Outlook for the Hawai'i Economy

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1997 YEAR IN REVIEW

The State's fragile economic recovery faltered in the second half of 1997. Preliminary (Department of Commerce) estimates indicate that inflation adjusted personal income rose nearly 2% last year, but we expect later revisions to bring the final estimate closer to the 1.4% rate we forecast last April.

Visitor arrivals in 1997 were stronger than expected, with 0.7% growth outstripping our forecast of -1.0%. However, 1997 average daily census was down 1.7%, and visitor expenditures have certainly declined as a weak yen and lagging eastbound arrivals took their toll on retail sales.

The hoped for end to the construction downturn failed to materialize, yet end-of-year strength in job creation left 1997 job growth (0.2%) only slightly less than we expected (0.4%). The contracting tax base fell a whopping 12% in real terms. As a result, real gross state product may well fall short of our 0.9% forecast. Unfortunately, we won't know for sure until the BEA releases their numbers two years from now!

With the US inflation rate reaching a 32 year low in 1997, and Hawaii's economy showing no signs of creating excess demand any time soon, Honolulu actually experienced 0.1% deflation from the 1st half of 1997 to the second half of 1997. For the entire year, Honolulu's Consumer Price Index rose 0.7%, very near our forecast (0.8%) at last years conference.

1998 Forecast Summary

We predict a continuation of this weakness into 1998. While visitor arrivals will continue to rebound somewhat from the weak performance of early 1997, we expect overall arrivals to rise just 2.0% above 1997 levels. Any strengthening in arrivals will have to come from the US mainland, as the strong dollar and turmoil in East Asia lead to no growth in the eastbound market.

Private sector construction activity will continue as a drag on the state economy with the real contracting tax base declining by almost 2% in 1998 and then returning to positive growth in 1999. While net job losses ended last year, we see little room for additional job growth. In fact, we are forecasting a 0.6% decline in 1998 and only 0.3% growth in 1999. Overall, output in Hawai'i as measured by real Gross State Product, will expand by only 0.7% in 98 and 1.1% in 99, while real personal income grows by 1.2% in 98 before slowing to 0.9% growth in 1999.
Inflation? What inflation? We predict zero inflation this year and 0.3% in 1999.

### Hawai'i Economic Indicators (Annual Growth Rates)

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<thead>
<tr>
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<th>1997</th>
<th>1998</th>
<th>1999</th>
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<tbody>
<tr>
<td>Real Personal Income</td>
<td>2.0</td>
<td>1.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Visitor Arrivals</td>
<td>0.7</td>
<td>2.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Nonagricultural Jobs</td>
<td>0.2</td>
<td>-0.6</td>
<td>0.3</td>
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<tr>
<td>Construction Put in Place</td>
<td>-12.2</td>
<td>-1.7</td>
<td>1.7</td>
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<tr>
<td>Real Gross State Product</td>
<td>0.9*</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Consumer Price Inflation</td>
<td>0.7</td>
<td>0.0</td>
<td>0.3</td>
</tr>
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* April 1997 Forecast

### Empirical Model Overview

We use statistical methods to predict developments in key Hawai‘i economic indicators based on their own past behavior and paths of several external indicators. Our primary model focuses on important high-frequency indicators, including Hawai‘i real personal income, visitor arrivals, nonagricultural jobs, and the real general excise and use taxbase on contracting, retail, and hotel rentals. We also include an interpolated quarterly Hawai‘i inflation rate in our core model as external "driving" variables, we use U.S. real personal income, the U.S. CPI inflation rate, Japanese real consumption expenditures, California nonagricultural employment, and the real yen/dollar exchange rate. Annual changes in gross state product (GSP) are projected based on their historical relationship with Hawai‘i income and jobs.

The primary Bayesian Vector Autoregression model (HERO-BV) treats the set of eight local variables and five external drivers as an interdependent system of economic relationships, where each data series may in principle be affected by its own history and the behavior of the other series. Some structure is imposed on the estimation process to reflect prior beliefs about economic relationships and to limit implausible influences of Hawai‘i variables on the U.S. and Japanese economies. The model captures both long-run relationships and patterns of dynamic adjustment. The model is estimated with quarterly data ending in 1997:4 (in some cases 1998:1), and a forecast is generated several years out. For purposes of forecasting, external driving variables are taken as given, and likely paths are assumed for them. With the exception of inflation (where HERO-BV predicts unreasonably large deflation), the forecasts presented are pure model forecasts, with no subjective adjustments.
Forecast Assumptions

Our forecast rests partly on assumptions about economic developments in the U.S. and Japanese economies. We expect the U.S. economic expansion to continue for the next two years, but at a somewhat slower pace than in 1997, with U.S. real personal income expanding at an average rate of 2.0%.

The California economy, which has expanded briskly for the last two years, may be challenged by weaker exports to Asia. Still, we expect job growth to continue at a 2.0% pace over each of the next two years.

The Japanese economy has likely slipped into recession. While the recently-announced fiscal package should provide support later this year and in 1999, it is far from clear that consumption will recover soon. As a result, we assume no growth in real Japanese consumption in 1998 or 1999. We also assume no retreat of the dollar from its current high value against the yen.

Results

This year our model breaks out westbound and eastbound visitor arrivals, and forecasts very different behavior for the two components. The recent strength in visitors from the mainland is expected to continue, posting 3.6% growth in 1998, and just over 2% in 1999. Visitors from Japan fell nearly one percent last year, and we forecast them to be essentially flat for the next two years.

Overall visitor arrivals will rise about 2% next year, a modest improvement from 1997.
As we expected, Hawai‘i’s net job losses ended last year. However, the combination of the strong yen, restraining Japanese visitor spending, and the perpetual drag of the construction industry on the local economy, implies little or no job growth in the next couple of years. We forecast job losses in 1998 at a 0.6% rate before returning to a slightly positive (0.3%) growth in 1999.

While the construction sector will not contract as severely as last year. We are still predicting a decline of 1.7% next year. We will go out on a limb one more time and predict the bottom of the construction cycle. The real GET contracting tax base should expand at a 1.7% rate in 1999.

Overall, we expect a "timid" expansion of both real personal income and real Gross State Product (GSP). In 1998 we predict personal income growth of 1.2%, down a bit from 1997 preliminary estimate of 2.0%, and 0.9% in 1999. Output in Hawai‘i, measured by GSP, should expand 0.7% next year and 1.1% in 1999.

Risks

There is greater than the normal uncertainty surrounding our forecast for both 1998 and 1999. The economic crisis in Asia has dramatically reduced short-term growth prospects for these economies. It is now clear that "Japan's Serotonin Deficit" is adversely affecting Hawaii’s tourism industry and overall retail sales. The risks of further spillovers from SE Asia to Japan are not inconsequential.

As we said last year, forecasting Hawaii’s economy has been an unrewarding enterprise in the 1990s. Models based on expert opinion and empirical evidence have faired equally poorly, consistently overestimating the strength of an impending recovery that recedes further and further into the future. However, according to preliminary estimates of 1997 Hawai‘i personal income, and preliminary numbers on Visitor arrivals, we actually underestimated some important economic indicators last year. This year, (HERO-BV) predicts very slow growth of the economy, so with any luck at all we will be back here next year reporting how we under forecast the robust economy.