Economic Impact of Transient Vacation Rentals (TVRs) on Maui County

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Executive Summary

Background

This study was commissioned by the Realtors Association of Maui (RAM) to update a previous study conducted by the Kauaian Institute addressing the economic contribution to Maui County of the Transient Vacation Rental industry (TVR). The intended purpose of our results is to not only inform policy makers of the TVR economic contribution to the County but also to scrutinize the industry itself in the context of the overall Maui lodging industry. The TVR industry is concerned about the apparent existence of an uninformed anti-TVR bias in Maui County government; about an ongoing enforcement of unreasonable rules; the potential enactment of legislation meant to marginalize this industry; and the potential economic consequences of such policies. This research effort is to inform the County policy makers of the level of these potential negative economic consequences. Informed policy-making can reduce both government and community concerns related to TVR operation while minimizing negative consequences of any new policy or enforcement of an existing policy.

Our study uses the 2002 Input-Output Tables to study the economic impact of transient vacation rentals (TVRs) on Maui County. Data from the American Community Survey conducted by the US Census Bureau, the Hawaii Visitor Research Report published by the Department of Business Economic Development and Tourism (DBEDT) State of Hawaii and UHERO EIS portal have been used in the analysis. A review of relevant studies and other information sources investigating the impact of TVRs provides an information backdrop for our analysis results and conclusions, which may also prove useful to policy makers.

Research Conclusion

Our essential research conclusion is that the TVR accommodation industry generates significant, positive economic benefits to Maui County and the State of Hawaii. At the high end of our estimation range, our results indicate positive economic benefits approaching: $318.8 million in total output (i.e. sales), $100.6 million in labor income, 3,478 jobs, $19.7 million in Hawaii State taxes and $191.1 thousand for Maui County's share of the TAT (transient accommodations tax). These are significant economic values being generated by an industry utilizing only 1.7 percent of all housing units available in Maui County.

Elimination of the TVR industry could result in the full loss of the TVR industry's economic value. The extent of the loss of the TVR industry due to government regulations depends to what extent TVR visitors substitute an alternative Maui County accommodation type to TVRs if they are unavailable or not sufficiently available to meet the current and expected future demand level for their accommodation type. In a global market place with alternatives to Maui destinations offering a literal potpourri of accommodation experiences, the modern, well-informed and sophisticated visitor can find the accommodations experience that best fits their tastes and preferences.

Based on the increasing market share of TVRs on Maui from 2000 to 2006 relative to other accommodation types one can reasonably surmise that the modern visitor increasingly prefers a TVR or its equivalent experience. Thus, even though elimination of Maui TVRs may not result in the loss of all TVR visitors who may substitute an alternative Maui County accommodation type yet available, we would still expect a significantly negative economic impact in Maui County if TVRs are eliminated or significantly reduced. That the mere threat of elimination appears to be a significant cause of the reduction of TVR numbers from 2005 to 2006 (11.0 percent) supports this contention.

Even with substitution of alternative accommodation types by the TVR visitor if TVRs are no longer available in Maui County there are economic impacts. These impacts are the redistribution of income from TVR property owners primarily to institutional accommodation (i.e. hotels, condos and timeshares) property owners. These are negative or positive depending on whether you lose or gain this income. Additionally, for the TVR visitor who yet comes to Maui utilizing an alternative accommodation type because of TVR unavailability, this visitor will have reduced satisfaction (i.e. utility) due to the fact that they have to choose a second-best accommodation alternative.

There exist policy means whereby the negative perceptions of TVRs leading to their current regulatory scrutiny can be addressed such that the negative economic consequences can be mitigated. For example, Maui could stand to gain tax revenues through increased property taxes if TVRs could operate as legitimate businesses and be required to pay their due share of taxes. Some of these additional funds can then be used to provide additional public goods and services such as water, sewer and parking in support of the visitor industry and for negative externality (i.e. unintended negative impacts on a local community from the operation of TVRs) mitigation. Negative externality mitigation may involve up-dating community zoning laws taking into account current realities, citations or loss of permits to operate for rowdy behavior and disturbing the peace in residential neighborhoods where TVRs may be permitted, fines for illegal and inappropriate parking, higher property taxes on TVR establishments to compensate residents, increased responsibility for TVR operators for the safety and security of the guests and mandatory evacuation plans in case of emergencies.

It is informative and appropriate to note aside from their economic contribution TVRs have positive externalities (i.e. unintended positive economic benefits on a local community). TVRs are generally associated with ADUs (accessory dwelling units). ADUs may be used for transient vacation rentals but they could also be used for housing local residents if need be. The character of Ohanas and local lifestyles need to be preserved as learning local customs and being exposed to native culture is one of the reasons why visitors choose to come to Hawaii. It is an irrefutable fact in resource economics that it is most efficient to let land gravitate to highest and best use, such as for TVRs.

Finally, we feel it relevant and appropriate to state that before the TVR issue is subjected to short shrift and TVR closure, it might be prudent for county officials to work in concert with state officials and TVR operators to improve data gathering regarding TVR visitors. Additionally, an extended cost-benefit analysis could also be undertaken exploring every option simultaneously addressing community concerns fairly and equitably.

Corollary Conclusion

A corollary conclusion to our overall research conclusion that merits elaboration for policy makers relates to the operation of the Maui lodging industry market and government intervention into this market. Economic theory and empirical research suggest that any government market intervention requires a rationale other than anecdotal opinions oftentimes relied upon to justify regulation or perfect knowledge of the preference of future generations. Without such justification or perfect knowledge**,** government market intervention transfers the resource use decision from the property owner to the legal/political authority. It is akin to centrally planning a market. Simultaneously, government intervention distorts market mechanisms which require no government prodding to operate efficiently and effectively to supply products and services to meet consumer demand.

Regulation of the TVR segment of the Maui lodging industry market will distort the naturally occurring economic activity of the TVR industry meeting the naturally occurring consumer demand for the lodging services it provides. Government intervention into a market in any form**,** however, is warranted when there is either: insufficient allocation for a public good (e.g. a beach,), there are significant negative externalities (i.e. undesirable impacts), or there is insufficient competition. Our analytical assessment indicates that there is no basis to conclude that the Maui lodging industry market and in particular the TVR segment of this market is operating other than optimally if the negative and positive externalities we elaborate on balance offset each other. It is beyond the scope of our research assignment to make this determination. We can state, however, that if the negative and positive externalities do offset one another, at least according to economic theory related to efficient markets, there is no basis for government market intervention into this market. A policymaker determination that negative externalities exceed both any positive externalities plus the positive economic impacts elaborated above then again, according to economic theory, government market intervention would be warranted. As a criterion to determine the nature and extent of regulation, the level warranted in the face of negative externalities would be that level required mitigating the negative externality without diminishing the positive benefits (i.e. economic + positive externalities) derived from the operation of the TVR lodging industry. This would be similar to what ahs occurred with the tobacco industry. Such a policy making outcome would preserve the economic and social benefits that accrue when the TVR market is allowed to operate freely without (or with a minimum) of government intervention with the simultaneous exercise of private property rights. When this occurs it is not possible to make some one better off without making some one else worse off by intervening with market forces.

Detailed Summary of Research Findings

A summary of our detailed research findings leading to the above conclusions follows.

Our review of relevant TVR studies and information revealed the following.

- TVRs are part of a worldwide growing, home-based business trend serving the tourist industry.

- Home-based businesses afford greater sense of freedom and choice to visitors, provide earnings for proprietors and have become a significant source of employment generation in the country.
- TVRs on Maui as well as elsewhere have been subject to government review to enforce existing regulations and to assess regulatory policy to mitigate perceived negative impacts (externalities) of TVRs on the communities where they operate.
- Potential negative externalities of TVRs include:
    - increased tax burden on property owners
    - increase noise, traffic congestion and other (non-local) intrusions into local neighborhoods where TVRs operate
    - reduced housing and rental availability for residents
    - increase rent process for residents
    - devaluation of properties adjacent to TVRs
    - increased stresses on local infrastructure
    - the conversion of residential neighborhoods into resort neighborhoods
    - a decreased sense of "localness"
    - the urbanization of agricultural and rural areas
    - a profusion of illegal structures
- Potential positive impacts (externalities) of TVRs include:
    - economic growth and development
    - increased property value
    - improvements in the quality of life
    - employment, particularly in more remote areas
    - tax revenues
    - income and induced investments
    - provision of low cost, more affordable vacation lodging especially for families
    - provision of vacation lodging in areas without other lodging options
    - an income source for individual property owners
    - diversification of the visitor industry ownership, to include middle-class residents as owner-operators.
    - improvements in the visitor experience, allowing more direct interaction between visitors and the "real" Maui.
- Policy measures to mitigate negative TVR impacts
    - measures to manage the number of TVR occupants and vehicles
    - higher property and/or personal tax rates for TVRs
    - programs to improve the safety of residents and guests where TVRs operate
    - provide remedies for unruly and unlawful overnight uses
    - encourage currently unregistered rentals to become licensed
    - provide residents with notice of each proposed commercial use of a residence in their neighborhoods to solicit community feedback
    - fines to force regulation compliance.

Data show the following for the TVR industry and the broader visitor industry within which it operates from which various inferences about the industry can be made.

- In percentage terms, TVR units accounted for 1.71 percent of all housing units available in Maui County or 2.28 percent of all occupied Housing Units.

- Maui Lodging Demand by Visitors shows:
  - Total visitors to Maui County increased from 2,246,253 visitors to 2,477,316 visitors, a gain of 10.3 from 2000 to 2006.
  - The number of visitors staying in transient vacation rentals (TVRs) increased from 59,115 visitors in 2000 to 105,967 visitors, a gain of 79.3 percent over the period.
- The size of the absolute increase in Maui visitors staying in TVRs and the increase in the visitor percentage of total Maui visitors staying in TVRs (i.e. lodging market share) suggest an increasing visitor preference of TVR accommodations on Maui with time when viewed in the context of a much smaller (10.3 percent) increase in total Maui visitors over this same period.
- Lodging Supply
  - TVR lodging units declined from 2005 to 2006 with the Maui declines (11 percent) being less in percentage terms than statewide (17.3 percent). These TVR declines statewide as well as in Maui County can reasonably be considered the result of regulatory threats by governing authorities, as well as normal attrition due to fledgling businesses failing to perform.
  - Maui County TVRs accounted for 3.4 percent of total visitor lodgings which is slightly less than the statewide percentage of 3.6 percent
  - The institutionalized lodging supplier (i.e. hotels, condos and timeshares taken collectively) percentage statewide and for Maui County are the same.
  - TVRs are the largest non-institutionalized providers of lodging units in Maui County as well as statewide.
- Efforts to aggressively regulate the TVR industry could restrict the supply of Maui (non-institutionalized) accommodations such that there is insufficient supply to service the increasing demand for this accommodation type with potential negative and other economic impacts.

Our analysis of the economic impacts of the Maui TVR industry indicated the following.

- Average daily TVR visitor spending totals $159.16 per day with the following distribution.
  - 47 percent on lodging
  - 19 percent on food and beverage
  - 10 percent each on entertainment, transportation and shopping
  - 4 percent on all other expenditures
- The average TVR visitor stay values used for the analysis are the following:
  - 6.85 days estimated from DBEDT data for Mixed and TVR accommodations
  - 7.36 days estimated from DBEDT data for all types of accommodations
  - 9.5 days estimated by RAM from anecdotal observations
- Based on the total number of Maui TVR visitors, the visitor length of stay and TVR visitor daily expenditures, we estimate the <u>direct</u> TVR visitor expenditures for lodging and total expenditures range from:
  - $54.2 million to $75.2 million for lodging
  - $115.5 to $160.2 million for total TVR visitor expenditures.
- Using the 2002 Input-Output multipliers we estimate the total (direct + indirect + induced) economic impact of the Maui TVR industry to range from:
  - output (i.e. sales)
    - $107.9 million to $160.2 million from lodging expenditures

        - $229.9 million to $318.8 million from total expenditures
    - labor income (earnings)
        - $34.2 million to $47.4 million from lodging expenditures
        - $72.5 million to $100.6 million from total expenditure
    - Maui County jobs
        - 966 to 1,339 jobs from lodging expenditures
        - 2,508 to 3,478 jobs from total expenditure
    - Hawaii State taxes generated
        - $7.4 million to $10.3 million from lodging expenditures
        - $14.2 million to $19.7 million from total expenditure
    - Maui County share of the TAT (transient accommodations tax)
        - $72.0 thousand to $99.8 thousand from lodging expenditures
        - $137.8 thousand to $191.1 thousand from total expenditure
    - Maui County tax revenues could be increased from the operation of TVRs with an appropriate taxation policy which distinguishes TVRs from non-TVR residential properties.
- Elimination of Maui County TVRs with no substitution by TVR visitors to an alternative, available Maui County accommodation type would result in negative economic impacts equivalent to the full values of the TVR industry economic impact just presented.
    - Substitution by the TVR visitor to an alternative Maui County accommodation type due to the unavailability of TVRs would mitigate the negative economic impacts of elimination of the TVR industry the extent to which substitution occurs.
    - The economic impacts of substitution to an alternative to a TVR of lodging type in Maui County would result in income redistribution effects from TVR owners to non-TVR accommodation type owners, and the loss of utility (i.e. satisfaction) of the TVR visitor due to their inability to stay in their first preference accommodation type.

I. Introduction:

Following a national trend, home-based businesses grew in Maui County during the 1990s. Some Maui County residents engaged in the vacation rentals business in order to serve the tourism industry. They did this by renting their homes or part of their homes as transient vacation rentals (TVRs). According to a former Mayor of Maui County, the discussions in the Maui County Council in the early nineties focused on growing the home-based vacation rental segment of tourism. This was seen as a part of an expanding worldwide trend. The public then clearly and enthusiastically supported incorporating the industry into the community as a growth industry. [1]

However, under current rules, all home occupations have had to go through a lengthy, difficult permitting process to bring their TVR businesses in compliance with existing law. Only a very few of the TVRs operating in Maui County are currently registered and have the necessary special use permits. For various reasons, including past assurances from the Maui County Government to not enforce outdated regulations pending passage of a new vacation rental ordinance, many TVR businesses have not gone through the permitting process.

The former Chairman of the Maui County's Land Use Committee produced a new bill proposing legitimatizing of TVRs in 2006. However, this bill was rejected by the County Council in February 2007. According to a news story, the current Maui Planning Department's draft bill for Bed & Breakfast rentals and TVRs being reviewed by various planning commissions on the islands of Maui, Molokai and Lanai, is more restrictive and if passed will likely eliminate many TVRs operating in Maui County.[2]

This study on the economic impact of TVRs on Maui County commissioned by the Realtors Association of Maui (RAM) is aimed at informing the debate on the Planning Department's draft bill and underlining the economic consequences of the Department's announced intent to enforce existing law and shut down TVRs without permits by January 1, 2008. Since TVRs are essentially small businesses, it is important to recognize the potential adverse effects and unintended consequences of regulation. Thus this study is also consistent with the enactment of Senate Bill 188 (Act 217) which was signed into law earlier this year by the Governor of the State of Hawaii. It may be noted that small businesses in Hawaii employ about 60 percent of the workforce. [3]

There has been only one previous documented study regarding the Transient Vacation Rentals on Maui by The Kauaian Institute in 2005 [4]. That market segment assessment study provided a comparative analysis of the geographic and economic footprint of transient vacation rentals on Maui. The two significant findings from this study were a count of 1095 TVR units in Maui following an intensive search process (which shows an under count of TVRs in official figures reported by DBEDT) and an estimate of $38 million in lodging revenues received by TVRs in 2003.

This study updates the earlier study by using officially reported data for 2006 and uses the Hawaii Input-Output Table also used by The Kauaian Institute to measure the impact of TVR lodging revenues on output, earnings and employment in Maui County. There has been no attempt to develop a new separate estimate of TVR lodgings in Maui County either through an intensive or extensive search process given the limitation on time in developing this research report. Section II provides a discussion of various externalities associated with vacation rentals in various parts of the US Mainland as well as in Maui County. In the third section the results of the present study are examined and analyzed. The last section discusses the policy implications of our research investigation.

II. Externality Impacts of Transient Vacation Rentals (TVRs)

According to the Travel Industry Association of America, in 2003, the U.S. travel industry garnered approximately $554.5 billion from domestic and international travelers excluding international passenger fares. The estimated impact of these travel expenditures, resulted in 7.2 million jobs with over $158 billion in payroll income for Americans, as well as $94.7 billion tax revenue for federal, state and local governments [5] .

It is not surprising, then, that given the vast potential of the tourism industry and its growth trend, many home-based businesses have turned their attention to serving travelers through either operating travel agencies or by offering lodgings as either bread & breakfast establishments or transient vacation rentals in their homes. Since the 1990s, the spread of the internet, e-commerce, web-based advertising and growth in the number of firms providing specialized software for home-based businesses and facilitating monetary transactions on-line have all contributed to increasing this segment of home-based businesses. As mentioned earlier, home-based businesses afford greater sense of freedom, provide earnings for proprietors and have become a significant source of employment generation in the country.

However, in many resort areas of the country, short-term vacation rentals are also having externality impacts on the local community. In economic theory, an externality occurs if the benefits or costs of a good are passed on to or 'spill over" to someone other than the buyer or seller of the good. The presence of externalities signifies market failure. This means that either the market produces "wrong" amounts of the goods or services in question or fails to allocate any resources to producing such goods or services even when fully justified economically through a consideration of benefits and costs. If costs of the good or service are inflicted on a third party without compensation it is referred to as a negative externality. Relative to market allocation of resources which is 'efficient' (in the absence of externalities), there is over allocation of resources to the production of the good or service in the presence of a negative externality.

Likewise, sometimes externalities associated with some goods or services are beneficial to other producers and consumers. These uncompensated spillovers accruing to third parties or the community at large are called positive externalities. Typically, the presence of beneficial externalities indicates under allocation of resources for goods and services that generate them.

One of the earliest studies on the issue of vacation home development was regarding rural Vermont [6]. In Vermont, rural areas with natural amenities have a history of using the tourist industry as a means of importing economic development. Since the 1950s urbanites from southern New England and New York sought recreational facilities in Vermont. The tourist industry promoters focused on the beneficial impacts such as improvements in the quality of life, additional employment, tax revenues, income and induced investments in a state that had traditionally high levels of poverty. Furthermore, it was felt that the impact on the tax base would be positive so local land owners would face lower property taxes. The argument was also advanced that the physical quality of life would improve due to an increase in local public goods and services demanded by vacationers without an increase in the property tax paid by landowners. The study by Fritz (1982) investigated the residential tax burden in about 240 Vermont towns. The study showed that problems may exist when attempting to rely on vacation home development as a method for inducing regional development. Under certain circumstances, increase in town land allocated for vacation homes was significantly associated with increasing tax burden on residential property. The incidence of occurrence was most apparent for smaller towns (less than 1000 population) although this result was significant for all 240 towns tested. It was also suggested by the author that positive effects such as increased property values may offset the disadvantage of increased tax burden.

In the City of Encinitas, California a proposed Major Amendment No. 2-05 (Short Term Vacation Rentals) to the City's Local Coastal Program would have served to prohibit short-term vacation rentals in all residential zones throughout the city [7]. The amendment cited conflicts between residents and visitors involving late night disturbances, excessive noise, parking problems and trash especially in areas near the shoreline. In this case, the staff recommendation from the California Coastal Commission to the Commissioners (dated January 25, 2006) was to reject the amendment as this would have eliminated a significant source of overnight visitor-serving accommodations and therefore inconsistent with the Coastal Act.. The Coastal Act promotes and preserves a full range of public access opportunities along the coast, including provision of accessible and affordable visitor-serving commercial facilities which serves and support coastal visitors. The staff recommendations had noted that the City had performed an internet search for vacation rentals and found at least 112 residences or condominiums that were advertised for short-term rentals. The majority of the identified residential units were located on the bluffs overlooking the ocean in the northern section of Encinitas in the community called Leucadia. The rental rates varied from $750-$3,750 per week in the low season (average $1564) to $850-$6000 per week in the high season (average$2414). However, the staff recommendations noted that despite the fact that the upper limits of these ranges could not be classified as low cost lodgings, short term rentals still offered a more affordable and desirable accommodation for many parties, especially families.

Another major reason provided for the Staff's recommendation to reject the Amendment was its inconsistency with the California Environmental Quality Act (CEQA) as the amendment would have an adverse impact on visitor serving accommodations and low-cost recreational facilities. Provisions of CEQA also state that amendments will not be approved or adopted as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant impact the activity may have on the environment.

In other significant actions, the Staff recommendations pointed out that the Commission had approved a Local Coastal Program (LCP) amendment to allow short-term rentals in residential and mixed residential zones within the Shelter Cove community in Humboldt County affecting approximately 2,300 lots. This was accompanied by approval of suggested modifications to the Humboldt County LCP Amendment request that required specific regulations for vacation rentals in terms of managing the number of occupants, parking and other related impacts, so as to not unduly impact local residents. The Commission previously rejected an LCP amendment to ban vacation rentals in all residential zones in the City of Imperial Beach in 2002 noting that the proposal was excessively restrictive discouraging tourist related uses and visitor accommodations.

Renting out a home as a vacation rental is not considered a commercial use in San Juan County in Washington and is allowed in residential areas. However, homeowners must obtain a conditional use permit. [8]. A concern over accessory dwelling units (ADUs) that may be attached or detached was noted. Detached ADUs were more likely to be used for vacation rentals and provide housing for caregivers. Attached ADUs were more likely to be used for family and other personal guests. On the positive side, transient rentals earn income for the owners such that changing the rules could cause "economic harm." Conversely, on the negative side, transient rentals limited housing to residents, devalued surrounding properties and impacted water systems due to increased density. There was general consensus that ADUs historically had provided affordable housing [9]. In 2005, in order to mitigate the TVR problem, property owners with transient rental permits were assessed taxes 15 percent higher than similar buildings without a permit. In addition, all of the personal property in the transient rental properties is now subject to personal property tax. The transient rentals are also subject to sales and hotel/motel taxes. [10] Property owners of transient vacation rentals must also provide a contact number that is available 24 hours a day and the number does not have to be local. [11]

Big Bear nestled in the San Bernardino Mountains in California has a current 2008 Ballot Measure initiative which seeks to improve the quality of transient rentals by improving the safety and security of guests, provide remedies for unruly and unlawful overnight uses and encourage currently unregistered rentals to become licensed and provide residents with notice of each proposed commercial use of a residence in their neighborhoods [12].

The discussions over Transient Vacation Rentals in Hawaii to some degree mirror the various concerns expressed by various communities and towns on the US mainland.

On Oahu, a significant concern over Transient Vacation Rentals is that it destroys the residential character of neighborhoods and turns them eventually into resort areas [13]. Other concerns include the fact that TVRs introduce a constant flow of strangers into the neighborhood and impacts rental housing availability, rent prices, property taxes and the property rights of neighbors [14].

In Maui, there is concern over the long run stock of housing for residents due to transient vacation rentals, Ohana units being converted to TVRs and their impact on local lifestyles. [15] There is also fear that TVRs would urbanize agricultural and rural areas [16].

A record of Maui county zoning complaints from January 1999 through August 2005 shows that noise, late parties, traffic congestion, illegal structures or illegal modeling, disturbances and parking on street are some of the negative externalities associated with TVRs on Maui. [17]. The most frequent complaint (10) was regarding disturbances from TVRs during the above period. According to testimony provided before the County's planning Committee on February 13, 2007, Planning Director Jeff Hunt stated on the record that the complaints against TVRs to his department were quite low. It amounted to 3 percent of all complaints on zoning matters.

In sum this literature review clearly indicates that there could potentially be a number of externality related issues with respect to transient vacation rentals. Whereas the impacts on output, employment, earnings and tax revenues are generally positive, there are other costs associated with the operations of TVRs related to disturbances, parking, water and sewer services, pressures on the long run stock of housing, on the character of residential neighborhoods, and the urbanization of agricultural and rural lands. There is also concern over the safety and security of the guests as well as the residents.

An extended cost-benefit analysis, which incorporates valuation of both positive and negative externalities often used for social decision making, is beyond the scope of this report. However, it may be noted that there are a number of management tools in economic theory to manage externalities and make the social and economic outcome more efficient. As referenced above, these involve tools such as legislation, fines and specific taxes to deal with negative externalities and subsidies for consumers and producers and provision of public goods and services in the case of positive externalities.

III. Economic Impacts of Transient Vacation Rentals (TVRs) on Maui County

The only other documented research regarding the impact of TVRs on Maui was done by The Kauaian Institute in August 2005. Although some definitional and legal differences exist between Bed & Breakfast Rentals and other private homes available for short-term rentals, in this study, all such rentals are considered to be Transient Vacation Rentals (TVRs).

Data Sources:

1. We used American Community Survey, for Maui County Hawaii done by the US Census Bureau for 2006. This provides a Population and Housing Narrative Profile and is an up-date over the US Census Bureau figures for 2000.

2. Information regarding total number of visitors, average length of stay, demand for lodging types, total visitor expenditures, visitor plant inventory by islands was all found through perusing DBEDTs Annual Visitor Research Reports from 2000-2007. We also used the input-output tables to make impact estimates using 2006 data consistent with The Kauaian Institute estimates that used data for 2003. This study, in essence, up-dates the impacts from the previous study for a year for which complete data exists.

3. Information on TVR visitor expenditures was derived by means of private communication with DBEDT officials.

4. The Kauaian Institute conducted searches over the internet and in the print media to provide the best available estimate of TVRs in Maui County. We have reported the total counts of B&Bs and other TVRs from both sources, namely, DBEDT and The Kauaiian Institute as we did not investigate the numbers ourselves. There is no district-wise information regarding TVRs in Maui County in our report due to time constraints.

Data Comparability

DBEDT reported 653 transient vacation rentals (TVRs) in Maui County and 617 on Maui Island in the 2006 Annual Visitor Report. The study done by The Kauaian Institute estimated the number of TVRs on Maui Island alone to be 1095 units (295 Bread & Breakfast units and 800 Single-family units) by July 2005. The Kauaian Institute estimate of the number of TVRs on Maui Island thus exceeds that estimated by DBEDT by 478 or 77%.

It is beyond the scope of this analysis to reconcile the difference between the DBEDT and Kauaian Institute estimates via primary research. It seems likely that the DBEDT numbers are from the optional survey on the back side of the Agricultural Declaration Form all inbound travelers fill out. Since the survey is optional, any TVR estimate based on this data could only accurately estimate the TVR number if there was 100% compliance. This is highly unlikely. Thus, the DBEDT TVR number is conservative, in all likelihood excessively so. In contrast, the Kauaian Institute Study's inventory lists were reviewed area by area by a small group of reliable, professional TVR booking agents specializing in those areas. The review:

1. eliminated duplicates (same property, different website, possibly different property name, etc.)
2. confirmed the number of rental units on the property
3. confirmed if it was B&B or TVR
4. provided additional (below the radar) units that were not initially found.

In our opinion, the comprehensive nature of this primary data collection process performed by the Kauaian Institute would result in a more accurate count of the (2003) TVR number than the (optionally reported) DBEDT data. Thus, the Kauaian Institute's estimated Maui County TVR number is used for our analysis purposes.

In estimating the market share for visitor lodgings by accommodation types in Maui County we had to drop the data for 2000 and 2001 as information on TVRs are not strictly comparable with information given for most recent years.

Maui County Housing Characteristics

The American Community Survey of Maui County done by the US Census Bureau in 2006 reported 64,000 housing units in the county. Of these, 48,000 were occupied dwellings.[1] The number of owner-occupied dwellings was 28,000 and the number of renter-occupied dwellings was 19,000.[2]

The Maui County Census survey data suggests that 25 percent (16,000) of the 64,000 housing units are unoccupied dwellings. It is not clear how many of those unoccupied homes are "seasonal" homes. Approximately, 64 percent of the housing units are single-unit structures and the other 36 percent multi-unit structures. This implies that in percentage terms, TVR units accounted for 1.71 percent of all housing units available in Maui County or 2.28 percent of all occupied Housing Units.

Number of Maui Visitors

Table 1 shows the Maui County Lodging Demand by Visitor Lodging Choice. Table 1 show that between 2000 and 2006, total visitors to Maui County increased from 2,246,253 visitors to 2,477,316 visitors, a gain of 10.3 percent. The figures for the total number of visitors were down for years 2001 through 2004 compared to a 2000 base year, but recovered in 2005 and posted a successive gain in 2006. Economic forecasts are for visitor numbers to remain relatively flat for the 2007-2008 period before resuming an upward trend in 2009.

[1] RAM estimates that 23,000 of the 64,000 are condos.
[2] These are considered (by RAM) to generally be long-term, (non-vacation) rentals.

Table 1: Maui County Lodging Demand by Visitor Lodging Choice (Source: Hawaii Visitor Research Reports 2000-2006, DBEDT)

Lodging Type	2000	2001	2002	2003	2004	2005	2006
Hotel*	1,273,679	1,102,568	1,099,959	1,097,701	1,088,990	1,077,167	1,040,891
Condo*	498,425	447,965	434,100	478,093	473,284	504,137	522,327
Timeshare*	65,471	87,474	108,050	111,191	127,455	147,042	178,568
Bed & Breakfast	65,471	27,746	28,737	29,082	27,469	28,924	30,599
Friends / Relatives	124,978	119,190	143,309	144,866	141,700	151,341	169,752
Mixed**	252,483	263,824	325,272	335,514	348,928	437,869	535,179
Total Visitors	2,246,253	2,048,768	2,139,427	2,196,447	2,207,826	2,346,480	2,477,316

* These accommodations only. **Staying in multiple accommodations

TVR Share of Maui Visitors

Table 2 shows that the number of visitors staying in transient vacation rentals (TVRs) increased from 59,115 visitors in 2000 to 105,967 visitors in 2006, a gain of 79.3 percent over the period. The number of visitors staying in TVRs as a share of all visitors to Maui County (including those staying with families and friends) was 4.3 percent in 2006, up from a 2.8 percent level in 2000 (derived from Tables 1 & 2). This 2000 to 2006 increase in the percentage of total Maui visitors staying in TVRs equals 53.5 percent. The size of the absolute increase in Maui visitors staying in TVRs and the increase in the visitor percentage of total Maui visitors staying in TVRs suggests an increasing visitor preference of TVR accommodations on Maui with time when viewed in the context of a much smaller (10.3 percent) increase in total Maui visitors over this same time period.

Table 2: Maui County TVR Demand by Visitor Number

Year	Rental Houses	B&B	TVR Total
2006	75,368	30,599	105,967
2005	65,195	28,924	94,119
2004	54,624	27,469	82,093
2003	49,232	29,082	78,314
2002	17,220	28,737	45,957
2001	23,061	28,780	51,841
2000	26,558	32,557	59,115

Visitor Demand and Market Share of Lodgings by Accommodation Type for Maui County

Table 3 combines Tables 1 and 2 data to more clearly reflect the TVR demand segment of the lodging market. Table 3 also eliminates the "Friends and Family" category as this category of visitor does not constitute demand for market lodgings. We characterize the lodging market serviced by hotels, condos and timeshare as the "institutional" market as these lodging providers are generally managed by third party institutions, not the lodging owner as is the case for a TVR. Table 3 clearly shows that these institutional lodging providers service the largest absolute number of visitors on Maui. However, Table 3 also shows that the market share of visitors they accommodate declined from 86.6 percent in 2000 to 75.5 percent in 2006. Figure 1 shows that of these 3 institutional accommodation types, only timeshare registered any market share gain from 2000 to 2006 (37.6 percent). Mixed accommodations also registered a market gain over this period (55.1 percent) but both gains are significantly less than the market share gain of TVRs, which showed a

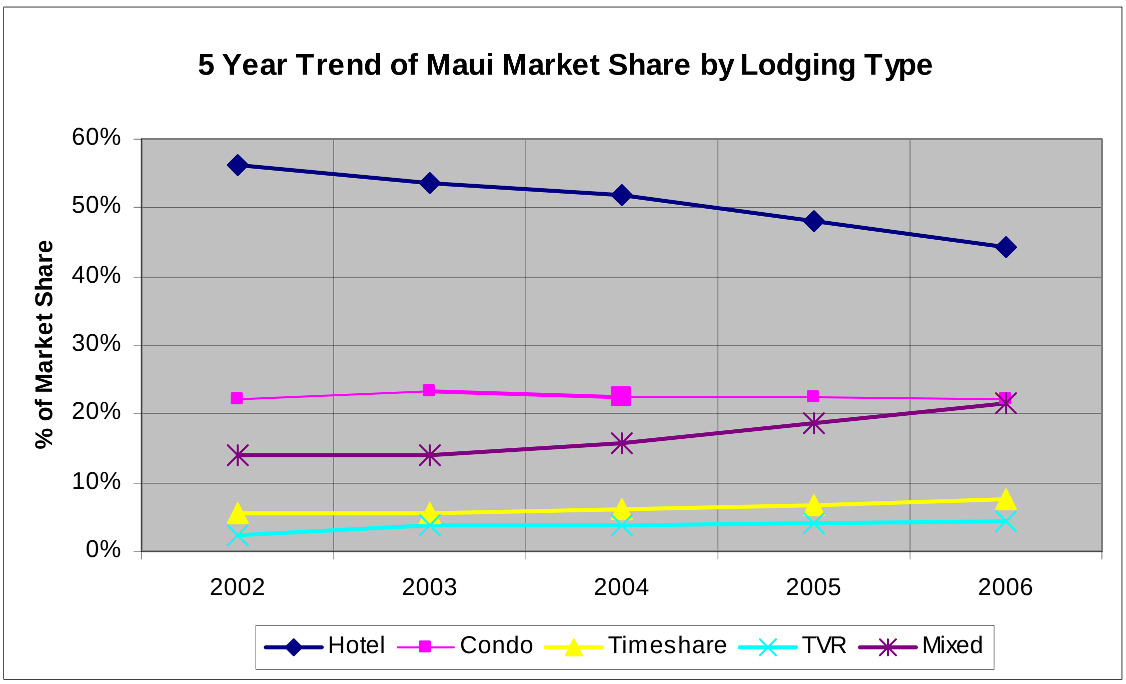
91.6 percent market share increase from 2000 to 2006. This market share gain reinforces the observation just noted. That is, there appears to an increasing visitor preference for TVR-type accommodation services with time.

Table 3: Adjusted Maui County Lodging Demand by Visitor Lodging Choice

Lodging Type	2000	2001	2002	2003	2004	2005	2006
Hotel*	1,273,679	1,102,568	1,099,959	1,097,701	1,088,990	1,077,167	1,040,891
Condo*	498,425	447,965	434,100	478,093	473,284	504,137	522,327
Timeshare*	65,471	87,474	108,050	111,191	127,455	147,042	178,568
TVR	59,115	51,841	45,957	78,314	82,093	94,119	105,967
Mixed**	177,733	197,452	271,916	286,282	330,440	414,952	506,663
Total	2,074,423	1,887,300	1,959,982	2,051,581	2,102,262	2,237,417	2,354,416
Market Share	86.6%	84.9%	82.3%	82.2%	81.8%	78.7%	75.5%

Market share is the sum of that for hotels, condos and timeshares.

Figure 1: Market Share by Accommodation Type



<u>Supply of Lodging by Accommodation Type for the State of Hawaii and by Islands</u>

Table 4 provides information regarding the supply of visitor lodgings by accommodation type for Maui and Statewide. Statewide, the total number of hotel units declined by 0.8 percent and TVRs (i.e. B&Bs + individual vacation units) by 17.3 percent over 2005 levels. In contrast, for Maui County the total number of units declined by only 0.2 percent and the total number of TVRs declined by only 11.0 percent over 2005 levels. It seems reasonable to conclude that the TVR declines statewide as well as in Maui County are the result of regulatory threats by governing authorities.

Table 4 also shows that TVRs accounted for 3.4 percent of all lodging types in Maui, 7.1 percent on Molokai and 1.1 percent on Lanai. In total for Maui County, TVRs accounted for 3.4 percent of total visitor lodgings which is slightly less than the statewide percentage of 3.6%. Hotel lodgings were less on Maui (42 percent) than statewide (60 percent) but taken with the (institutionalized lodging) categories of condominium hotels and timeshares the percentages are the same (94 percent). These 3 categories would seem to interchange given the condominium and time share conversion of hotel lodging units, the category of which declined accordingly from 2005 to 2006.

It is informative to note that TVRs are the largest non-institutionalized providers of lodging units in Maui County as well as statewide. If efforts to regulate the TVR industry are too restrictive the supply of Maui (non-institutionalized) accommodations may be insufficient to service the increasing demand for this accommodation type with potential negative economic impacts.

Table 4: Supply of Lodgings by Type of Accommodations, State of Hawaii, 2006

Island	Type	Available Units	Properties	Change From 2005
Maui	Apartment/Hotel	37	5	-8
	Bed & Breakfast	122	30	6
	Condominium Hotel	7830	114	321
	Hostel	37	3	0
	Hotel	7595	27	-379
	Individual Vacation Unit	495	71	-75
	Timeshare	1959	16	107
	Other	366	15	0
	Total	18441	281	-28
Moloka'i	Bed & Breakfast	3	2	0
	Condominium Hotel	259	6	0
	Hotel	141	3	0
	Individual Vacation Unit	29	22	-1
	Timeshare	15	0	0
	Other	4	1	0
	Total	451	34	-1
Lana'i	Apartment/Hotel	1	1	0
	Bed & Breakfast	3	1	0
	Hotel	362	3	0
	Individual Vacation Unit	1	1	-2
	Total	367	6	-2
Statewide	Apartment/Hotel	347	21	-14
	Bed & Breakfast	598	179	-27
	Condominium Hotel	17235	232	1988
	Hostel	342	13	-5
	Hotel	43637	141	-2424
	Individual Vacation Unit	2014	531	-424
	Timeshare	7271	45	344
	Other	1072	54	-48
State Total	**Total**	**72516**	**1216**	**-610**

Daily Spending of TVR Visitor

On average, a TVR visitor spent $159.16 per day in Maui County. Approximately, 47 percent of the amount expended was on lodgings which was equal to $74.70.[3] Expenditures on lodgings were followed by expenditures on food and beverage ($30.72), transportation ($16.79), shopping ($15.38), entertainment ($15.28) and all other ($6.29) in order of importance. Thus the average TVR visitor spent $84.46 daily on other items besides lodging while visiting Maui County.

We perform the estimation of the economic impacts on TVR lodging expenditures as well as total TVR visitor expenditures to highlight the fact that the full economic impact of the TVR industry exceeds the TVR visitor expenditure solely on lodging.

Estimated TVR Lodging & Total Related Revenues from TVR Visitors in Maui County

The formula for calculating revenues from TVR visitor stays on Maui is:
Lodging (Total) Revenues for TVRs = Total Annual Number of TVR Visitors X TVR Visitor Length of Stay X TVR visitor daily lodging (total) expenditures.
Where:

- Maui TVR visitor number (2006) = 105,967 (see Tables 3 or 4)
- Maui TVR visitor daily expenditure
    - Lodging = $74.70 (as noted above)
    - Total = $159.16 (as noted above)
- Average length of stay in Maui County per visitor range of estimates:
    - 6.85 days estimated from DBEDT data for Mixed and TVR accommodations
    - 7.36 days estimated from DBEDT data for all types of accommodations
    - 9.5 days estimated by RAM from anecdotal observations.[4]

We calculate annual lodging expenditures and total (i.e. lodging + other expenditures) annual expenditures of Maui visitors staying in TVRs. The lodging expenditure indicates spending directly related to Maui property owners willingness to supply TVR services to accommodate this visitor market segment. Total expenditures more broadly measure the overall direct economic impact of serving the TVR market segment by TVR property owners. As such, total expenditures more accurately measure the overall economic impact of the TVR industry in Maui County. The economic impact of any reduction of TVR visitors to Maui due to any policy or regulation reducing the number of TVRs on Maui should use these impact estimates.

[3] Information regarding daily expenditures of TVR visitors in Maui was gleaned from personal communication with Cy Feng, Economist, DBEDT October 30, 2007.

[4] It is beyond the scope of our research efforts to substantiate the RAM visitor length of stay value for TVRs. It's ultimate credibility and any estimates we derive using this value rests with RAM. We can state, however, that a lower lodging rate per day does afford the average visitor a greater ability to stay longer (i.e. a greater length of stay) than higher priced accommodation types. The average TVR lodging rate ($74.4) is less than average rates for other accommodation types. For example, the average daily Maui lodging expenditure across all lodging types in 2006 was $93.4 and for hotels it was $130. Additionally, a 9.5 day TVR length of stay estimate implies a TVR occupancy rate of 80 percent with an average visitor number per stay of 3 persons using the 2006 TVR visitor number. This would seem within the realm of reasonableness in the context of a UHERO reported 2006 average Maui occupancy rate of 80%, a DEBDT reported average party size across all lodging types on Maui of 2.17 in 2006 and the fact that individual TVRs may have multiple accommodation units which would not be accounted for in the TVR count used for our analysis.

- Direct lodging expenditures
    - $54.2 million for a 6.85 average length of stay
    - $58.3 million for a 7.46 average length of stay, and
    - $75.2 million for a 9.5 average length of stay
- Direct total expenditures
    - $115.5 million for a 6.85 average length of stay of
    - $125.8 million for a 7.46 average length of stay, and
    - $160.2 million for a 9.5 average length of stay

Economy-wide Impacts of TVR Lodging and Total Expenditures on Maui County

We used multipliers (Type II) from the 2002 State of Hawaii Input-Output Tables to estimate the economic impacts of Maui TVR visitor lodging and total expenditures. These dollar impacts which include direct, indirect and induced effects for each economic variable are as follows.

- Total output
    - For lodging expenditures[5]
        - $107.9 million from a 6.85 day length of stay
        - $124.1 million from a 7.36 day length of stay
        - $160.2 million from a 9.5 day length of stay
    - For total expenditures[6]
        - $229.9 million from a 6.85 day length of stay
        - $247.0 million from a 7.36 day length of stay
        - $318.8 million from a 9.5 day length of stay
- Labor income (earnings)
    - For lodging expenditures
        - $34.2 million from a 6.85 day length of stay
        - $36.7 million from a 7.36 day length of stay
        - $47.4 million from a 9.5 day length of stay
    - For total expenditures
        - $72.5 million from a 6.85 day length of stay
        - $77.9 million from a 7.36 day length of stay

[5] The Type II multiplier category used for determining the indirect and induced effects of direct TVR lodging is for "accommodation."

[6] The total expenditure Type II multiplier categories used for determining the indirect and induced effects of direct TVR total expenditures is the weighted average per the total expenditure distribution as shown in the following table.

Expenditure Category	Multiplier Category	% of total	Multipliers: Output	Earnings	State Tax	Jobs
Total Lodging	Accommodation	46.9%	1.99	0.63	0.137	17.81
Total Food and Beverage	Eating and drinking	19.3%	2.06	0.60	0.095	27.24
Total Entertainment	Arts and entertainment	9.6%	1.97	0.77	0.09	34.97
Total Transportation	Transportation	10.5%	2.03	0.57	0.078	15.35
Total Shopping	Retail trade	9.7%	1.85	0.57	0.205	20.96
All Other	Other services	4.0%	2.08	0.69	0.095	27.5
	Weighted Average	100.0%	2.00	0.63	0.12	21.71

        - $100.6 million from a 9.5 day length of stay
- Maui County jobs
    - For lodging expenditures
        - 966 jobs from a 6.85 day length of stay
        - 1,038 jobs from a 7.36 day length of stay
        - 1,339 jobs from a 9.5 day length of stay
    - For total expenditures
        - 2,508 jobs from a 6.85 day length of stay
        - 2,694 jobs from a 7.36 day length of stay
        - 3,478 jobs from a 9.5 day length of stay
- Hawaii State taxes
    - For lodging expenditures
        - $7.4 million from a 6.85 day length of stay
        - $8.0 million from a 7.36 day length of stay
        - $10.3 million from a 9.5 day length of stay
    - For total expenditures
        - $14.2 million from a 6.85 day length of stay
        - $15.3 million from a 7.36 day length of stay
        - $19.7 million from a 9.5 day length of stay

<u>Fiscal Impacts of TVRs on Maui County</u>

According to Hawaii Statutes, 44.8 percent of TAT (Transient Accommodation Tax) revenues belong to counties [18]. Maui's share of the TAT revenues meant for the counties is 22.8 percent [19]. According to the Annual Report of the Hawaii State Department of Taxation, Total Transient Accommodations Tax (TAT) for fiscal year 2006 was $217,008,000 in the State of Hawaii which comprises 4.26% of total State tax revenues for 2006. Thus, the percentage of total state taxes generated by TVRs that would be paid to Maui for its share of the TAT equals 0.971%. Based on this percentage we estimate that Maui County's share of the additional revenues would be as follows.

- Maui TAT from State
    - For lodging expenditures
        - $72.0 thousand for a 6.85 day length of stay
        - $77.3 thousand for a 7.36 day length of stay
        - $99.8 thousand for a 9.5 day length of stay
    - For total expenditures
        - $137.8 thousand for a 6.85 day length of stay
        - $148.0 thousand for a 7.36 day length of stay
        - $191.1 thousand for a 9.5 day length of stay

There may be other Maui County-level tax consequences due to the current operation of TVRs. Based on the review of other studies presented above it is uncertain if these (property) tax consequences would be positive or negative.

A possible revenue opportunity for Maui County would be to increase property tax collections due to increased assessments of TVR building structures, improvements and associated land value in case TVRs are allowed to operate legitimately. It may be noted that Maui county government has already moved in this direction by imposing on the timeshare industry a much higher real property tax rate by creating a new tax category called timeshares in 2004. [20]

The justification for a new property tax category is that the Transient Accommodations Tax or TAT is determined on the basis of the "fair market value." In the case of time share units it has been defined as "an amount equal to one-half the gross daily maintenance fees that are paid by the owner." An equivalent type of category could be created for TVRs.

Visitor Reductions and Substitutions Due to TVR Regulation

A reduction in TVRs could reduce the Maui visitor number if TVR visitors cannot or choose not to use an alternative lodging type if TVR lodgings are unavailable due to regulatory impacts. It is beyond the scope of this research report to address the issue of any TVR reduction on the Maui visitor number. However, one can reasonably surmise that in a competitive global market place with the capacity to provide a potpourri of lodging types, informed budget-conscious visitors would find alternative destinations to Maui if Maui lodging choices do not meet their specific lodging tastes and preferences, most specifically a TVR experience. It is safe to assume that this source of exogenous (out-of-state) expenditures would cease if TVR visitors make the choice to go to an alternate resort destination outside of the State of Hawaii.

If some of the TVR visitors do retain Maui as their resort destination using alternate forms of lodgings such as hotels, condos or timeshares because TVRs are forced to cease Maui operations, the economic impact in Maui County from this segment of visitors will likely be reduced due to the netting out effect. However, there would yet be a redistribution of income from TVR owners to non-TVR accommodation owners and a loss of utility (satisfaction) to TVR visitors who must use a “second best” accommodation type during their stay in Maui County. It is again beyond the scope of this analysis to determine the extent of the substitution and income redistribution impacts of any policy eliminating or reducing TVRs.

It is informative to note that it appears that the simple threat of TVR regulation has reduced their number from 2005 to 2006 as discussed above in Maui County by 11.0 percent. If this reduction resulted in a proportionate reduction in visitors to Maui and their total expenditures the economic impact would be a reduction ranging from:

- $25.3 million to $35.1 million in output
- $8.0 million to $11.1 million in labor income
- 276 to 251 Maui jobs
- $1.6 million to $2.2 million in Hawaii State taxes
- $15.2 thousand to $21 thousand in TAT revenues to Maui County.

Again as noted, it is beyond the scope of this research effort to determine whether visitors whose first preference is a TVR lodging experience substitute another Maui lodging type due to their unavailability, or choose an alternative resort destination. The extent to which the TVR visitor lacking his/her first lodging preference substitutes an alternative lodging type on Maui the economic impact of a reduction in TVR numbers will be less than the numbers just reported. Similarly, if TVRs are eliminated altogether in Maui County and there is no substitution by the TVR visitor of an alternative lodging type, the economic impacts will be the full economic impact amount of the TVR industry estimated and presented above.

IV. Policy Implications

Opponents of TVRs have attempted, through the political process, to prohibit the operation of TVRs in Maui County, limit them to commercial or resort areas where permitted through the use of outdated zoning ordinances and/or deny them needed permits to operate legitimately.

A current policy proposal being debated in Maui has the potential to deny needed permits to TVRs and cause approximately 90 percent of them to cease operations. No grandfathering of existing TVRs would be permitted. Our study has shown that there are significant positive economic impacts of TVR operations in Maui. There is *prima facie* evidence that the TVR sub-sector of the lodgings industry has grown into an industry of significant size over the last 15-16 years and that it is providing significant economic benefits to the populace of Maui County. These include contributions to economic output between $222.9 and $318.8 million, contributions to earnings between $72.5 million and $100.6 million with the generation of 2,508 to 3,478 jobs in the county.

According to a Mayor of a previous Maui County administration, there were written assurances to concerned people that an appropriate bill legitimizing the activities of TVRs in Maui County would be brought forward and passed at which time the TVRs would be provided the necessary permits to operate legally. Some TVRs that were applicants for the permit withdrew their applications and were told they could continue to operate and the County would not enforce the existing law till revised. Others are still waiting for hearings on their applications made as long as six years previously. A possible alternative to a legal operation is an illegal one. As many TVRs are currently operating outside of the law, we estimate that some portion of the range of total state tax revenues generated by TVRs (i.e. $14.2 and $19.7 million) are being lost to the State of Hawaii with a consequent, though much lower, loss of TAT revenues to Maui County. Maui could stand to gain tax revenues through increased property taxes if TVRs could operate as legitimate businesses and be required to pay their due share of taxes. Some of these additional funds can then be used to provide additional public goods and services such as support of affordable housing, water, sewer and parking in support of the visitor industry and for negative externality mitigation.

There are a number of negative externalities that have been associated with the transient vacation rental business. These need to be addressed to ameliorate citizen concerns. Fortunately, there are a number of policy instruments to mitigate the problems of negative externalities. These may involve up-dating community zoning laws taking into account current realities, citations for rowdy behavior and disturbing the peace in residential neighborhoods where TVRs may be permitted, fines for illegal and inappropriate parking, higher property taxes on TVR establishments to compensate residents, increased responsibility for TVR operators for the safety and security of the guests and mandatory evacuation plans in case of emergencies.

The possible impact on long term availability of housing is not a major concern given the large number of unoccupied housing in Maui. It has been shown that in other places outside of Hawaii, accessory dwelling units (ADUs) whether attached or detached have contributed to an increase in affordable housing and also generated important family income. These ADUs may be used for transient vacation rentals but they could also be used for housing local residents if need be. The character of Ohanas and local lifestyles need to be preserved as learning local customs and being exposed to native culture is one of the reasons why visitors choose to come to Hawaii. It is an irrefutable fact in resource economics that it is most efficient to let land gravitate to highest and best use.

Future trends in the tourism business in Hawaii will be determined by many factors not discussed in this study such as Hawaii's Tourism Strategic Plan, Small Business Policy, land use policy, availability of sufficient plant inventory, infrastructure policy and the recreational choices of baby boomers. However, based on our empirical investigations, we can state that there is a growing trend for transient vacation rentals (TVRs) in the Hawaii market as in other resort areas of the mainland and worldwide. Before the issue is subjected to short shrift and TVR closure, it might be prudent for county officials to work in concert with state officials and TVR operators to improve data gathering regarding TVR visitors and do an extended cost-benefit analysis and explore every option to address community concerns fairly and equitably.

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