The Economic Impact of Kalani

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Executive Summary:

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Initiating Expenditures	$14.26 Million to $15.57 Million
Economic Output	$26.08 Million to $28.48 Million
Earnings	$7.74 Million to $8.45 Million
Full Time Job Equivalents	193.5 to 211.3
Taxes (state and local levels)	$1.57 Million to $1.71 Million

Kalani provided over 77,000 visitor-nights of accommodation in 2013. Based on information from Kalani and industry data from the Hawaii Tourism Authority (HTA), Kalani is responsible for attracting between $14.26 million to $15.57 million in visitor expenditures (Initiating Expenditures). Using input-output models from the State Department of Business, Economic Development and Tourism (DBEDT), I conclude that through direct, indirect and induced effects, the initiating expenditures generated statewide, predominantly on the Big Island:

$26.08 million to $28.48 million in economic output (equivalent to gross sales);

$7.74million to 8.45 million in earnings;

Increased labor activities equivalent to 194 to 211 full-time jobs; and

state and local taxes of $1.57 million to $1.71 million.

"Kalani is Hawaii's largest retreat center, one of the best-loved centers in the world for more than 35 years. Visitors from around the world come for our personal and group yoga retreats and our colorful mix of performing arts, nature, adventure, and diverse programming…established as a non-profit, 501(c)(3) charity with a 35-year track record of service. We are the largest NGO provider of recreational and cultural services serving Puna, the poorest district in Hawaii. In addition to serving our community, we also provide substantial services to thousands of retreat center visitors annually.
Whether you stay with us as a guest, or make a tax-deductible donation to one of our funds, your contributions support our educational mission, the preservation of ancient Hawaiian cultural sites, and the development of a model sustainable community." From:
http://kalani.com

Initiating Expenditures: Through its various activities and services, in 2013 Kalani attracted 77,653 visitor days (24,513 guest/regular and 53,140 volunteer) to its facilities and helped attract an estimated 7,690 to 15,379 additional visitor days to the surrounding hospitality industry.[1]

In addition, Kalani visitors, both guest and volunteer, spend time and money elsewhere in-state once attracted by Kalani. Information from Kalani indicates that volunteer guests can be expected to spend at least 1 day/night in-state for every three days at Kalani. This is an additional 17,696 nights.

Information from Kalani indicates that guests may be assumed to spend 45% as many days/nights, equaling 11,031, elsewhere in-state as they do at Kalani.

Based on detailed information from Kalani on the distribution of visitors from around the globe[2] and average daily expenditures per visitor per location of origin from HTA (Table 1, page 10) an average daily expenditure of $172.06 per day per guest visitor and $170.56 per day per volunteer visitor may be derived. The net volunteer expenditure was adjusted downward to $71.77/day. The difference, $98.79, reflects the daily room and board value of their volunteer efforts while at

[1] There are 231 near-by rentals listed on VRBO.com (Vacation Rentals By Owner). I assume that each
[2] This level of detail was very helpful and indicates Kalani's impressive efforts to assess their markets and their approach to data collection in general.

Kalani.[3] The expenditure per day of the visitors to other near-by accommodations are valued at $170.56 per day.[4]

(A) Annual Expenditures of guest visitors while at and in-state due to Kalani:

35,543.85days x $172.06/day = $6,115,675

(B) Annual Expenditures of volunteer visitors while at and in-state due to Kalani:

53,140 days x $71.77/day = $3,814,032 plus

17,696 days x $170,56/day = $3,018,165 = $6,832,197

(C) Annual Expenditures of guest visitors attracted to Big Island By Kalani staying nearby: (i) 7,690 days x $170.56/day = $1,311,526 or

(ii) 15,379 days x $170.56/day = $2,623,052.

In Part (C) above, alternatives (i) and (ii) differ based on whether or not one ascribes 10% or 20% of nearby visitor expenditures to Kalani.

The sum of (A) + (B) +(C(i)) = $14,259,398 = new expenditure dollars injected in to the economy due to Kalani under assumption that 10% of nearby visitors are there due to Kalani.

The sum of (A) + (B) +(C(ii)) = $15,570,923 = new expenditure dollars injected in to the economy due to Kalani under assumption that 20% of nearby visitors are there due to Kalani.

[3] See Appendix A. The idea here is that volunteers 'earn' the equivalent of the market-value of their room and board while volunteering at Kalani. So, their daily expenditures drop from the expected $170.56 to $71.77 per day. For the 17,696 days spent in-state, but outside Kalani, their daily expenditures are assumed to be $170.56 daily.

[4] This figure is derived (see Appendix A) using the distribution of origin of the volunteer visitors to Kalani multiplied by their expected average daily expenditures (from HTA, Table 1, page 10).

Economic Multipliers[5]

Multipliers are derived from the state's input-output table to estimate the various types of economic impacts of a change in an industry's final demand. Four of the most commonly used input-output multipliers are those for output, earnings, employment and taxes.

Multipliers are derived based on direct, indirect and induced effects arising from an exogenous change in an industry's final demand. The *direct* effect measures the initial effect attributable to the exogenous change, while the *indirect* effect measures the subsequent intra- and inter-industry purchases of inputs as a result of the initial change in output of the directly affected industry. When earnings and personal consumption expenditures (PCEs) are also included in the model as an additional endogenous sector, the resultant multipliers measure the effects of demand changes on household spending (PCEs) that result from changes in earnings through direct and indirect effects. These additional effects are known as the *induced* effects.

Multiplier =

(Direct effect + Indirect effect + Induced effect)/ Direct effect.

From *State I-O Study* (pages 21-23) the following multipliers may be derived:

Economic Output = 1.829

[5] This section follows State of Hawaii, Department of Business and Economic Development and Tourism, *The Hawaii State Input-Output Study: 2007 Benchmark Report*, revised December 2013, "*State I-O Study*".
Given Kalani's integration into the local community, a suggestion that traditional multipliers may understate Kalani's impact may be true. The dollars spent by Kalani-induced guests, while spending time away from Kalani, may be better captured by the state input-output multipliers. This analysis uses the state input-output derived multipliers without attempting an *ad hoc* increase in multiplier values.

Interpreted as $1.00 of initial (or exogenous) spending generates $1.83 of economic output. $1 is the direct effect, $0.83 results from the indirect and induced effects.

Earnings = 0.543, $0.543 per $1 of initial (or exogenous) spending;

Jobs = 13.57 per one million dollars of initial expenditures;

Taxes = 0.11, or $0.11 per dollar of initial (or exogenous) spending.

Economic Impact

The economic impacts shown in the Executive Summary are calculated by multiplying the initial (or exogenous) expenditures attributable to the KBF times the relevant multiplier. Thus,

Economic Output increases by 1.829 times $14,259,398 or $15,570,923 = a range from: $26,080,439 to $28,479,218.

Earnings: 0.543 times $14,259,398 or $15,570,923 = $7,742,779 to $8,454,938.

Full-Time Job Equivalents: 13.57 times 14.26 or 15.57= 194 to 211.[6]

State and Local Taxes: 0.11 times $14,259,398 or $15,570,923 = $1,568,534 to $1,712,802.

[6] A "Full-Time Equivalent Job" is defined here as 40 hrs./week times 50 weeks = 2000 hours per year. There are many different combinations of how this increased labor time might be distributed across people. Some might get more hours (straight time or over time), others might get a part-time job, etc.

Broader Social and Economic Impacts--Discussion

Tourism and visitor industry literature recognizes the importance of a variety of activities, attributes, attitudes, amenities, and opportunities that may ultimately define a location or destination. These may combine cultural, geo-physical, social, economic and other qualities combined in ways that attract the visitor and enhance both their and residents' experiences . Recent work shows that the goal is "…retaining current visitors as well as attracting new ones. In order to develop an area that supports both, a destination needs to include a variety of basic tourist activities as well as identify specific areas that support unique sets of activities. New visitors will be drawn by the offer of familiar combinations of tourist activities, but will then continue to return to participate in the sets of uniquely specific activities."[7]

The implications of this and other studies is that a growing and thriving visitor destination industry will have to be a portfolio of assets, some unique, whether due to nature or circumstances, others created and fostered to be complementary and enjoyed in varying combinations and available to visitors and locals alike.

Kalani provides a destination event experience while at the same time allowing visitors and locals to meet and mix in a stunning physical environment. The Retreat is both unique thanks to location and wellness activities and festivals it hosts. These add to the richness, scale, scope, and texture of the opportunities available to visitor and locals alike on the Big Island. Thus, it adds in several important ways to enrich the social and economic strength and vitality of the Big Island.

Many of the **activities Kalani** provides service its immediate and extended community. **Music, Yoga, Art, and Culinary Festivals** attract visitors yielding

[7] Lamondia, J.J., and Bhat, C.R., (2011), "A Study of Visitors Leisure Travel Behavior in the Northwest Territories of Canada," *Transportation Letters: The International Journal of Transportation Research*, Vol. 3, No. 1, pp. 1-19 (Keywords: Tourism travel behavior, combined leisure activity involvement, prior travel experience, Composite Marginal Likelihood, Multivariate Binary Probit).

significant economic impacts.[8] These festivals also enrich and broaden the experiences of the local community and island. This economic impact is harder to assess as expenditures by locals may mostly replace other expenditures they may have made locally. To the extent that visitors from outside attend these festivals because locals also participate, which, of course, is highly likely, the economic impact will be captured above via the spending by visitors.

Kalani's Community Center activity classes, e.g. yoga, wellness and other classes, are open to the public at zero cost. This broadens and enriches the services available to the local community. This social value, while important, is more difficult to quantify. However, a rough economic value may be imputed as follows. Kalani estimates that 8,623 person-classes are filled by local residents annually.[9] Valued at $15/hour this is a contribution (or donation) by Kalani of approximately $129,345 annually to the residents who enjoy these services. If we consider that every $1 they save will enter the expenditure stream nearby, we can apply the above multipliers to arrive at figures augmenting economic output by $236,572 annually.[10]

Beyond this, if these classes reduce illness and improve the quality of life for participants, there is an economic value. Information on disease/injury prevention suggests that "for each person who becomes and stays physically active as a result of …participation in…fitness programs, the cost of treating chronic diseases and costs related to absenteeism and lower productivity are reduced by approximately $1,000 per person per year."[11] If we assumed three classes per week per year per person, 8,623 classes is approximately 55.3 people per year. Thus, at a productivity benefit of $1,000 per person, that is an additional $55,300 annually contributed by Kalani to residents of the local community.

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[8] For example, the visitors to the Puna Music Festival generate an estimated $1.4 million annually. This impact is captured within the larger estimate for Kalani as a whole as the major impact will be spending driven by visitors to the Festival staying at or near Kalani. These expenditures have been captured by their visitor-days and estimated daily expenditures.

[9] A "person-class" is one person attending one class (usually about an hour in length).

[10] The interested reader may find the values for Earnings, Jobs, and Taxes using the multipliers on page 5 above.

[11] See: "Here For Good. The Impact of the YMCA of Greater New York on New York City's Economy—Executive Summary", Appleseed, January 2013, page 4.

Fiscal Sponsorship: Kalani's leadership has years of successful experience in both the for-profit and non-profit fields. For many, access to Federal, state, and local funding depends on knowing how to negotiate the myriad requirements of various grant-funding agencies. This knowledge is either hard to find or expensive. Thus, in smaller and more remote areas especially, access to and awards of grants for worthy non-profits are lacking.

Realizing this deficit, Kalani started a mentoring/sponsorship program that assists community groups. One recent result has been a $90,000 grant to a local Puna-based group. In addition to the increased services and quality of life such funding represents, Kalani has assisted in augmenting the economic stream in its community through its sponsorship mentoring.

Permaculture and Waste Prevention/Diversion

"Permaculture is a branch of ecological design, ecological engineering, environmental design, construction and integrated water resources management that develops sustainable architecture, regenerative and self-maintained habitat and agricultural systems modeled from natural ecosystems.
Permaculture is a philosophy of working with, rather than against nature; of protracted and thoughtful observation rather than protracted and thoughtless labor; and of looking at plants and animals in all their functions, rather than treating any area as a single product system.

—Bill Mollison."[12]

Kalani is stewarding permaculture events encouraging knowledge sharing. It is developing a website to assist the community in mapping assets and skills throughout Puna Makai area. Facilitating contact and communication, sharing knowledge and resources, Kalani is adding value by assisting the Puna Makai community in better using and conserving their scarce resources.

Kalani is also aggressively reducing its waste stream. Every ton of waste diverted from the local landfill saves from $74 to $112 per ton.[13] Kalani estimates

[12] Wikipedia, http://en.wikipedia.org/wiki/Permaculture, accessed 11-19-2014. The similarity to the Hawaiian Ahupua`a, the basic self-sustaining unit, is striking.

that it diverts anywhere from 75% to 89% of its waste from the traditional source-to-landfill stream. [14] At 4.6 pounds per person per day average[15], Kalani produces approximately 1400 pounds of waste daily. Diverting 82% of it reduces the waste-to-landfill stream by 1150 lbs, or about .575 of a ton/daily. This adds up to 210 tons annually. At $93/ton this reduces social cost of waste by approximately $20,000 annually.

Beyond this value, Kalani proved itself a very good asset for the County and its neighbors during and after Hurricane Iselle in August 2014.

Equipped with generators and facilities needed to create an emergency distribution and safety center, Kalani saved the County the expense of mobilizing scarce resources to provide this for residents of the Puna region. An estimated 200 hours of Kalani labor, valued approximately at $3500 (see: http://www.handsonnetwork.org/tools/volunteercalculator) along with the physical plant and shelter activities, had a many-fold higher value than the labor volunteers alone.

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[13] Hilo Landfill Feasibility Study, Final Report, R.W. Beck, March 2012, page ES-2. Figures converted from 2011 values to 2014 values. The average is $93/ton. Diversion is used here to mean reuse and recycle. Kalani is also involved in reducing potential waste at the front-end of the stream.

[14] "Greenleaders", page 4.

[15] See Annenberg, http://www.learner.org/interactives/garbage/solidwaste.html

References

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