COUNCIL COMMITTEE OF THE WHOLE

The Council Committee of the Whole met on September 10, 2019 at 6:01 p.m., with Council President Hare presiding. Members of Council present were Mr. Anderson, Mr. Sudler (arrived at 6:03 p.m.), Mr. Neil, Mr. Slavin, Mr. Cole, Mr. Polce, Mr. Taylor, and Mr. Lindell (arrived at 6:23 p.m.). Mayor Christiansen was also present (departed at 6:25 p.m.). Civilian members present for their Committee meetings were Mr. Caldwell and Col. Dix, Retired, *(Parks, Recreation, and Community Enhancement)*, and Mr. Contant and Mr. Shevock *(Legislative, Finance, and Administration)*.

PARKS, RECREATION, AND COMMUNITY ENHANCEMENT COMMITTEE

The Parks, Recreation, and Community Enhancement Committee met with Chairman Anderson presiding.

ADOPTION OF AGENDA

Mr. Neil moved for approval of the agenda, seconded by Mr. Taylor and unanimously carried.

Presentation - Dementia Friendly Delaware (Lindy Scott)

Ms. Lindy Scott reviewed a presentation entitled "Dementia Friendly Delaware, Addressing a Growing Need in the State" **(Attachment #1)**.

Responding to Mr. Sudler, Ms. Scott advised that they were finalizing the training process but that it would only be about an hour long and could be done either in person or through the web.

Mr. Caldwell asked if the training would involve family members as well. In response, Ms. Scott stated that they wanted to train City workers first and then there would be an outreach effort for caregivers as well.

Mr. Neil thanked Ms. Scott and Lieutenant Governor Bethany Hall-Long for making healthcare issues a priority.

Mr. Anderson indicated that he had some questions regarding how exactly the program would work and the different organization involved, and that he would contact Ms. Scott for additional information.

Mr. Neil moved for adjournment of the Parks, Recreation, and Community Enhancement Committee meeting. The motion was seconded by Mr. Taylor and unanimously carried.

Meeting adjourned at 6:16 p.m.

LEGISLATIVE, FINANCE, AND ADMINISTRATION COMMITTEE

The Legislative, Finance, and Administration Committee met with Council President Hare presiding in the absence of Chairman Lindell, who assumed the Chair upon his arrival at 6:23 p.m.

ADOPTION OF AGENDA

Mr. Neil moved for approval of the agenda, seconded by Mr. Anderson and unanimously carried.

Public Hearing - Proposed Ordinance #2019-16 Amending Chapter 102 - Taxation of the Dover Code by inserting a new Article VII - Lodging Tax

Mr. Neil read the following statement into the record:

> The Mayor and I serve as the City's representatives on the Kent County Tourism Board. I have witnessed the renaissance of this Board since 2015 into a vibrant, moving forward force to bring visitors to Dover and Kent County. A look at Delaware's Quaint Villages, the Kent County Tourism website shows why more and more visitors have reasons to come and are coming here.
>
> I took the Certified Tourism Ambassador Training program and passed, which disproves the statement that "You Can't teach Old Dogs New Tricks."
>
> As the worse Lacrosse Player in the University of Maryland history, I love DE Turf because it brings a continuing flow of visitors to this area... but so does NASCAR, Firefly, College Graduations, Homecoming Football Games, the State Legislature, the Kent County Tourism outreach and the miscellaneous other reasons that bring people here.
>
> I do know that Hotel/Motel owners receive top dollar when demand is high. They also pay fees to booking agents if rooms are booked through those agencies including those with agreements with DE Turf... plus a fee if they have an agreement with DE Turf.
>
> Should we implement this Lodging Tax, they will NOT pay that tax nor will the City Taxpayers. It is a lot cheaper to pay the small additional fee than to pay for the gas to travel to New Castle or Sussex County to stay... and more convenient too.
>
> If the City uses this additional money for infrastructure, as I hope it will be used, then I regard this as a User Fee that currently falls solely on the City Taxpayers.

> Keep in mind, during the recession, much of the infrastructure, including machinery, was extended far beyond its life expectancy. The emergency repairs of these infrastructure items cost far more than scheduled replacement would cost.
>
> Since both the City and the County can levy this Tax, I certainly will seek a reasonable approach in the amount to set, but it will be implemented. City taxpayers deserve no less.

Mr. Hare declared the public hearing open.

Mr. K.C. Sheth, 21 St. Annes Court, noted that he had been a City resident for 50 years, and had served on the City's Board of Adjustment for 27 years, and as former Chairman of the Board for Kent County Tourism. He expressed concern regarding the proposed lodging tax, explaining that it would negatively impact the hotel industry in the City, especially since property and school taxes were just increased. Mr. Sheth stated that he thought that infrastructure was an issue for every resident of the City, so they should carry the burden equally.

Mr. Victor Schimp, 163 Stonewater Way, stated that he had been a resident of Dover since 1969 and had worked in the hospitality industry since 1973, starting at the age of 14. He informed members that he had served as a former Chairman of the Delaware Hotel and Lodging Association, former Chairman of Kent County Tourism, and as former Chairman of the Central Delaware Chamber of Commerce, so he has a vested interest in the hotel industry, tourism, and business in general, and cannot sit idly by and watch the industry get hit with a potential 75% increase in public accommodations tax (PAT). He expressed concern regarding the adverse impact that a City and County lodging tax would have on the hotel industry. Mr. Schimp noted that he had heard talk regarding a slowdown approach to the tax increase of 1% or 1.5% and suggested that the legislation be rewritten with a 1% or 1.5% cap.

Ms. Bessie Crain, 855 Townsend Boulevard, asked why a nonprofit organization was benefitting from this lodging tax and what the monies would be used to fund, noting that no one was providing any information. Responding, Mr. Lindell clarified that, in regard to a nonprofit organization benefitting, Kent County was considering a lodging tax which would go to DE Turf. He stated that the City was not part of that proposal. Mr. Lindell noted that he thought members planned to discuss what the proposed lodging taxes would fund following the public hearing.

Mrs. Sara Herbert, 223 North Bradford Street, expressed concern regarding the proposed lodging tax. She referenced an article from the Delaware State News, indicating that if both the County and City measures are implemented, the lodging tax rate in the City of Dover limits would rise to 14%, making it the highest hotel tax in the state. She stated that she thought it was Council's job to protect businesses and not make it harder on them. Mrs. Herbert stated that it was her understanding that Kent County Levy Court would be the body to approve the countywide increase, and noted that she was hearing that the rate would be set at 1%, however, she did not trust it. She expressed concern

that the County had not yet scheduled discussions regarding the tax and questioned why the City would set a tax rate and meet to discuss this matter on September 23, 2019 before they know what Kent County Levy Court is going to do. Mrs. Herbert explained that if the City and County both set lodging tax rates at 3%, then the rate will be up to at least 14%. She stated that she thought that a City tax should go to the City and no where else, noting that the City's downtown and infrastructure need work. Mrs. Herbert also expressed concern that the lodging tax legislation was pushed through the state legislature at the last minute and was unfair and poorly thought out, noting that DE Turf bragged about the fact that they were not going to use any tax money, and they are a nonprofit that has been making a profit.

Mr. Sam Chick, 115 West Loockerman Street, expressed concern regarding the negative impacts the proposed lodging tax increase would have on the economy of Dover, noting that it would be an increase for the hoteliers because there is already an 8% state lodging tax in Delaware. He indicated that the tax would not only impact hotel occupancy but all businesses, explaining that by taking the money through the lodging tax, it could not be spent in the City. Mr. Chick noted that he did not feel it was fair to impose another tax, especially since taxes were recently increased, but stated that he did not disagree with the principle that the City should get some lodging tax. He suggested that if the City wanted a lodging tax, they should go back to the General Assembly and ask them for a portion of the existing 8%.

In response to Mr. Chick, Mr. Neil stated that the 8% that the state collects is divided among the counties for tourism uses, with the smallest portion going to Kent County and the largest to New Castle County. He noted that he did not think that the lodging tax would keep anyone from staying in Dover, explaining that they would have to stay somewhere if they want to see their child play at DE Turf. Responding, Mr. Chick stated that five-eighths of the state lodging tax goes to the General Fund, so there is plenty of money sitting there. He suggested that there are other ways to approach this than increasing taxes. Mr. Chick questioned why people would want to stay in or build a hotel in Dover if the taxes are higher in the City than they are in the surrounding County or any of the municipalities. He suggested that it would be better for Council to maintain what they have, explaining that he thought it would make the City more competitive for lodging and more hotels would be built here because it would be more of an economic advantage than the rest of the state.

Mr. Joe Fitzgerald, speaking on behalf of the Delaware Hotel Lodging Association, expressed opposition to the tax increase and concern regarding the potential economic impact of the tax. He stated that the Delaware Hotel Lodging Association was very concerned about the manner in which the legislation was passed by the General Assembly. He explained that, while they were only enabling legislation for the City and County, he thought they still merited a committee hearing and should have gone through the regular process so stakeholders could have an opportunity to weigh in on how they thought these taxes would affect them.

Mr. Schimp clarified that the 8% state PAT is currently allocated as follows: 5% to the General Fund, 1% to the State Tourism Office, 1% to beach replenishment, and 1% allocated to the three counties based on the proportion of lodging revenue.

Mr. Hare noted that when the General Assembly passed the enabling legislation for New Castle and Sussex Counties, they stipulated that they could only tax unincorporated areas; however, the legislation for Kent County did not include that stipulation. He expressed concern that Kent County is not treated equally, noting that Kent County does not receive equal treatment regarding payment of in lieu of taxes (PILOT) either. Mr. Hare stated that he thought the County would implement a 3% lodging tax and if the City implements a 1.5% lodging tax, the City would have the lowest lodging tax in the state. He stated that the County's tax would all go to DE Turf, which he thought would guarantee no future property tax increases from the County, explaining that it would be difficult to raise taxes and give $1M to a nonprofit. Mr. Hare stated that the money collected from the City's lodging tax would be used to help reduce expenses within the City, which would benefit everyone.

Mr. Anderson moved to amend line 8 of Proposed Ordinance #2019-16 by inserting after rent, "starting with an initial rate of 1.5%." The motion was seconded by Mr. Neil.

Responding to Mr. Contant, Mr. Anderson stated that the total revenue for a 1.5% lodging tax rate was still being projected and unknown, but the revenue projections would be approximately $350,000, plus or minus $50,000.

Mr. Sudler stated that he thought it was apparent that the City's hoteliers would endure a financial hardship with the proposed lodging tax, and without stating how the City plans on utilizing the funds, he could not currently support any initiative for a lodging tax.

Mr. Slavin stated that he was sensitive to the comments regarding the stacking of taxes, explaining that while it is a decision for the City to raise its own taxes, the City has a beneficial relationship with Kent County Levy Court and has always tried to have a peaceful coexistence, so he thought they needed to take that into account. He stated that he thought that any motion passed by the Committee should specifically state that any revenues raised go to infrastructure deferred maintenance in the City. Mr. Slavin also suggested that if the City were to set an initial rate of 1.5%, it should be stepped specifically in .5% increments over a period of time, to allow the ability to take the rate back down if needed.

Mr. Anderson stated that he thought that the state lodging tax was basically an 11% tax now with the rates that had been set by the counties and municipalities. He explained that the Committee motion's would set a level, which he hoped would be an example to the county not to exceed. Mr. Anderson stated that since people had not stayed away from other places in the state that had implemented lodging taxes, he did not think they would stay away from Dover, since Dover is a place that tourists come and enjoy. He explained that he thought the motion was reasonable because

it provides some measure of economic certainty. Mr. Anderson cautioned that if the City did not set a level now, it would leave the door open for the County to set a higher level, up to 3%, and he wanted the money to stay in the City to help make it a more economically vibrant place with better infrastructure and to keep taxes lower.

Mr. Neil stated that it was very clear that the City's infrastructure was in need because the tax rate was kept so low during the recession and continued to be low for a long period of time, and any time there is an emergency repair required, it costs more. He explained that he did not think that the lodging tax would hurt the hotels, particularly if they are charging the maximum amount that they can because there are not enough rooms in the area for the people. Mr. Neil noted that the customers would be paying the tax, not the hotel, and they expect to pay it, like they do elsewhere. He stated that, at least they get a break in Delaware because there is no sales tax.

Mr. Contant stated that he is always cautious about raising taxes or creating new taxes, because he questions what will stop the government from doing it in the future to the detriment of the economy. He noted that while he disagreed with the way the General Assembly passed the legislation at the end of their session with the traditional committee process, he could see that some people are worried about it being a race to 3%. Mr. Contant indicated that he thought that if the City sets the precedent, it might make the County back off a little bit. He stated that he likes the idea of step increases, so that the City can see the impact over time, and that he would like to see that implemented as an amendment to the proposed ordinance.

Mr. Hare noted that he had heard from some hoteliers that DE Turf often cancels events a few weeks out and hotels have to deal with large blocks of room reservations being cancelled. He suggested that DE Turf take some responsibility for the compensation of hotels when they cancel events. Mr. Hare also encouraged those who participated in the public hearing to also express their concerns to Kent County Levy Court.

Mr. Cole indicated that he agreed with using the lodging tax revenue for infrastructure and that he also liked the idea of .5% step increases.

Mr. Slavin stated that members could amend the motion on the floor or they could ask that the motion be withdrawn and a new motion be put on the floor.

Mr. Anderson stated that he did not want to withdraw his motion because they need the certainty. He explained that he thought that the rate was fair and that it would be a huge mistake to do it otherwise because the City would not necessarily get enough revenue to accomplish its goals with a .5% tax. Mr. Anderson stated that he thought they would just be delaying the inevitable.

Mr. Taylor stated that he did not think the .5% increments seemed to be enough at a time and Mr. Anderson's motion seemed to be fair; however, he was concerned for the local businesses

because of the recent increases in school and property taxes. He stated that he could not support it as is.

Mr. Polce referred to information he reviewed during the Committee meeting of July 9, 2019. He stated that the article titled "The Impact of the Hotel Room Tax: An Interrupted Time Series Approach," published in the National Tax Journal in December 1992, **(Attachment #2)**, demonstrates the debate on the hotel or lodging tax in the early '90s and the propensity to sway a consumer's habit on a lodging tax. He also reviewed an article published in January 28, 2019 by the National Conference of State Legislatures (NCSL) **(Attachment #3)**, noting that it demonstrates that no data can be borne out that a marginal increase could sway a consumer's behavior. Mr. Polce noted that the term "marginal" is really critical in this debate, in the fact that members have to decide what marginal is. He explained that the discussion throughout this process had led to a deliberate decision and members were now talking about a 1.5% rate which is $1.50 on $100, regardless of whether it is done as a step increase or implemented at the time the ordinance is enacted. Referring to local hotel data from Travelocity on July 26, 2019, Mr. Polce stated that the cost of a room at Dover Downs was $198, and asked if members thought $1.98 would impact the consumer's decision whether or not to come to Dover. He noted that he had recently traveled to Dublin, Ireland where his lodging tax rate was 23% and he never considered spending time outside of Dublin as a result. Mr. Polce stated that individuals are drawn to Dover for DE Turf, NASCAR, Firefly, First Fridays, etc. and consumers determine what they are willing to pay, not the industry. Responding to Mr. Taylor's concerns regarding the recent tax increases, Mr. Polce stated that the citizens of Dover are bearing the City's decision regarding the property tax increase, and those living within the Capital School District are paying as a result of the referendum. He advised that members have to be mindful that each tax has implications and are coming from different funding sources and potential funding sources. Mr. Polce stated that he thought it was also important to keep in mind that research showed that the vast majority of hotel taxes are not coming from those who live within their same geographical hub. He expressed his opinion that the proposal was a very reasonable compromise.

Mr. Lindell stated that he did not support a 3% lodging tax; however, the state legislature provided the City with enabling legislation allowing "up to 3%" and he indicated that he thought the City's legislation should remain consistent. He stated that he agreed with the suggestion that the tax should be implemented in increments and that he thought any revenue that comes of this definitely needs to go to infrastructure.

Mr. Slavin reminded everyone that the Committee would send a recommendation to Council regarding the proposed ordinance and then Council would hold two readings, one in two weeks and one in four weeks, and at each of those occasions, there would be an opportunity for public input. He stated that they do business like that because they do not like to fight on the floor, explaining that they like to hear what the concerns are and then bring things to the floor once they have worked them out and hopefully they can achieve that compromise. Mr. Slavin expressed his opinion that members had carried this matter as far as they could, explaining that the Committee has the option to take the

spirit of the dialogue and pass the matter onto Council without a recommendation and Council could then continue the dialogue in two weeks. He stated that hopefully in the two intervening weeks members would have time to sit down and work out a compromise, noting that he thought they had certainly exhibited an ability to move on this issue.

Mr. Hare noted that no public hearings would be held regarding this matter during the Council meetings in two and four weeks. Responding, Mr. Slavin stated that Council can always vote to suspend the rules and have a public hearing. Mr. Hare indicated that the Committee could recommend that Council set a public hearing, however, he stated that he thought that they would hear a lot of the same comments.

Mr. Neil stated that after the vote was completed on the current motion, he would have a motion to designate the funds generated from this tax to go to the infrastructure.

Mr. Hare advised members that the First Reading was already accomplished, so the Final Reading would be held during the meeting on September 23, 2019.

The motion to amend line 8 of Proposed Ordinance #2019-16 by inserting after rent, "starting with an initial rate of 1.5%," failed by a roll call vote of seven no (Sudler, Slavin, Cole, Taylor, Lindell, Hare, and Contant) and four yes (Anderson, Neil, Polce, and Shevock).

Mr. Slavin moved to advance Proposed Ordinance #2019-16 without any recommendation from the Committee and for a public hearing to be scheduled for the next Council meeting on September 23, 2019. The motion was seconded by Mr. Cole.

Mr. Anderson reminded everyone that if no public hearing is scheduled for this particular matter, anyone wishing to speak about it can do so during the open forum segment of the Council meeting.

The motion to advance Proposed Ordinance #2019-16 without any recommendation from the Committee and for a public hearing to be scheduled for the next Council meeting on September 23, 2019 was carried by a roll call vote of eight yes (Neil, Slavin, Cole, Polce, Taylor, Lindell, Shevock, and Contant) and three no (Anderson, Sudler, and Hare).

Proposed Ordinance #2019-17 - Amending Appendix C - Downtown Redevelopment and Appendix D - Downtown Dover Business Improvement District (Sponsor: CCW/LF&A Committee)

This matter was deferred during the Council Committee of the Whole/Legislative, Finance, and Administration Committee meeting of July 23, 2018.

Mr. Slavin advised that credit for the introduction of this proposed ordinance was owed to Mr. Taylor, who, like many members of Council, expressed an interest in the status of the City's downtown. Mr. Slavin stated that this is a taxation issue, explaining that the Business Improvement

District (BID) tax is levied against property owners within the very area the City is trying to revitalize, and it is levied in addition to property taxes. He reminded members that, two or three years ago, Council was successful in rolling the rate back to zero and had left it at zero. Mr. Slavin stated that he thought that the City should just eliminate this provision from the tax rules entirely, because it is not necessary at this point. He informed members that he had repeatedly heard from downtown property and business owners that they felt that this tax was unfair to them because it was an additional property tax.

Mr. Todd Stonesifer, 115 North State Street, advised members that he wants to see the downtown area revitalized and thrive, explaining that he has lots at stake as a property owner in the BID and President of Destination Downtown Dover, which is a nonprofit whose mission is to energize the heart of Delaware, which is Dover's downtown area. He stated that Destination Downtown Dover is responsible for a portion of First Fridays, as well as History, Heritage and Hops, and Oktoberfest, from which the funding all goes back into improvement of the downtown area. Mr. Stonesifer informed members that the biggest complaint he hears is in regard to building stock. He explained that economic development 101 says that if an individual who wants to open a business in downtown Dover has to bring a very outdated building up to current Code, pay property tax, and then pay a secondary BID tax, and will probably take their idea outside the BID. Mr. Stonesifer indicated that eliminating the BID tax would support the effort of trying to improve downtown Dover. He also suggested the possibility of implementing more incentives and educating people who have an interest in those incentives.

Mr. Anderson stated that the City had implemented a number of incentives for downtown Dover, so it makes sense to also eliminate disincentives. He reminded members that Council had set the BID tax rate at zero the past couple of years, and he thought that the proposed ordinance would formalize that decision. Mr. Anderson noted that his only concern was in regard to any possible legal implications and, since he had yet to see any indication that there would be any unforeseen legal issues, he was in support of the proposed ordinance.

Mr. Neil moved to recommend adoption of Proposed Ordinance #2019-17, seconded by Mr. Taylor and unanimously carried.

Evaluation of Requests for Proposals - Collection Agency Services

Mrs. Donna Mitchell, City Manager, reviewed the background and analysis regarding the evaluation of requests for proposals (RFPs) for Collection Agency Services.

Staff recommended approval of IC System of St. Paul, MN for Collection Services and authorization for the City Manager to negotiate and sign a final agreement with IC System of St. Paul, MN for Collection Services. Fees are based on a percentage of revenue collected.

Mrs. Mitchell advised that the collection agency adds an 18% fee to the amount of the collection; however, she suggested having Mr. Matt Harline, Assistant City Manager, determine whether the

City would get a better collection rate if they take the 18% out of the City's collection instead. She explained that the City would only get 82% on the dollar, instead of 100%; however, the City was not getting anything with the 18% add-on fee arrangement with the last collection agency. Mrs. Mitchell stated that she wanted Council's authorization to negotiate less than 100% in order to get a great collection, noting that she would not go below the 18% reduction.

Responding to Mr. Polce, Mrs. Mitchell explained that the agency would still be collecting 100% of the debt; however, they would take their fee from the City instead of adding it onto what the customer already owes. She stated that she wanted to look at the analysis to determine if they would be able to collect more by doing it this way because they did not have much success with the previous agency which was adding on the customer fee. Mr. Contant stated that, based on his experience trying to collect money on behalf of his homeowners' association (HOA), the HOA found they were more successful in getting money from people when the HOA paid the collection agency fee out of the money collected instead of adding it onto the overall price. He explained, for example, that if someone owed $100, the collection agency fee would be paid from the $100 collected, instead of collecting $118. Mr. Contant stated that he thought that some people were just not willing to pay the additional amount, so they would not pay at all.

Mr. Contant asked what the collection success rate is for ICS. Responding, Mrs. Patricia Marney, Customer Service Director, advised that they collected $11M in 2017 and $13M in 2018, noting that they have 700,000 accounts. She stated that she was not sure that answered Mr. Contant's question and that she would be happy to get that information. Mr. Contant stated that he would be interested in knowing that information; although, he noted that, according to the Staff Evaluation Matrix, he thought that it appeared that ICS met the rest of the City's criteria better than the other companies.

Mr. Anderson expressed his support for Mrs. Mitchell having the authority to run an analysis. He stated that he thought that if they were dealing with people who were not paying, and then the amount changes once they agree to pay, it might psychologically take them back to not want to pay. Mr. Anderson noted that he could understand Mrs. Mitchell's interest in wanting to try another way, since the City tried it by adding on the fee and only got a 2% success rate, while the national average tends to be approximately 30% for collections.

Mr. Sudler stated that Mrs. Mitchell had gained his trust in her insight because she has been accurate and precise when it comes to numbers and analogy in the past. He expressed his support and faith in Mrs. Mitchell's assessment.

Mr. Taylor stated that Mrs. Mitchell also has his support. He noted that, as a business owner with approximately 4,000 customers, if he hired a collection agency and they got 50% of what was owed, that would be better than 100% of nothing.

Mr. Neil moved to recommend approval of staff's recommendation of IC System of St. Paul, MN for Collection Services, and authorization for the City Manager to negotiate and sign a final agreement with IC System of St. Paul, MN for Collection Services. Fees are based on a percentage of revenue collected. The motion was seconded by Mr. Sudler and unanimously carried.

Evaluation of Bids - FY 19 Street and Alley Program

Mrs. Donna Mitchell, City Manager, reviewed the evaluation of bids for the FY 19 Street and Alley Program, noting that the program is based on Community Transportation Fund (CTF) funding, and is prevailing wage projects. She stated that Grassbusters Landscaping, Inc. was currently doing most of the work for the City, they had been doing a good job, and there had not been any problems. Mrs. Mitchell advised that these CTF funds would basically complete the remainder of the streets in the Lincoln Park development.

Staff recommended awarding a unit price contract, based upon Bid #19-0024PW for the FY 19 Street & Alley Program to Grassbusters Landscaping, Inc. based on the Prevailing Wage unit prices for each work item submitted. The estimated value of the contract is $483,294. Work will be performed in strict accordance to the Bid Specifications.

Mr. Sudler moved to recommend awarding a unit price contract, based upon Bid #19-0024PW for the FY 19 Street & Alley Program to Grassbusters Landscaping, Inc. based on the Prevailing Wage unit prices for each work item submitted. The estimated value of the contract is $483,294. Work will be performed in strict accordance to the Bid Specifications, as recommended by staff. The motion was seconded by Mr. Anderson and unanimously carried.

Fiscal Year 2019/20 Edward Byrne Justice Assistance Grant Program - In-car Camera/Computer Systems and Interview Room System Upgrade

Mrs. Donna Mitchell, City Manager, reviewed the background information regarding the Fiscal Year 2019/20 Edward Byrne Justice Assistance Grant Program.

Staff recommended approval of the grant project, as requested.

Responding to Mr. Sudler, Mrs. Mitchell explained her understanding that the Smyrna Police Department Mental Health Partnership Program was where a counselor rides along with the police officers for people with opioid issues. Mr. Polce advised that the Mental Health Partnership Program is a nationally recognized model where they embed a practitioner with a clinical background in with the police to respond for intervention for individuals with either chronic persistent mental illness or substance use disorder. He stated that when the idea was originally pitched to the Dover Police Department, they decided to abstain and the monies were reappropriated to Smyrna. Mr. Polce noted that the initial concern was that the Dover Police Department did not have enough officers in the community policing division, which is where the embedded practitioner would best fit. He explained that the program is very successful in Smyrna and there are also programs in Oceanview,

and Georgetown, and it was his understanding that Milford was also attempting to start a pilot program.

In response to Mr. Sudler, Mr. Anderson stated that this is a joint grant application for Dover and Smyrna and each agency decides what to do with their funding. He explained that this partnership had been ongoing for many years and because Dover is the larger entity, it has the capacity to act as the administrative agent.

Mr. Neil moved to recommend approval of the grant project, as requested. The motion was seconded by Mr. Anderson and unanimously carried.

Mr. Neil moved for adjournment of the Legislative, Finance, and Administration Committee meeting, seconded by Mr. Shevock and unanimously carried.

Meeting adjourned at 7:49 p.m.

Mr. Neil moved for adjournment of the Council Committee of the Whole meeting. The motion was seconded by Mr. Shevock and unanimously carried.

Meeting adjourned at 7:50 p.m.

William F. Hare
Council President

WFH/TM/dd/jt
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Attachments

Attachment #1 - Presentation entitled "Dementia Friendly Delaware, Addressing a Growing Need in the State," provided by Ms. Lindy Scott

Attachment #2 - An article titled "The Impact of the Hotel Room Tax: An Interrupted Time Series Approach," published in the National Tax Journal in December 1992, provided by Mr. Polce

Attachment #3 - National Conference of State Legislatures (NCSL), Table of State Lodging Taxes, dated January 28, 2019, provided by Mr. Polce



Thank you for allowing me to be here today. My name is Lindy Scott and I am the Executive Assistant to the Director of the Delaware Division of Services for Aging and Adults with Physical Disabilities or DSAAPD. Our division is working with partners from around the state, including Lt. Governor Bethany Hall-Long, to support people diagnosed with dementia and their caregivers though an innovated new initiative: Dementia Friendly Delaware.

This initiative is in response to a growing need for dementia friendly efforts throughout, not just the US, but worldwide. By 2025 the number of people age 65 and older with Alzheimer's disease and other dementias is estimated to reach 7.1 million. Nearly 60% of people with dementia live in their own community homes and one in seven live alone. 85% of unpaid help (an average of 22 hours per week with a value of approximately $218 billion annually) is provided by family members. Due to caregiving responsibilities, businesses are losing $34 billion annually in revenue and productivity .

As one of the states with the fastest growing aging populations, Delaware has seen the dramatic rise of the retirement age population. Currently, there are an estimated 17,000 Delawareans over the age of 65 living with Alzheimer's disease or related dementias. By 2025 this number is expected to grow by 35% to 23,000. Our division, and one of our sister divisions, the Division of Medicaid and Medical Assistance, have seen the increased need for services, especially for this vulnerable population.

So what is Dementia Friendly Delaware? For one, the effort starts with all of you. While DSAAPD is the lead agency and the Lt. Governor is providing much needed leadership in the effort, all of you will play a pivotal role in make Dementia Friendly Delaware a success.

Response to the Need:
Dementia Friendly Community



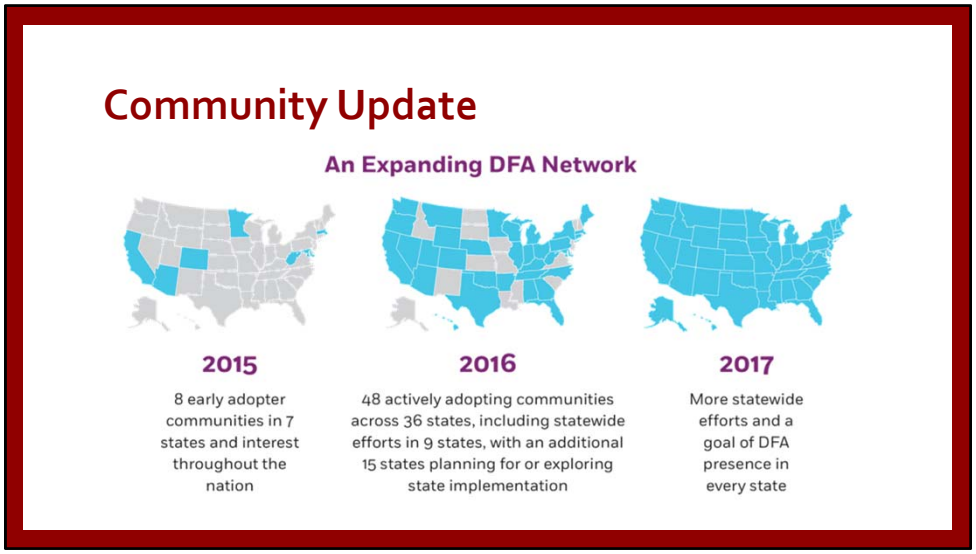
- The Dementia Friendly Delaware initiative will provide a system of technical assistance, tools and resources to assist communities and individuals in taking action to improve community and system capabilities, optimize the health, wellbeing and involvement of people with dementia and their care partners, and support them to continue in their roles.
- Every part of the community plays a role and can work together to take steps to create a dementia friendly culture.
- **Businesses**, such as **banks** and **financial and legal services** support customers with dementia and **employers** support employees who are caregivers
- **Health care systems** promote early diagnosis and options for ongoing care and support
- **Communities of faith** provide welcoming and engaging environments for those with the disease and their caregivers
- **Local governments** plan and implement housing, transportation, public spaces, and emergency response that enable people with dementia to thrive in the community
- **Neighbors and community members** are understanding and supportive to those around them, including individuals with cognitive impairment
- **Residential care and community based supports** offer a range of services to maximize independence and support ongoing community engagement with a variety of options adapted to cognitive decline.

Testing Ground: Minnesota Results



- Awareness and education: Dementia Friends
- Caregiver supports
- New, meaningful community engagement opportunities (arts, music)
- Cross-Sector Engagement and Training: business, government, law enforcement, youth, first responder and faith
- Health system adoption of optimal dementia care practices

- The Dementia Friendly America initiative is based on Minnesota's ACT on Alzheimer's, a successful statewide, volunteer-driven collaboration of medical, academic, community, government, business and nonprofit stakeholders from across the state. Developmental evaluation of these communities has shown an increase in services and resources that are supportive of people living with dementia, an increased awareness of dementia and effective responses from those living in communities undertaking this effort, and a greater sense of confidence for those living with dementia and/or their care partners.
- Since 2011, 43 communities have come together to prepare for the personal, social, and budget impacts of dementia by addressing community needs and increasing support for people impacted by dementia. Another 7 communities will join the effort in the coming months.



The DFA network is expanding rapidly, as you can see in this slide. Delaware, by joining this network, is able to utilize the knowledge and technical assistance of every other community who has already started these efforts.

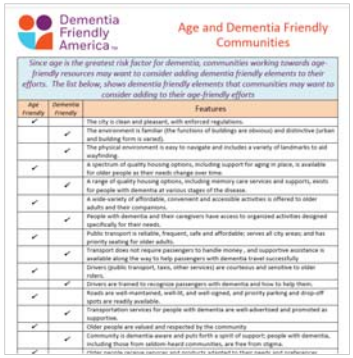


The Dementia Friendly America initiative is led by a coalition of over 35 national organizations that represent different aspects of community. These include but are not limited to: health care, philanthropy, emergency and first response, clergy, and business



- The Dementia Friendly America initiative has set out to foster dementia friendly communities across the country. To do so, DFA has created a robust set of resources that help all communities work towards dementia friendliness.
- The outcomes we hope to see from fostering dementia friendly communities are three-fold:
    - Community capacity to support those with dementia and their care partners
    - System capacity to support those with dementia and their care partners
    - Lastly and most importantly, enhanced quality of life and other positive outcomes for those with dementia and their care partners

Alignment with Age-Friendly



Dementia Friendly America

Age and Dementia Friendly Communities

Since age is the greatest risk factor for dementia, communities working towards age-friendly resources may want to consider adding dementia friendly elements to their efforts. The list below, shows dementia friendly elements that communities may want to consider adding to their age-friendly efforts

Age Friendly	Dementia Friendly	Features
✓		The city is clean and pleasant, with enforced regulations.
	✓	The environment is familiar (the functions of buildings are obvious) and distinctive (urban and building form is varied).
	✓	The physical environment is easy to navigate and includes a variety of landmarks to aid wayfinding.
✓		A spectrum of quality housing options, including support for aging in place, is available for older people as their needs change over time.
	✓	A range of quality housing options, including memory care services and supports, exists for people with dementia at various stages of the disease.
✓		A wide variety of affordable, convenient and accessible activities is offered to older adults and their companions.
	✓	People with dementia and their caregivers have access to organized activities designed specifically for their needs.
✓		Public transport is reliable, frequent, safe and affordable; serves all city areas; and has priority seating for older adults.
	✓	Transport does not require passengers to handle money , and supportive assistance is available along the way to help passengers with dementia travel successfully.
✓		Drivers (public transport, taxis, other services) are courteous and sensitive to older riders.
	✓	Drivers are trained to recognize passengers with dementia and how to help them.
✓		Roads are well-maintained, well-lit, and well-signed, and priority parking and drop-off spots are readily available.
	✓	Transportation services for people with dementia are well-advertised and promoted as supportive.
✓		Older people are valued and respected by the community.
	✓	Community is dementia-aware and puts forth a spirit of support; people with dementia, including those from seldom-heard communities, are free from stigma.
✓		Older people receive services and products adapted to their needs and preferences.



RESEARCH REPORT MARCH 2016

Better Together:
A Comparative Analysis of Age-Friendly and Dementia Friendly Communities

Natalie Turner and Lydia Morken

DFA also works to align dementia friendly communities efforts with age friendly efforts and provide resources to help in this regard. In Delaware, this is particularly important because the older population is growing rapidly.

Community Web-Based Resource



Here you will see a depiction of the different sectors that DFA has resources for. If a resource is not available through the DFA site, Delaware can reach out to another partner within the network to get the resource needed.



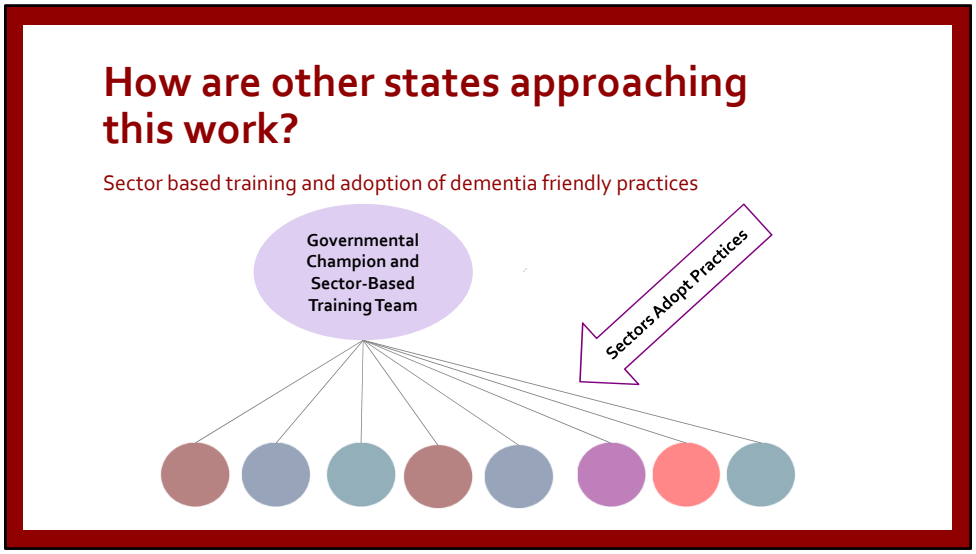
Every part of community has a unique role in contributing to dementia friendliness. Taking an all sectors approach is a way to build engagement across many parts of the community. It is important as Delaware begins this initiative, that we have representation from all of these sectors. You will notice many nontraditional sectors, that especially our division does not normally work hand-in-hand with, including businesses and financial services. However, these sectors are critical to achieving a dementia friendly Delaware.

Example of Sector Guides



- Business
- Banks and financial
- Community-based supports
- Faith communities
- Health and long term care
- Legal and advance planning
- Local government (planning, emergency response, law enforcement)
- Neighbor and community members

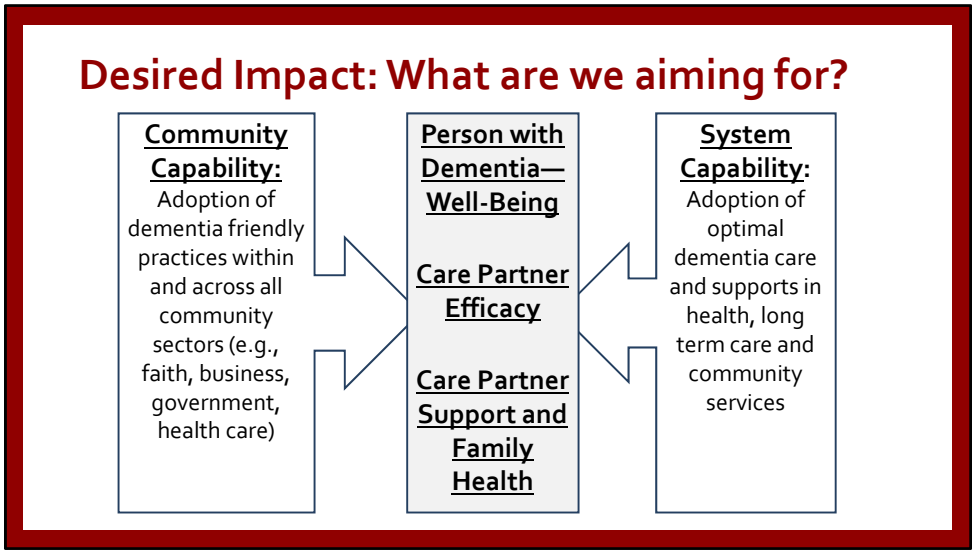
Every part of the community has a unique role in meaningfully supporting people with dementia and their family and friend care partners. Sector guides provide information, resources, and actions that specific sectors can take. Examples of things in sectors guides that are useful are specific things the sectors can do, such as environmental tips. In the Business sector guide tips include providing quiet places to sit and relax and making there are well-lit hallways, uncluttered spaces, and prominent, easy-to-understand signs for restrooms and other important places.



States are approaching this work through sector-based training and adoption of dementia friendly practices.

This is how we are approaching dementia friendly Delaware. DSAAPD is the governmental champion and connects with the national network, as well as provides annual reports to the DFA national team.

We are asking that the City of Dover be our local government sector champion by providing needed dementia training for all city workers. This includes those that interact with the residents of Dover like Customer Service office and first responders. In addition, City Planners can learn from trainings how making small changes to Dover's public spaces can have a huge impact for someone that has been diagnosed with dementia to be able to thrive in your city. DSAAPD is able to provide technical assistance in order for this to happen.



This is our desired impact and potential evaluation design. If the community and system have the capability to adopt dementia friendly practices, everyone in our state will benefit. We also believe that the training provided will have a positive effect on other populations, like those with autism.

Contact for Questions

Lindy Scott – Lindy.Scott@Delaware.gov

Julie Devlin – Julie.Devlin@Delaware.gov

302-255-9393

Dementia Friendly Delaware

In closing, DSAAPD, with the Lt. Governor's Office, is excited to join all of you as we move our state forward with this important initiative. We hope you will make the decision to become a Dementia Friendly city, Delaware's first city or local government entity to do so. If you do, DSAAPD will work with you to implement this important training for all city workers. If you have any questions, please feel free to reach out to me or my colleague, Julie Devlin, who is staffing the initiative with me for our division.

(December, 1992), pp. 433-41

THE IMPACT OF THE HOTEL ROOM TAX: AN INTERRUPTED TIME SERIES APPROACH**

CARL BONHAM, EDWIN FUJII, ERIC IM, AND JAMES MAK*

National Tax Association

ABSTRACT

Travel destinations commonly levy hotel room taxes to finance services demanded by tourists and residents. Evidence to date on the effects of a hotel room tax has centered on ex ante analyses of the incidence of a hotel room tax and its effect on the demand for travel and vacation goods. In this paper we employ interrupted time series analysis to estimate ex post the impact of a hotel room tax on real net hotel revenues by analyzing that time series before and after the imposition of the tax. We find that the tax had a negligible effect on real hotel revenues.

Introduction

TRAVEL destinations commonly levy special tourist taxes to finance public services demanded by tourists and residents. A popular tax is the *ad valorem* hotel room (transient accommodation) occupancy tax, typically assessed as a percentage of the rental price of an occupied hotel room. In 1990, 47 out of 50 states in the U.S. levied taxes on hotel room rentals [Hiemstra and Ismail, (April 1990, p. 4)]. Alaska, California, and Oregon do not levy state taxes on room rentals but permit localities to levy hotel room taxes.

In recent years, rising fiscal responsibilities combined with the growing reluctance of residents to pay higher taxes have induced many state and local governments to enact new taxes or increase rates on existing hotel room taxes. Since 1987, Atlanta raised its hotel room tax from 8 percent to 11 percent, Fort Lauderdale from 7 percent to 9 percent, Portland, Oregon from 6 percent to 9 percent, Dallas from 9 percent to 13 percent, and Columbus, Ohio from 11.5 percent to 15.5 percent.[1] In August 1984, the average hotel room tax rate in 45 U.S. cities with room taxes was about 7 percent (Mak, 1988). A similar survey of 242 U.S. visitor convention bureaus found that the average hotel room tax rate in January 1990 was nearly 10 percent [Hiemstra and Ismail, (1990, p. 4)]. With the enactment of a 5 percent hotel room tax by the State of New York in June 1990, New York City currently has the highest hotel room occupancy tax in the U.S. at 19.25 percent plus $2 on every room priced at $100 or more.[2]

The popularity of the hotel room tax stems from the widely held perception that its burden is largely borne by tourists rather than residents, with little negative impact on industry sales. For example, Combs and Elledge (1979, p. 203) argued, *without empirical evidence*, that the "demand for lodging in a resort [is] inelastic with respect to price," and concluded that "a small *ad valorem* tax imposed on motel rooms and other forms of temporary lodging would have very little impact on the industry and would generate substantial revenue for the local government." Hotel operators, by contrast, generally believe that a hotel room tax harms the industry.[3] However, empirical studies on the impact of the hotel room tax yield contradictory results.[4]

In a previous article in this *journal*, Fujii, Khaled and Mak (1985) estimated the *ex ante* incidence of a *proposed* hotel room tax in Hawaii.[5] We are unaware of any empirical studies that measure the *ex post* effect of the imposition of a hotel room tax. The purpose of this paper is to estimate the impact of the 1987 Hawaii hotel room tax by comparing the *real* net (after tax) rental receipts of hotel operators before and after the imposition of the tax. A novelty of this paper is the use of tax base rather than survey data to measure hotel receipts. We measure the impact of the tax on *real* net hotel rental receipts using in-

*Department of Economics, University of Hawaii at Manoa, Honolulu, HI 96822.

Carl Bonham is also a researcher with the Social Science Research Institute at the University of Hawaii.

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terrupted time series analysis. Our empirical results indicate that the tax reduced *real* net rental receipts by about 1 percent. The coefficient, however, is not significantly different from zero. In sum, the State is able to raise substantial amounts of tax revenue from the new tax without imposing a significant burden on hotel operators.

Taxing Hotel Room Rentals in Hawaii

Act 340 passed by the 1986 Hawaii State Legislature imposes a 5 percent "transient accommodation" tax, commonly called the hotel room tax, on proceeds from the rental of "transient accommodations" beginning January 1, 1987.[6] The tax applies to the gross proceeds from room rentals and includes the hotel tax "visibly passed on and collected." Thus the tax base for the hotel room tax is equal to 1.0525 multiplied by the rental price of the hotel room. The effective tax rate is 5.25 percent of the rental price of the lodging.[7] With exceptions for very small hotel operators, monthly returns and payments are due by the end of the month following the transaction month. The new transient accommodation tax is in addition to the 4 percent sales (i.e., general excise) tax levied on the gross proceeds received by the sellers for all retail transactions, including hotel rentals. Hence, the combined tax on hotel room rentals rose from 4.16 percent to 9.41 percent. Tax collections under the two taxes are displayed in Table 1.

In fiscal year 1990, the State collected $82 million from the transient accommodation tax, making it the third largest source of state government revenues after the general excise tax and the state income tax. An additional $62 million was collected from the general excise tax levied on hotel room rentals.

The Model

The imposition of a hotel room tax creates a wedge between the price of hotel room rentals to consumers and the after-tax price received by hotel operators. Assuming demand and supply remained unchanged, economic theory predicts that the room tax must always increase the (after tax) price of hotel room rentals to consumers and reduce the net price received by hotel operators, except in cases where the elasticity of supply is infinite or the elasticity of demand is zero. Indeed, if the incidence of the room tax falls partly on consumers, higher after-tax prices are likely to decrease the quantity demanded for lodging and the net revenues of hotel operators.

Our model treats the imposition of the new transient accommodation tax as a quasi-experiment and measures its effect using an interrupted time series model.[8] The imposition of a transient accommodation tax in January 1987 breaks the time series for real after-tax hotel rental receipts into two discrete segments. The null hypothesis is that the new tax had no significant effect on real net hotel rental receipts. We use *monthly* data on the natural log of *real* after-tax hotel rental revenues (lnHR) constructed from the general excise tax base data on hotel receipts.[9] The data span the period from January 1980 to March 1990 (see Figure 1). We began the series in January 1980 to exclude the potential effects of the (1979) second oil crisis on travel and terminated the time series just prior to Iraq's invasion of Kuwait.

An additional exogenous event was relevant to the empirical analysis. In September 1985, the Group of Five Nations (the U.S., Great Britain, France, Germany, and Japan) agreed to intervene in foreign exchange markets to bring about a depreciation of the dollar relative to other currencies. The Plaza Agreement, as this intervention is referred to, attempted to correct for the appreciation of the dollar relative to other major currencies over the period 1981–1985 (see Yarbrough and Yarbrough, 1988, p. 437). Since demand for travel is highly sensitive to exchange rate fluctuations (see e.g., Gray 1966, and Loeb 1982), the depreciation of the dollar subsequent to the agreement is expected to have a significant impact on foreign travel to Hawaii. Japanese visitors, for example, comprise the second

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TABLE 1
TAX COLLECTIONS FROM HOTELS AND TRANSIENT ACCOMMODATIONS
(in thousands of dollars)

Fiscal Year	General Excise Tax	Hotel Room Tax	Total
1987	$49,919	$23,510	$ 73,429
1988	$56,612	$62,279	$123,951
1989	$57,608	$75,973	$133,581
1990	$61,931	$82,438	$144,369

Source: State of Hawaii, Department of Taxation, *Annual Report, 1987-1988, 1988-1989, and 1989-1990.*

Notes: The fiscal year runs from July 1 to June 30. Thus for fiscal year 1987, the transient accommodation tax was in effect for only 6 months. In that year transient accommodation tax collections were less than half of the general excise tax collections on hotel rentals; this is explained by the lag in getting operators to register for the new tax. As of June 1987, there were 8,619 filers for the transient accommodation tax. In June 1988, there were 10,770 filers.

largest group of Hawaii tourists. The yen/dollar exchange rate fell from 237 yen per dollar in August 1985 to 127 yen per dollar three years later, cutting almost in half the yen price of vacations in Hawaii. Between 1985 and 1990 the Japanese share of total Hawaii visitor traffic rose from 14.5 percent to 20.7 percent.[10] Similarly, the share of total foreign visitors rose from 29.5 percent to 36.4 percent.[11] To capture the separate effects of the Plaza Agreement in 1985 and the imposition of the hotel room tax in Hawaii in 1987 we used two policy dummies: one for the exchange rate adjustment and the other for the implementation of the hotel room tax.

Intuitively, intervention analysis can be thought of as a two-step process. First we identify an ARIMA noise model for the real revenue series prior to the Plaza Agreement and the imposition of the hotel room tax. This identified model is then reestimated using the full sample and the residuals are analyzed for systematic components. If the model identified for the pre-intervention sample produces random residuals when estimated over the full sample, there is no systematic effect from either policy change. Note that the validity of this approach requires a well-specified noise model for the preintervention period to eliminate systematic components in the residual series that might be mistaken for tax effects. The attraction of the time series approach is that it provides a parsimonious representation of the real revenue series in terms of its own past.

An alternative approach would be to estimate a reduced form equation for the real revenue series with the appropriate economic explanatory variables. A dummy variable would then be used to capture the effect of a policy change.[12] Such a model would, however, require deseasonalized-monthly data on a long list of variables (e.g., airfares, incomes, hotel room rates, prices of other vacation goods, competing destination prices, exchange rates, tourist taxes, etc.), not all of which are readily available.

While the time series approach does not offer a structural explanation for the behavior of the real revenue series, it does allow us to identify systematic changes in the stochastic process generating the revenue series before and after the imposition of the tax. The appropriateness of this approach is illustrated by the stability of the empirical results reported below. The noise model identified in the pre-intervention period fits the data remarkably well before and after the imposition of the tax.

Our model is described as follows:

$$\ln HR_t = N_t + \Sigma f_j(I_{j,t}) \quad (1)$$

where

$\ln HR_t$ = ln(real net after tax hotel receipts)

N_t = the "noise" component of the ARIMA structure

$f_j(I_{j,t})$ = the transfer function capturing the effect of the discrete interventions (j = 1,2)

$$I_{j,t} = \begin{cases} \text{j = 1: 1 since September 1985 (exchange rate adjustment)} \\ \quad\quad 0 \text{ otherwise} \\ \\ \text{j = 2: 1 since January 1987 (hotel room tax)} \\ \quad\quad 0 \text{ otherwise} \end{cases}$$

The *pre-intervention* series is driven entirely by N_t and is assumed to take the form of the following ARIMA model:

$$N_t = \mu + \frac{\theta_q(B) \cdot \Theta_Q(B^s)}{\phi_p(B) \cdot \Phi_P(B^s)(1 - B)^{\lambda_1}(1 - B^s)^{\lambda_2}} e_t \quad (2)$$

where

μ = mean of N_t

$\phi_p(B) = 1 - \Sigma \phi_i B^i$ (i = 1,2,...,p)

$\Phi_P(B^s) = 1 - \Sigma \Phi_{is} B^{is}$ (i = 1,2,...,P)

$\theta_q(B) = 1 - \Sigma \theta_i B^i$ (i = 1,2,...,q)

$\Theta_Q(B^s) = 1 - \Sigma \Theta_{is} B^{is}$ (i = 1,2,...,Q)

are the autoregressive, seasonal autoregressive, moving average, and seasonal moving average polynomials in the back shift operator B of order p, P, q, and Q, respectively. (1 -- B) and (1 − B^s) are the reverse difference and seasonal difference operators, respectively. The parameters λ_1 and λ_2 are binary variables. If the series is first order integrated, λ_1 = 1 and 0 otherwise; if the series is first order seasonally integrated, λ_2 = 1 and 0 otherwise. The innovation series e_t is independently and identically distributed with zero mean.

The transfer function for each intervention is described as:

$$f(I_t) = \frac{\omega_h(B)}{\delta_m(B)}(1 - B)^D B^k I_t \quad (3)$$

where

$\delta_m(B) = 1 - \Sigma \delta_i B^i$ (i = 1,2,...,m)

$$D = \begin{cases} 0 \text{ if the impact is permanent} \\ 1 \text{ if the impact is transitory} \end{cases}$$

$\omega_h(B) = \Sigma \omega_i B^i$ (i = 0,1,...,h)

k = number of periods by which the initial impact lags behind the intervention point.

The path of $f(I_t)$ is determined by $\delta_m(B)$. The permanent impact converges to $\omega_h(1)/\delta_m(1)$. The degrees of polynomials in B, m and h, are empirically determined.[13]

Empirical Results

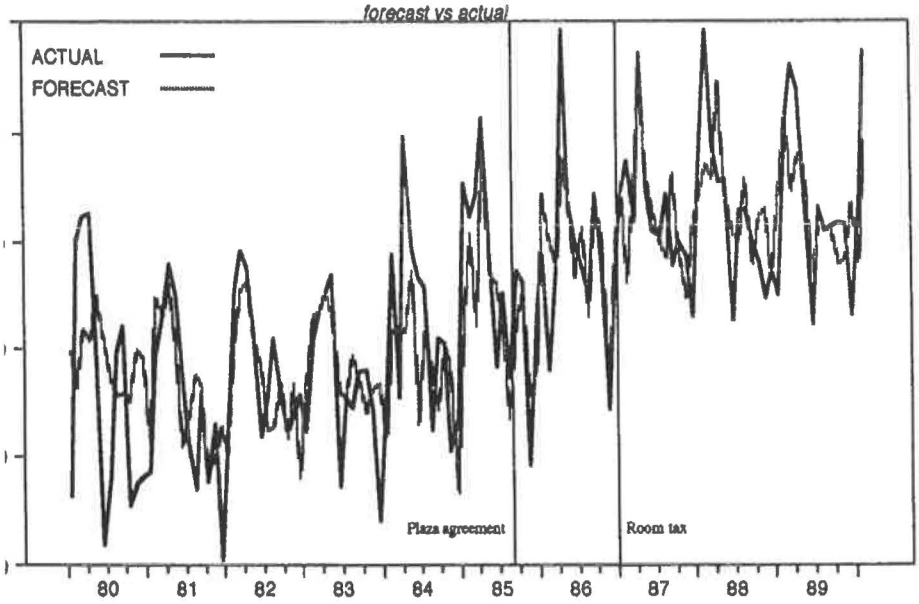
The model is initially fit over the pre-intervention series, 1980:1–1985:8 (i.e., before the Plaza Agreement (1985:9) and the hotel room tax (1987:1)) to identify the ARIMA structure underlying the time series. A series of diagnostic checks is performed using the estimated autocorrelation and partial autocorrelation functions. The appropriate ARIMA structure is selected using the rule of parsimony. The ARIMA structure identified from the *pre-intervention* sample is:

$$\ln HR_t = N_t = \mu + \frac{1 - \theta_9 B^9}{(1 - \phi_1 B)(1 - \Phi_{12})B^{12}} e_t \quad (4)$$

Parameter estimates are reported in the first column of Table 2.[14] The Q statistic fails to reject the null hypothesis that e_t is serially uncorrelated. Thus, we assume that the identified ARIMA structure is appropriate. It is noteworthy that the two sets of estimated parameters of the ARIMA structure in Table 2 are not statistically different from each other pairwise, with each parameter estimate within the other's 95 percent confidence interval. A comparison of forecast and actual real net hotel receipts generated by the model is displayed in Figure 1.

To estimate the impact of the imposition of the hotel room tax, we impose the pre-identified ARIMA structure on the entire sample along with transfer functions for the Plaza Accord and the hotel room tax. The *complete model* with the

FIGURE 1
REAL HOTEL RENTAL REVENUE IN LOGARITHMS



ntified transfer functions has the fol-
ing form:

$$HR_t = N_t + \frac{\omega_{1,0}}{(1 - \delta_{1,1}B)} I_{1,t-2} + \omega_{2,0} \cdot I_{2,t}. \quad (5)$$

The ARIMA model estimated for the full
nple with the two policy dummies in-
ded is reported in the last column of
ble 2. The ARIMA structure identified
r the *pre-intervention* period is very
ble throughout the full sample period,
licating that the two transfer functions
equately explain the change in the time
ies during the post-intervention pe-
d. Our results illustrate the separate
cts of the two dummy variables on real
er-tax hotel rental receipts.[15] Note that
coefficient of the Plaza Agreement, ω_{10}
0.021, is positive and significant (at 5
rcent one-tail test) as expected, indi-
ing that the depreciation of the dollar
bsequent to the Plaza Agreement had a
nificant positive impact on travel to
waii. Exchange rate adjustments in-
ased real hotel revenues in Hawaii by 2 percent initially, with a total long run increase of 28.5 percent.

More importantly, our results show that real after-tax hotel room receipts declined by approximately one percent as a result of the imposition of the room tax in 1987. However, the coefficient of the hotel tax dummy, $\omega_{2,0}$, is not significantly different from zero. In sum, the hotel room tax had a negligible impact on the real room receipts of hotel operators.[16]

Our results suggest that the hotel room tax is almost fully shifted forward to tourists (i.e., the price to buyers rose by the full amount of the tax) with no significant revenue loss to hotel operators. Thus, the demand for hotel lodging may be close to perfectly inelastic. This is further supported by examining data on real hotel room rates displayed in Figure 2.[17] Figure 2 shows no sharp decline in the trend of the room rate series before and after the room tax was imposed, indicating that hotel operators were able to shift virtually the entire tax on to consumers. The shifting is more extensive than predicted by the earlier work of Fujii, Khaled, and Mak (1985) for Hawaii which suggested

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TABLE 2
PARAMETER ESTIMATES

Parameters	Pre-Intervention Sample (80:1-85:8)	Full Sample (80:1 - 90:3)
μ	6.59611	6.59602
	(109.29)	(123.56)
θ_9	-0.25125	-0.25396
	(2.12)	(2.86)
ϕ_1	0.33921	0.24479
	(3.02)	(2.76)
$\phi_{1,2}$	0.59489	0.64330
	(5.72)	(8.91)
$\omega_{1,0}$		0.02105
		(1.78)
$\delta_{1,1}$		0.92623
		(16.47)
$\omega_{2,0}$		-0.00944
		(0.13)
Q(24)	21.90	24.98

Notes: Absolute t statistics are reported in parentheses below each coefficient.
Q(24) is the Ljung-Box Q statistic for the null hypothesis that the first 24 residual autocorrelations are equal to zero. The Q statistic is distributed as a chi-squared statistic with 24-k degrees of freedom, where k is the number of estimated parameters.

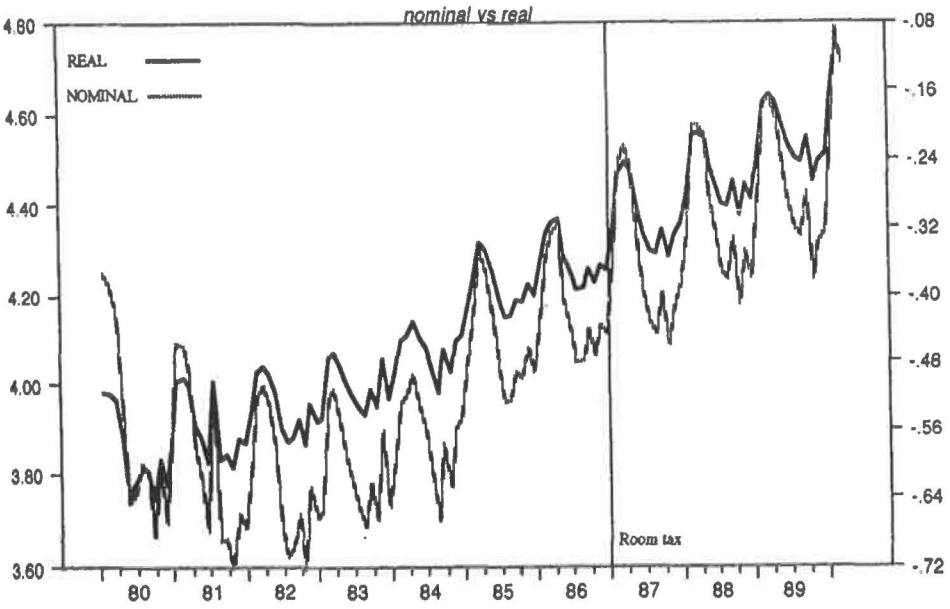
ex ante that about two-thirds of the tax would be shifted to tourists with a moderately large negative impact on hotel rental receipts. The results are closer to the predictions of Combs and Elledge (1979) who argued that because the demand for lodging is likely inelastic with respect to price, a small *ad valorem* tax on lodging would have little effect on net after tax hotel receipts and yield substantial revenue for the local jurisdiction.

One plausible explanation for the lack of a significant impact is that visitors did not know about the new tax. Since the room tax is typically paid by tourists when they check out, they may not have adequately anticipated or responded to the higher effective price of rooms. However, this does not apply to more than half of all tourists to Hawaii who purchase prepaid package tours that include at least round-trip airfare and lodging.[18] Another potential explanation for the absence of a significant tax impact is that other travel destinations in the U.S. have also increased their room taxes recently. However, it is difficult to imagine that various tax changes elsewhere, imposed in different amounts and at different times and places, exactly canceled out the new room tax in Hawaii.

Conclusion

In recent years many fiscally beleaguered state and local governments have either implemented new hotel occupancy taxes or substantially increased existing hotel taxes to finance public services. The popularity of the tax stems from the premise that the hotel room tax is largely exported to non-residents with little neg-

FIGURE 2
HOTEL RENTAL PRICE IN LOGARITHMS



ative impact on hotel operators.

Our analysis of the effects of the 1987 Hawaii hotel room tax indicates that the tax did not have a significant negative impact on hotel rental receipts. Our finding may not be entirely surprising since a 5 percent increase in lodging expenditures represents less than 1.5 percent of the total cost of a typical vacation in Hawaii inclusive of round-trip airfare. That may not be true of travel to other destinations. Therefore it is important to perform similar analyses for other travel destinations.

ENDNOTES

**The authors are indebted to Chung H. Lee, Ken White, three anonymous referees, and the editor for helpful comments.

[1]Wall Street Journal, *Tax Report*, March 8, 1989.

[2]See "New York's Hotel Tax Highest in the Nation," *The Sunday Honolulu Star Bulletin and Advertiser* (September 16, 1990), p. F4.

[3]See, for example, Schofield (1991), p. 1.

[4]See, for example, Fujii, Khaled and Mak (1985), Zuraski and Sanders (1989), and Hiemstra and Ismail (1991).

[5]This partial equilibrium model demonstrated that the burden of a hotel occupancy tax is approximately equal to the ratio of the supply and demand elasticities for lodging. Empirical estimates suggested a supply elasticity of 2 and a demand elasticity of 1, yielding the prediction that approximately two thirds of a hotel room tax would be passed on to visitors in the form of higher prices. This study, however, like other extant studies, predicts the incidence of the tax *ex ante*.

[6]Transient accommodations are defined as accommodations that are customarily occupied by a transient for less than 180 consecutive days. A transient is a person who does not have the intention of making the accommodation a permanent place of domicile. Exemptions are granted for health care facilities, school dormitories, nonprofit corporations, military personnel on permanent duty, and government-subsidized low-income renters. See Bock, Brilliant, and Gerding (1990).

[7]For example, since the tax base (B) is inclusive of the tax charged hotel guests, to net the same room revenue as before the tax, hotels must add on a tax to guests of 5.25%. That is:

$$B = 1.0525*R$$

After tax (= .05*B), hotels net (1-.05)*B = .95*B = .95*1.0525*R = R.

[8]Time series intervention analysis was first proposed by Campbell and Stanley (1966) and Cook and Campbell (1979) to assess the impact of a discrete intervention in a social process. The methodology is described in McDowell, McCleary, Meidinger, and Hay (1980). It has a broad range of applications. For example, Box and Tiao (1975) used it to examine the effectiveness of air pollution control laws. McPheters,

Mann, and Schlagenhauf (1984) analyzed the impact of more severe penalties for the use of firearms on property crime. More recently, Fomby and Hayes (1990) employed intervention analysis to examine the impact of the War on Poverty on families in the lowest quintile of the income distribution.

[9]The hotel revenue series is derived by dividing the general excise tax base data on hotel receipts (=total hotel rental receipts * 1.0416) by the U.S. consumer price index times 1.0416. Two adjustments were made to the series. First, since we are modeling consumption and not tax revenues *per se*, the data are lagged one period (e.g. January tax collections reflect December receipts). Therefore, the data used in the empirical analysis actually begin in December 1979. Moreover, since visitor lengths of stay can span two monthly reporting periods (and average length of stay is about 10 days), we weighted current and previous month receipts by 2/3 and 1/3, respectively.

[10]State of Hawaii, *The 1990 State of Hawaii Data Book*, (Honolulu: Department of Business, Economic Development and Tourism, 1991), p. 197.

[11]Hawaii Visitors Bureau, *1991 Annual Research Report* (Honolulu, 1992), p. 4.

[12]See Slemrod (1982) for an example of such an approach used to measure the impact of the Revenue Act of 1978 on the volume of stock transactions.

[13]A transfer function model is a multivariate ARIMA model where causal input variables determine the output variable, and the error term (capturing the combined effects of all other factors influencing the output series) is modeled as an ARIMA process. Here, the real revenue series is influenced by policy dummy inputs. In a more general model the revenue series could be determined by inputs such as the explanatory variables used in a reduced form model. The dynamic response of real revenues to the policy change is described by the general rational distributed lag, $f(I_t)$, called a transfer function, or an impulse response function. In contrast to the usual static-dummy variable approach using a reduced form model, the transfer function model allows for a dynamic response of real hotel revenues to policy changes. The path of $f(I_t)$ is determined empirically and provides information on the impact, transition, and long run effects of the policy change.

[14]The identified noise model reported in Table 2 contains a nine month moving average component included to whiten the residuals by capturing the significant autocorrelation in the hotel revenue series at lag nine. While some researchers have attributed significant autocorrelations at long lags to chance and thus elected to ignore them (e.g. Granger and Newbold (1986), pp. 107–114), others have chosen to model the observed correlation (e.g., Thompson and Tiao (1971), Fackler and Krieger (1986), Koch and Rasche (1988), and Hanssens and Vanden Abeele (1987)). We choose to model the observed correlation to eliminate all systematic fluctuations in the residuals of the preintervention model to avoid mistaking them for systematic effects of the hotel room tax. Furthermore, the seasonal and aseasonal behavior of the revenue series is complex enough to generate such correlations. There are a wide variety of factors affecting the seasonal pattern of the revenue series. Hotel room revenues exhibit annual peaks that typically occur in June and December and troughs in October and February (peaks and troughs are highly variable, changing from year to year). Visitors to Hawaii must negotiate a wide variety of factors in planning their vacations. When are airfares lowest? When does Golden Week or Spring Break fall? Note that school and work holidays fluctuate from year to year as do cold spells in both the East and West. Income is certainly not a smooth series either. The lumpiness of Japanese income due to significant bonuses in June and December may contribute to the observed behavior of our data. Finally, the conclusions of this paper are unchanged when our model is estimated without the moving average parameter.

[15]Notice that the dummy for the Plaza Agreement, I_1, is lagged one period, while the dummy for the hotel room tax, I_2, is not. The lagged impact of each policy change is determined empirically. The tax dummy is not significantly different from zero either contemporaneously or with a lag.

[16]We have treated the Plaza agreement as an exogenous policy change. An alternative would be to specify a transfer function for the real after-tax revenue series and extract the information in the yen/dollar exchange rate by including it as an independent variable. Using this alternative specification, the *pre-intervention* sample for the transfer function model ends immediately prior to the imposition of the hotel room tax, not prior to the Plaza agreement. Although the sample periods are different, we find that the noise model from this alternative specification is quite similar to that reported in Table 2, and the imposition of the hotel room tax had a very small negative impact on real hotel revenues. The hotel room tax dummy has a coefficient of -.0065 with a t-statistic of 0.04 as compared with a coefficient of -0.0094 with a t-statistic of (.13) as reported in Table 2. Thus, in both cases, the imposition of the hotel room tax had a negligible impact on real hotel room rental receipts.

[17]These are computed from data on average hotel room rates provided by the accounting firm of Pannell Kerr Forster based on their monthly surveys of individual hotel properties in Hawaii. The surveys cover approximately two thirds of all hotel rooms and is subject to measurement error. Thus we use the price series only as supporting evidence.

[18]Hawaii Visitors Bureau, *1990 Annual Research Report* (Honolulu, 1991), p. 50. In 1990, the percentage of Hawaii tourists purchasing package tours was 54%.

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State Lodging Taxes

1/28/2019

Specific Statewide Taxes on Lodging – By State

The following table contains state lodging tax rates. Please keep in mind that these taxes are often levied in addition to local lodging and/or sales taxes.

Contact: Jackson Brainerd

State Lodging Tax Rates

State	Sales Tax	Lodging Tax	Total State Tax
Alabama	N/A	4.0% [1]	4.0%
Alaska	No state sales tax	N/A	None
Arizona	N/A	5.5%	5.5%
Arkansas	6.5%	2.0%	8.5%
California	N/A	N/A	None
Colorado	2.9%	N/A	2.9%
*Connecticut	N/A	15.0%	15.0%
*Delaware	No state sales tax	8.0%	8.0%
Florida	6.0%	N/A	6.0%
Georgia	4.0%	5$ fee per room	4.0%
*Hawaii	4.0%	10.25%	14.25%

State	Sales Tax	Lodging Tax	Total State Tax
Idaho	6.0%	2.0%	8.0%
Illinois	N/A	6.0%	6.0%
Indiana	7.0%	N/A	7.0%
Iowa	N/A	5.0%	5.0%
Kansas	6.5%	N/A [2]	6.5%
Kentucky	6.0%	1.0%	7.0%
Louisiana	4.45%	N/A	4.45%
*Maine	N/A	9.0%	9.0%
Maryland	6.0%	N/A	6.0%
Massachusetts	N/A	5.7%	5.7%
Michigan	6.0%	6.0% [3]	12.0%
Minnesota	6.875%	N/A	6.875%
Mississippi	7.0%	N/A	7.0%
Missouri	4.225%	N/A	4.225%
Montana	3.0% [4]	4.0%	7.0%
Nebraska	5.5%	1.0%	6.5%
Nevada	N/A	N/A [5]	None
*New Hampshire	No state sales tax	9.0%	9.0%
New Jersey	6.625%	5.0%	11.625%
New Mexico	5.125%	N/A	5.125%
New York	4.0%	N/A	4.0%
North Carolina	4.75%	N/A	4.75%
North Dakota	5.0%	N/A	5.0%
Ohio	5.75%	N/A	5.75%
Oklahoma	4.5%	N/A	4.5%

State	Sales Tax	Lodging Tax	Total State Tax
Oregon	No state sales tax	1.8% [6]	1.8%
Pennsylvania	N/A	6.0%	6.0%
Rhode Island	7.0%	5.0%	12.0%
South Carolina	5.0% [7]	2.0%	7.0%
South Dakota	4.5%	1.5% [8]	6.0%
Tennessee	7.0%	N/A	7.0%
Texas	N/A	6.0%	6.0%
Utah	4.7%	0.32%	5.02%
Vermont	N/A	9.0%	9.0%
Virginia	4.3% [9]	0.0%	4.3%
Washington	6.5%	N/A	6.5%
West Virginia	6%	N/A	6%
Wisconsin	5%	N/A	5%
Wyoming	4%	N/A	4%
District of Columbia	N/A	14.95%	14.95%
Puerto Rico	N/A	9%	9%
Virgin Islands	N/A	12.5%	12.5%

N/A = tax not levied on accommodations

* = no additional local tax on accommodations

[1] State lodging tax rate raised to 5.0% in mountain lakes area.

[2] A state lodging tax is only levied in special statutory designated redevelopment districts at 5.0%.

[3] State levied lodging tax varies. Convention hotels located within a qualified local government unit with 81-160 rooms rate is 3.0% and 6.0% for hotels with more than 160 rooms. All other hotels with 81-160 rooms is 1.5% and 5.0% for hotels with more than 160 rooms.

[4] Specific sales tax levied on accommodations. State has no general sales tax.

[5] Counties must levy a lodging tax of 1% or 2% based on population.

[6] The rate becomes 1.5% after 7/1/2020.

[7] State sales tax on lodging is lowered to 5.0%.

[8] Seasonal (June-September)

[9] An additional 0.7% may be included in the rate in certain planning districts.

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