62%	1.4%
Revenue	$1,318	$879	$447	$2,644	$305
Base	$37,480	$28,063	$7,450	$72,993	$21,786
2016 Growth Coalition (Larger Tax Change)					
Rate	3.0%	2.5%	3.0%	2.81%	1.61%
Revenue	$1,199	$799	$315	$2,313	$415
Base	$39,967	$31,960	$10,500	$82,427	$25,776

Source: Econsult Solutions (2015).

The Cook County, Illinois, Property Tax System

Every county in Illinois, except Cook County, assesses all property that is subject to property taxation at 33.3% of market value. The Constitution of the State of Illinois permits counties with population in excess of 200,000 to adopt a classification system for local property taxation in which the assessment ratio can vary across classes of property by a factor no larger than 2.5. Cook County is the only county that has adopted such a system, which currently includes six major classes and eight incentive classes. The six major classes and their statutory assessment ratios are illustrated in Table 9.

The Illinois Department of Revenue computes an equalization factor that brings the total assessed value of property for Cook County to 33.3% of estimated market value for the entire county. Because residential property, Class 2 and Class 3, the largest category of property, is assessed at only 10% of market value, the equalization factor is in the range of 3.0. The actual equalization factor was 3.30 in 2010 and 2.9706 in 2011. These equalization factors imply that, in effect, commercial and industrial properties in Cook County are being assessed at 82.5% to 74.3% of market value, compared to 33.3% in the collar counties such as DuPage, Lake, and Will. The classification system leads to a large divergence in property taxes on commercial and industrial properties that are otherwise identical between Cook County and the adjacent counties. On the other hand, the state equalization factor brings the assessment ratio for residential property in Cook County roughly into equality with residential property in the adjacent counties.

It is important to make the distinction between the assessment ratio and the property tax rate. The property tax rate for Cook County reported here is the property tax bill divided by the value of the property, i.e., property taxes as a percentage of property value. For example, the property tax rate

Table 9. Cook County Property Tax Classifications by Statutory Assessment Ratios

Class	Type	Assessment Ratio
Class 1	Vacant or farm land	10%
Class 2	Residential (6 units or fewer)	10%
Class 3	Apartments (7 units or more)	10% (as of 2011)
Class 4	Not-for-profit	25%
Class 5a	Commercial	25%
Class 5b	Industrial	25%

Source: Cook County Assessor's Office (2015).

for tax year 2011 in River Forest Township in Cook County is calculated as follows:

$$\text{Tax Rate} = \frac{\text{Estimated Property Value} \times \text{Assessment Ratio} \times \text{State Equalization Factor} \times \text{Local Tax Rate}}{\text{Estimated Property Value}}$$

Estimated Property Value cancels out from this equation, so in this case of commercial and industrial property in suburban River Forest Township in Cook County,

$$\text{Tax Rate} = 0.25 \times 2.9706 \times 0.09247 = 0.0687$$

(6.87% of estimated property value)

The corresponding tax rate for residential property in River Forest Township uses the assessment ratio of 10%, which produces a tax rate of 2.75%.

The studies of industrial property sales by McDonald and Yurova (2006, 2007) found that the average property tax rate for 2001–2004 for a sample of 419 properties was 4.32% of market value in Cook County and 1.69% of market value in DuPage County. Other studies find similar differences.

Property Tax Rates in Metropolitan Chicago

Dardick and Bentle (2015) estimate effective property tax rates (property taxes as a percentage of property value) for 2015. Table 10 shows effective property tax rates for a representative sample of municipalities. Municipalities in Cook County and the adjacent counties of DuPage, Lake, and Will are shown. Table 10 shows that property tax rates in suburban Cook County municipalities are much higher than property tax rates both in the City of Chicago and in collar county municipalities.

Table 10 shows that the 2015 effective property tax rate in the City of Chicago on residential property (1.86%) was among the lowest in the metro area, but the rate on business property (4.64%) was higher than in most of the collar county municipalities. Funding from the State of Illinois for the Chicago Public Schools is a major factor in keeping these rates as low as they are. However, effective property tax rates on business property were higher in suburban Cook municipalities than in the collar county municipalities—in most cases much higher. The highest effective property tax rates on business property were in the low-income southern Cook County municipalities of Harvey and Calumet City. In addition, effective property tax rates in prosperous Cook

Table 10. Effective Property Tax Rates (%) in Chicago Area Counties, 2015		
Municipality	**Residential**	**Business**
Cook County		
Chicago	1.86	4.64
Arlington Heights	2.69	6.73
Glenview	2.37	5.92
Evanston	2.66	6.64
Harvey	5.72	14.31
Calumet City	7.10	17.74
Oak Park	3.35	8.38
DuPage County		
Elk Grove Village	3.22	3.22
Wheaton	2.67	2.67
Naperville	2.45	2.45
Lake County		
Buffalo Grove	3.27	3.27
Lake Forest	1.85	1.85
Waukegan	5.52	5.52
Will County		
Joliet	3.63	3.63
Peotone	3.15	3.15
Naperville	2.76	2.76

Note: The City of Naperville is a Chicago suburb located in both DuPage and Will counties.

Source: Dardick and Bentle (2015).

County suburbs such as Arlington Heights, Evanston, and Oak Park were double (or more) the rates in many of the collar county municipalities.

Economic Effects of the Cook County Property Tax System

Academic research on the Cook County property tax as it pertains to commercial and industrial property has produced four significant findings pertinent to this study. First, the growth of the property tax base for both commercial and industrial property in a county is strongly negatively affected by a property tax rate that exceeds the average for the metropolitan area. A greater increase in the property tax rate also inhibits the growth of the commercial and industrial tax base (McDonald 1993a). Second, higher property

tax rates led to significantly slower growth rates for employment, commercial property values, and industrial property values in suburban municipalities during 1990–1996 (Dye, McGuire, and Merriman 2001).[4] Third, industrial properties in Cook County sold for prices that were 16% lower than comparable properties in DuPage County during 2001–2004. This estimate implies that the difference in property taxes was fully capitalized into lower property values (McDonald and Yurova 2006, 2007).[5] As McDonald (1993a) and Dye, McGuire, and Merriman (2001) show, lower market values for industrial property translate into lower growth in property of this type. Last, a study of the downtown office rents found that 45% of property tax differences among those buildings were shifted to tenants in the form of higher rents (McDonald 1993b). This suggests that, under some conditions, a portion of higher property taxes is shifted to tenants rather than only reducing property value.

Conclusion: Philadelphia Must Exercise Caution but Continue to Seek an Optimal Tax System

We conclude with the observation that while reducing reliance on the Philadelphia wage tax is a good idea, the advisability of making a drastic cut in the business net income tax is open to question. Furthermore, while the creation of a property tax classification system faces legal hurdles, the separation of the property tax rates on residential and commercial property may lead to further increases in the tax on commercial property that could be harmful. As evidence from Cook County shows, Philadelphia must exercise utmost caution if it chooses to enact a property classification system.

This study raises the question of what should be the best combination of taxes to raise the money needed to operate municipal services. Philadelphia uses most of the various taxes that exist: property, sales, wage, business net income, and business gross receipts revenue. It is even going so far as to reach into a new grab-bag of taxes such as its new "beverage tax," a 1.5 cent per ounce tax on purchases of sugary and artificially sweetened beverages ("Philadelphia Beverage Tax" 2016). In general, Philadelphia has not taxed all forms of household income—just wages. There is general agreement that Philadelphia relies too heavily on the wage tax, but is there a solution to the problem? Philadelphia seems hard-pressed to figure out a solution that replaces its revenue. Is Philadelphia "boxed in" by the wage tax?

An answer to this question must include an assessment of the City's public services as well. Cities must provide educational and social services, but to do so, they must be able to attract and retain households and businesses that are able and willing to pay taxes. Success in attracting taxpayers depends

on providing the services and amenities that they demand. Good schools and safe neighborhoods probably top the list, but other factors such as parks, libraries, commercial corridors, and recreation centers are important too. Can the City leverage its public goods that attract new residents while retaining the residents that it has? Future studies must continue to think about whether an optimal combination of taxes exists and if cities can garner enough revenue to provide crucial services that meet its citizenry's needs.

NOTES

1. The School District of Philadelphia imposes a tax of 0.7681%, which brings the total tax rate to 1.3998%. An exemption from property taxes for 10 years is available for new construction or substantial renovation of existing properties.

2. For the most part, local governments rely on property taxes for a large percentage of their revenue. According to the Urban Institute, all local governments together raised 29.7% of tax revenue from real estate taxes, but that percentage has declined sharply from 66.2% in 1967 (Urban Institute 2012).

3. Landlord effective rent is defined as rent received by the landlord after all expenses have been subtracted. This includes an annualized amount for tenant concessions such as months of free rent and allowances for upgrades of the space. Tenant effective rent is the total cost of occupying the space (including utilities, with an adjustment for tenant concessions).

4. The City of Chicago is not included in the study.

5. The studies focused on industrial properties in the O'Hare Airport market area.

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