UHERO
THE ECONOMIC RESEARCH ORGANIZATION
AT THE UNIVERSITY OF HAWAI'I

Are Hotel Property Taxes Fully Passed on to Hotel Guests?

BY

JAMES MAK

Working Paper No. 2013-15

December 2013

UNIVERSITY OF HAWAI'I AT MANOA
2424 MAILE WAY, ROOM 540 • HONOLULU, HAWAI'I 96822
WWW.UHERO.HAWAII.EDU

Are Hotel Property Taxes Fully Passed on to Hotel Guests?

James Mak*

(December 27, 2013)

Abstract

Recent research on the excise tax effects of the property tax in small, multi-sector open economies suggests that the property tax may not be fully forward shifted to consumers as previously believed. I adapt this analysis to examine whether local hotel property taxes in Hawaii are fully passed on to hotel guests as lawmakers had intended. We conclude that full forward shifting is unlikely. I argue that an excise/sales tax on hotel occupancy is preferable to the property tax as a tourist tax.

Key words: Property tax, excise tax effects, hotel occupancy tax, hotel property tax

*Department of Economics and University of Hawaii Economic Research Organization, University of Hawaii-Manoa, Honolulu, Hi. U.S.A.

It is not uncommon among U.S. states to design their tax systems to export taxes to non-residents (Gade and Adkins, 1990). The same is true of tourist destinations. Taxes levied directly on tourists and tourism businesses have proliferated in the U.S. and around the world in recent decades.

The most widely levied tourist tax is the hotel room occupancy tax. It is an excise/sales tax, expressed either as a percentage of the daily rental price of an occupied hotel room (an ad valorem tax) or a specific sum of money per night (a per diem tax). Research has shown that the burden of the hotel room occupancy tax falls largely on room occupants; hence it is a consumption tax (see for example, Fujii, Khaled and Mak, 1985; Bonham, Fujii, Im, and Mak, 1992). To the extent that most of the hotel room guests are non-resident visitors, the hotel room occupancy tax is largely exported.

By contrast, Hawaii's four county governments are not permitted to levy hotel occupancy taxes.[1] To generate own-source revenues from tourism, the counties employ the property tax to tax tourist accommodations (Kato, Kwak, and Mak, 2010). In Hawaii property tax rates vary on different types of property and in different counties. In fiscal year 2012-2013, the City and County of Honolulu has the highest tax rate on hotel/resort properties at $12.40 per $1000 of net assessed valuation, while Kauai County is at the low end with hotel and resort property tax rates of $8.20 per $1000 of net assessed valuation on buildings and $7.14 on land.[2] Property tax rates also vary by type of

---

[1] There is a statewide hotel room occupancy tax imposed by the State government, and some of the revenue generated is distributed to the four counties. State lawmakers have occasionally threatened to take away the counties' share of the hotel room tax revenues.

[2] The assessment ratio for all four counties in Hawaii is 100%.

property. Two of the counties—Maui and Kauai—levy significantly higher rates on hotel and resort properties than on other types of property (e.g. industrial, commercial, apartments, single family residences). The ratio of hotel and resort property tax rates to rates on other types of property within each county is greatest on Maui. For fiscal year 2012- 2013, the Maui County Council set a rate of $9.15 per $1000 assessed value on hotel/resort properties compared to $7.10 on industrial property, $6.90 on commercial property, $6.00 on agricultural property, and $5.75 for single family residences.[3] Maui is also the most tourism dependent county in Hawaii with 39 percent of its gross domestic product attributable to tourism compared to 30 percent for Kauai, 24 percent for Hawaii Island, and 19 percent for Honolulu (Hawaii Tourism Authority, 2006).[4]

The question that I address here is who bears the burden of Hawaii's county property taxes levied on hotels? Are they passed on to hotel guests as lawmakers intended or are they backward shifted to investors, workers, and landowners? Recent research on the incidence of the property tax suggests that hotel property taxes in Hawaii, and perhaps elsewhere as well, might not be as readily passed on to hotel guests as previously believed. We argue that an excise tax on hotel occupancy is preferable to the property tax as a tourist tax.

I. Relevant Literature

---

[3] http://www.realpropertyhonolulu.com/content/rpadcms/documents/2012/12_rates.pdf (accessed on 4/12/2013).

[4] Maui, Kauai, and Hawaii Island counties are commonly referred to as the Neighbor Islands.

Who bears the burden of the property tax remains an unsettled issue. The "traditional view", which assumes an economy with one production sector, capital mobility, and labor/land immobility, argues that property taxes are fully forward shifted to consumers by increasing consumer prices by the full amount of the tax.[5] Later research suggests that this may not be true. In his seminal paper, Mieszkowski (1972) offers a "new view" which argues that the property tax is a tax on capital which increases the cost of capital services in production. Differential property tax rates between communities result in differential production costs of goods and services; thus (p. 77) "…depending on the competitive position of the industries in the high tax communities vis-à-vis firms in other areas, the price of the products of the heavily taxed industries will rise, and/or wages and the returns on land will have to fall so that the industries in the high tax town can remain competitive." Mieszkowski (1972, pp. 90 and 95) surmises that in a single sector model with partial labor mobility at least three quarters of the property tax falls on consumers.

In a very recent paper, Muthitacharoan and Zodrow (hereafter MZ, 2012) re-examine the excise tax effects of the property tax. MZ develop an intermediate time frame model of a small open economy with four sectors, manufacturing, agriculture, services, and housing. Manufacturing and agriculture are tradable goods meaning that their output prices are determined externally and thus fixed. Services and housing are not tradable meaning that their output prices are determined locally. All four sectors employ labor, capital, and land. Both product and factor input markets are assumed to be

[5] See Muthitacharoan and Zodrow (2012, pp. 559-561) for a more extensive review of related literature. Also Zodrow (2001).

perfectly competitive. The supply of capital in the taxing jurisdiction is assumed to be perfectly elastic meaning that the rate of return after taxes on capital is also fixed. Labor is partially mobile; it is mobile across production sectors within the taxing jurisdiction but immobile between jurisdictions. However, the amount of land in each production sector is fixed. A uniform property tax rate increase is imposed on manufacturing, services, and housing, but not on agriculture. Finally, it is assumed that other jurisdictions hold their tax policies constant.

In this world, who bears the burden of the property tax increase? Since the return on capital is fixed, the excise tax effects of a property tax increase are distributed only among consumers, workers, and owners of the various types of land in the taxing jurisdiction. Using simulation methodology, MZ find (p. 558) "…that, within an intermediate-run time frame in which labor is mobile across production sectors but fixed within the taxing jurisdiction, the excise tax effects of the property tax fall primarily on labor and land; for example, in our benchmark case, 65 percent of the tax burden borne by the residents is concentrated on the sources side of the incidence, and more than three-quarters of that sources-side burden is due to a decline in labor income." There is partial forward shifting in the two nontradable sectors—housing and services—but the rise in consumer prices in those two sectors account for only 35 percent of the increase in tax revenue (MZ, Table 2, p. 569). MZ explain (p. 568) that "the reallocation of labor across sectors in response to the tax [increase] puts downward pressure on wages in all production sectors and therefore mitigates the forward shifting of the tax burden in the two nontradable sectors…Thus, the traditional view of the property tax, under which consumer prices go up by the full amount of the property tax, does not obtain in the four-sector model."

MZ also consider a longer time horizon in which labor is also perfectly mobile across tax jurisdictions. Workers are permitted to commute to a job in another jurisdiction but continue to live within the taxing jurisdiction.[6] (Imagine the residents of a rural community or a suburb commuting to the nearby city to work because wages are higher in the city.) Under those circumstances, wage rates in the taxing jurisdiction cannot fall after the property taxes are raised since workers will otherwise opt to work in some other jurisdiction at higher wages. MZ find (p. 578) that…"when labor mobility is expanded to include interjurisdictional mobility so that backward shifting to labor is impossible, the extent of forward shifting to consumers increases substantially, with about three-quarters of the total tax burden borne by the residents falling on consumers of housing and services." In sum, the property tax increase is either largely forward shifted or largely backward shifted depending on whether workers can seek employment in other jurisdictions that face lower property taxes.

II. Implications for the Incidence of Hawaii's Local Hotel Property Taxes

MZ's model is not a precise representation of Hawaii's economy. Most importantly, there is no hotel sector. Also, there is little manufacturing in Hawaii (relative to the rest of the U.S.).[7] Thus, a revision of the MZ four-sector model for

---

[6] Note that permitting residents to change their residence eliminates the possibility of forward shifting. (MZ, 2012, p. 561)

[7] In 2006, manufacturing accounted for 1.6 percent of the state's gross domestic product compared to 13.9 percent for the entire U.S. (State of Hawaii, Department of Business, Economic Development and Tourism, February, 2008.) Agriculture's share of GDP is

Hawaii could include agriculture, housing, services (other than hotels), and hotels.[8] The result is a more accurate description of the state's Neighbor Island counties. Likewise, there are many local jurisdictions elsewhere whose principal exports comprise only of tourism services and agriculture. While MZ assume prices of their two tradable goods—manufacturing and agriculture—are fixed, we assume hotel room rates are set locally (and not nationally or globally) and therefore not fixed.[9] Assuming room rates to be fixed would exclude the possibility of forward shifting in the hotel sector. The level and changes in hotel room rates vary greatly among the counties in Hawaii, and between Hawaii and other tourist destinations (see, for example, George, 2012). Adapting MZ's analysis to Hawaii's situation, we can now consider the incidence of a property tax increase in the hotel sector *in a single Hawaii county* (e.g. Maui).

An increase in the property tax rate on hotels and resorts increases the cost of production in that sector. Capital is driven out of the hotel sector to other sectors (and to neighboring jurisdictions). Demand for labor and land also decline in the hotel sector. With partial labor mobility, workers leave the hotel sector to seek employment in housing, agriculture, and non-hotel services and putting downward pressure on wage

---

even less than that of manufacturing (.7 percent for Hawaii compared to 1.0 percent for the U.S.), but is much more important on the Neighbor Islands.

[8] One distinction between hotel and non-hotel services is that non-hotel services are labor intensive while hotel services require large inputs of both labor and capital.

[9] This implies that hotel accommodations are not sold in perfectly competitive markets. We assume prices of the agricultural goods are fixed; most of the agricultural output in Hawaii is exported.

rates in all four sectors. Net land rents decline in the hotel sector but increases in the other three sectors as production rises in those sectors due to the inflow of capital and labor from the hotel sector. With higher production costs, hotel room rates rise but not by the full amount of the property tax increase as declining wage rates and land rent combine to hold down the rise in hotel room rates. If workers are able to travel at negligible cost to work in other jurisdictions, wages in the taxing jurisdiction cannot fall and more of the property tax increase in the hotel sector will fall on hotel guests. However, in Hawaii interjurisdictional labor mobility means commuting to work by costly air travel to another county (island). The high cost of interisland travel would deter a large number of people from commuting to work in another county as a result of one county raising its hotel property tax rate.[10] This means that labor in the taxing jurisdiction will bear a significant share of the burden of the increased property tax rate on hotel properties. Thus, an increase in the hotel property tax cannot be fully passed on to hotel guests.

III. Conclusion

Property taxes can be a sizable item in hotel operating expenses. In 2011, property taxes averaged $1,999 per available room per year at full service hotels in the U.S., $8.10 per occupied room night, 4.6 percent of operating expenses excluding capital costs, and 3.4 percent of hotel revenues from all (i.e. room and non-room) sources. At limited service hotels where room rental revenues comprised almost all (97 percent) of total hotel revenues,[11] property taxes averaged $1,157 per available room per year, $4.55

[10] A few people who live on the Neighbor Islands commute to work in Honolulu due to lower housing costs on the Neighbor Islands.

[11] Compared to 67 percent in full service hotels.

per occupied room night, or 8.5 percent of operating expenses, and 4.9 percent of hotel revenues (STR, 2012).

The analysis here, adapted from MZ, suggests that the real property tax levied on hotels is not as readily passed on to tourists in the form of higher after tax hotel room rates as previously believed. More work needs to be done, perhaps using simulation as did MZ, to ascertain how much of the hotel property tax is forward shifted. Is it less than one-half, more than one-half, or more than three fourth? From the residents' perspective, this raises the question of whether it is better to raise the property tax on hotels or to allow the local authorities to levy their own excise/sales tax on hotel room occupancy? The fact that the latter is far more widely employed around the world as a tourist tax indicates that the excise tax is the preferred (and superior) choice. Property taxes on improvements can discourage capital investment. Property values (for tax purposes) are also difficult to measure accurately as assessors must separate the taxable tangible values from the nontaxable intangible values such as the value of a brand/franchise (Rushmore and Rubin, 1984; Hutcheson, 2008). In 1989, the U.S. Advisory Commission on Intergovernmental Relations (ACIR) in a report to the Hawaii Tax Review Commission (ACIR, 1989, p. 8) recommended that the State turn over its hotel room occupancy (i.e. transient accommodation) tax to the four counties. The Legislature did not implement the recommendation. While no reason was explicitly given for rejecting the recommendation, there was--and there remains--concern amongst hoteliers that giving the counties authority to levy their own hotel occupancy tax might lead to higher and unequal tax rates.

An unusual approach to taxing hotel room occupancy that combines the use of the property tax and a de facto excise/ sales tax is found in Antwerp and Brussels (Belgium). In those two cities, the hotel room tax is a specific number of euros (EUR) per room per quarter/year (levied on hotels) whether or not the room is occupied; larger amounts are levied on hotels that have more rooms and charge higher prices.[12] Thus, hotel room taxes in these two cities are essentially property taxes. Hotels then add a per diem "tax" on guest bills at the time of check-out; the amount charged is at the discretion of the individual hotels. An internet search (5/16/2013) of selected 1 to 4-star hotels in Antwerp (check-in June 3, 2013; check-out June 4, 2013) found the following quoted "city taxes" on lodging for 2 guests: ibis budget Antwerpen Central Station (1 star), EUR 1.60 per *accommodation* per night; Hotel Postiljon (1 star), EUR 1 per *person* per night; Hotel Antwerpt Billard Palace (1 star), EUR 2 per *person* per night; Hotel Industies (2 stars), EUR 3.50 per *person* per night; Hotel Granducale (2 stars), city tax "is not applicable"; Hotel Scheldezicht (2 stars), EUR 2.5 per *person* per night; ibis Styles Antwerpen City Center (3 stars), EUR 1.5 per *accommodation* per night; Holiday Inn Express Antwerp Çity-North (3 stars), EUR 2.5 per *person* per night; Leopold Hotel Antwerp (4 stars), EUR 2.50 per *person* per night; Hotel Mercure Antwerpen Centrum Opera (4 stars), EUR *1.5* per *accommodation* per night.[13] Such disparity in taxes can

[12] At http://www.etoa.org/policyareas/tourist-taxes/belgium (Accessed on 4/12/2013).

[13] One of the co-authors of this article was told at the time of check-out from one Antwerp hotel in 2012 that the per diem tax must be paid in cash. An additional 6 percent national value-added tax (VAT) is included in the rental price of the room.

only contribute to consumer confusion and possibly resentment. I suggest that local governments should tax the room occupants directly by levying a hotel occupancy tax instead.

References

Bonham, Carl, Edwin Fujii, Eric Im, and James Mak. (1992). "The Impact of the Hotel Room Tax: An Interrupted Time Series Approach," *National Tax Journal,* XLV (4), December, pp. 432-442.

Fujii, Edwin, Mohammed Khaled, and James Mak. (1985). "The Exportability of Hotel Occupancy and Other Tourist Taxes," *National Tax Journal,* 38 (2), June, pp. 169-178.

Gade, Mary N. and Lee C. Adkins. (1990). "Tax Exporting and State Revenue Sources," *National Tax Journal,* 43, March, pp. 39-52.

George, James R. (2012). "Digging into Hawaii Hotel Industry's Most Recent Occupancy, Room Rate Numbers," *Pacific Business News,* July 13 at http://www.bizjournals.com/pacific/blog/2012/07/digging-into-hawaii-hotel-industrys.html?page=all (Accessed on April 22, 2013).

Green, Cindy Estis and Mark V. Lomanno. (2012). *Distribution Channel Analysis: A Guide for Hotels*, An AH&LA and STR Special Report Published by the HSMAI Foundation, January, at http://www.ahla.com/uploadedFiles/_Common/pdf/Distribution_Analysis.pdf (Accessed on February 1, 2012).

Hawaii Tourism Authority. (2006). *County Tourism Strategic Plans, 2006-2015* at http://www.hawaiitourismauthority.org/about-hta/plans/#county (Accessed on May 5, 2013).

Hutcheson, Mark. (2008). "Mass Appraisals May Lead to Higher Taxes," *Hotel News Resource,* March 11 at http://www.hotelnewsresource.com/article31546.html

(Accessed on May 2, 2013).

Kato, Andrew, Sally Kwak, and James Mak. (2010). “Using the Property Tax to Appropriate Gains from Tourism,” *Journal of Travel Research,* XX (X), pp. 1-10.

Mieszkowski, Peter. (1972). “The Property Tax: An Excise Tax or A Profits Tax?” *Journal of Public Economics,* 1, 1972, pp. 73-96.

Muthitacharoen, Athiphat and George R. Zodrow. (2012). “Revisiting the Excise Tax Effects of the Property Tax,” *Public Finance Review,* 40 (5), pp. 555-583.

Rushmore, Stephen and Karen E. Rubin. (1984). *The Valuation of Hotels and Motels for Assessment Purposes,* Mineola, N.Y.: HVS International, April at http://www.hvs.com/content/971.pdf (Accessed on April 30, 2013).

State of Hawaii, Department of Business, Economic Development and Tourism (DBEDT). (2008). *Measuring Economic Diversification in Hawaii,* Honolulu: Research and Economic Analysis Division, DBEDT, February.

STR. (2012). *HOST 2012, U.S. Hotel Operating Statistics Study Report for the Year 2011* at http://www.strglobal.com/Samples/NA/HOSTHighlights.pdf (Accessed on April 27, 2013).

U.S. Advisory Commission on Intergovernmental Relations (ACIR). (1989). “Intergovernmental Fiscal Relations in Hawaii,” in *Tax Review Commission, Working Papers and Consultant Studies,* vol. 2, Honolulu: State of Hawaii Department of Taxation, December, pp. 139-314.

Zodrow, George R. (2001). “The Property Tax as a Capital Tax: A Room with Three Views,” *National Tax Journal*, 54 (1) March, pp. 139-155.