UHERO

THE ECONOMIC RESEARCH ORGANIZATION
AT THE UNIVERSITY OF HAWAI'I

Forecast Project

TOURISM HOT, ~~BUT~~ BROADER GROWTH ~~STILL ELUSIVE~~ ON THE WAY

DR. CARL BONHAM
EXECUTIVE DIRECTOR, UHERO

Senate Ways & Means + House Finance
Pre-session Briefing

January 4, 2013

Overview

External Snapshot

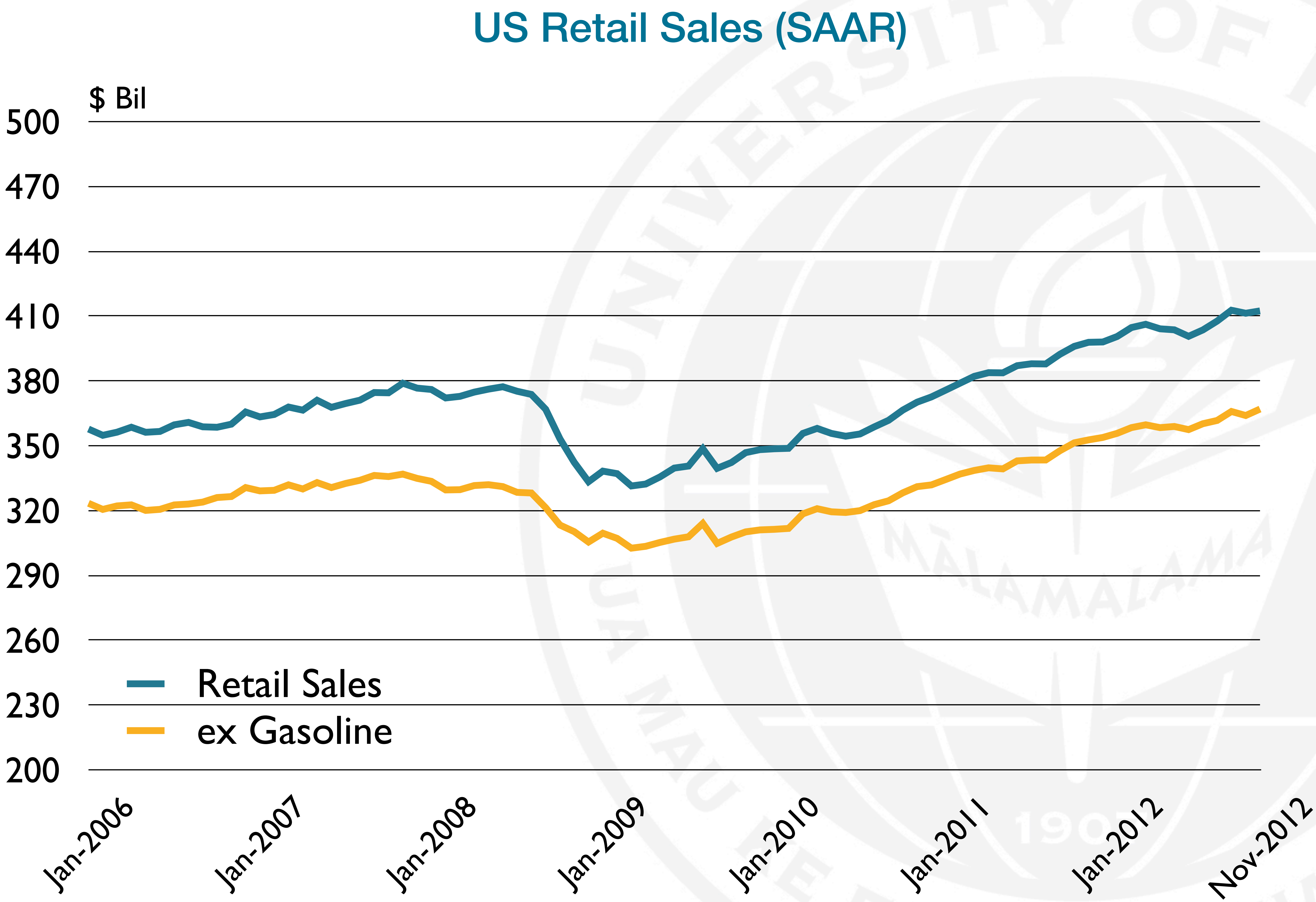
- Recent news on US economy is encouraging
- 2013 outlook still highly uncertain
  - Fiscal Cliff averted but Debt Debacle II looms
  - Can deficit reduction be offset by private sector?
  - Fed to ease continuously until improvement occurs
  - Europe's slow moving train wreck continues to drag

Current Conditions

2013 Outlook

- Visitor arrivals will set new record
- Airline lift is still the story
- State and County cuts are ending
- Real Estate and Construction outlook improving rapidly
- Oahu construction about to ramp up

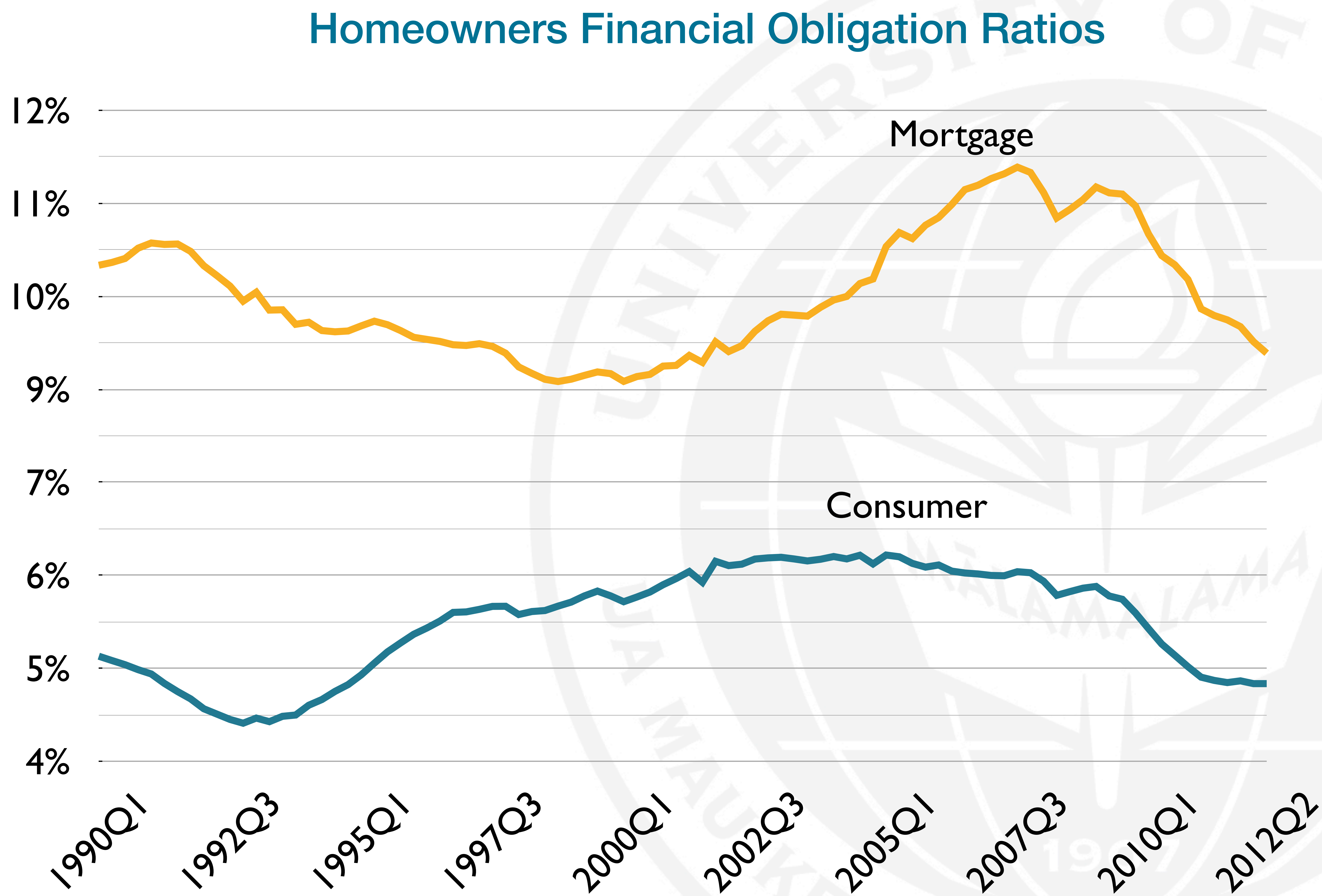
Consumer spending still on again off again



Source: Census

UHERO

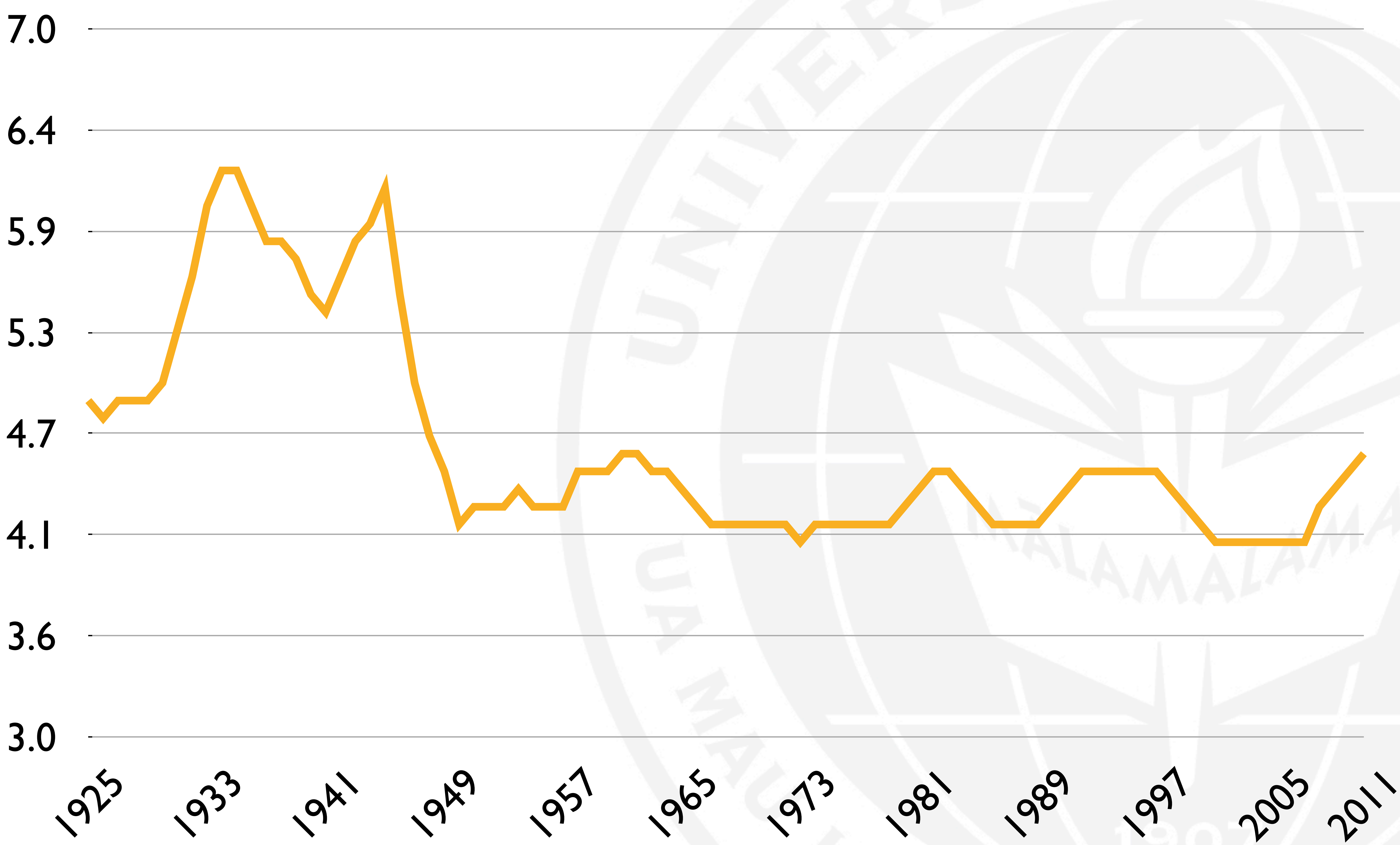
BUT DE-LEVERAGING ON TRACK



Source: FRB

And replacement spending poised for rebound

Average Age of Consumer Durables Highest in 60+ Years



Source: BEA http://192.149.12.20/iTable/index_FA.cfm

The Good

- There was a deal—and it came before the end of January!
- Fiscal austerity reduced (from what it could have been)
  - extending unemployment benefits,
  - raising income threshold to 450K
  - The AMT is permanently patched
- And the deficit has been declining for 3 years
  - FY09—10.1% of GDP, FY10—9% FY11—8.7%, FY13—6%?

Details for wonks (thanks to Ezra Klein at WaPo)

— Tax rates will permanently rise to Clinton-era levels for families with income above $450,000 and individuals above $400,000. All income below the threshold will permanently be taxed at Bush-era rates.
— The tax on capital gains and dividends will be permanently set at 20 percent for those with income above the $450,000/$400,000 threshold. It will remain at 15 percent for everyone else. (Clinton-era rates were 20 percent for capital gains and taxed dividends as ordinary income, with a top rate of 39.6 percent.)
— The estate tax will be set at 40 percent for those at the $450,000/$400,000 threshold, with a $5 million exemption. That threshold will be indexed to inflation, as a concession to Republicans and some Democrats in rural areas like Sen. Max Baucus (D-Mt.).
— The sequester will be delayed for two months. Half of the delay will be offset by discretionary cuts, split between defense and non-defense. The other half will be offset by revenue raised by the voluntary transfer of traditional IRAs to Roth IRAs, which would tax retirement savings when they're moved over.
— The 2009 expansion of tax breaks for low-income Americans: the Earned Income Tax Credit, the Child Tax Credit, and the American Opportunity Tax Credit will be extended for five years.
— The Alternative Minimum Tax will be permanently patched to avoid raising taxes on the middle-class.
— The deal will not address the debt-ceiling, and the payroll tax holiday will be allowed to expire.
— Two limits on tax exemptions and deductions for higher-income Americans will be reimposed: Personal Exemption Phaseout (PEP) will be set at $250,000 and the itemized deduction limitation (Pease) kicks in at $300,000.
—The full package of temporary business tax breaks — benefiting everything from R&D and wind energy to race-car track owners — will be extended for another year.
— Scheduled cuts to doctors under Medicare would be avoided for a year through spending cuts that haven't been specified.
— Federal unemployment insurance will be extended for another year, benefiting those unemployed for longer than 26 weeks. This $30 billion provision won't be offset.
— A nine-month farm bill fix will be attached to the deal, Sen. Debbie Stabenow told reporters, averting the newly dubbed milk cliff.

To the Fiscal plateau —it goes on and on

The Bad

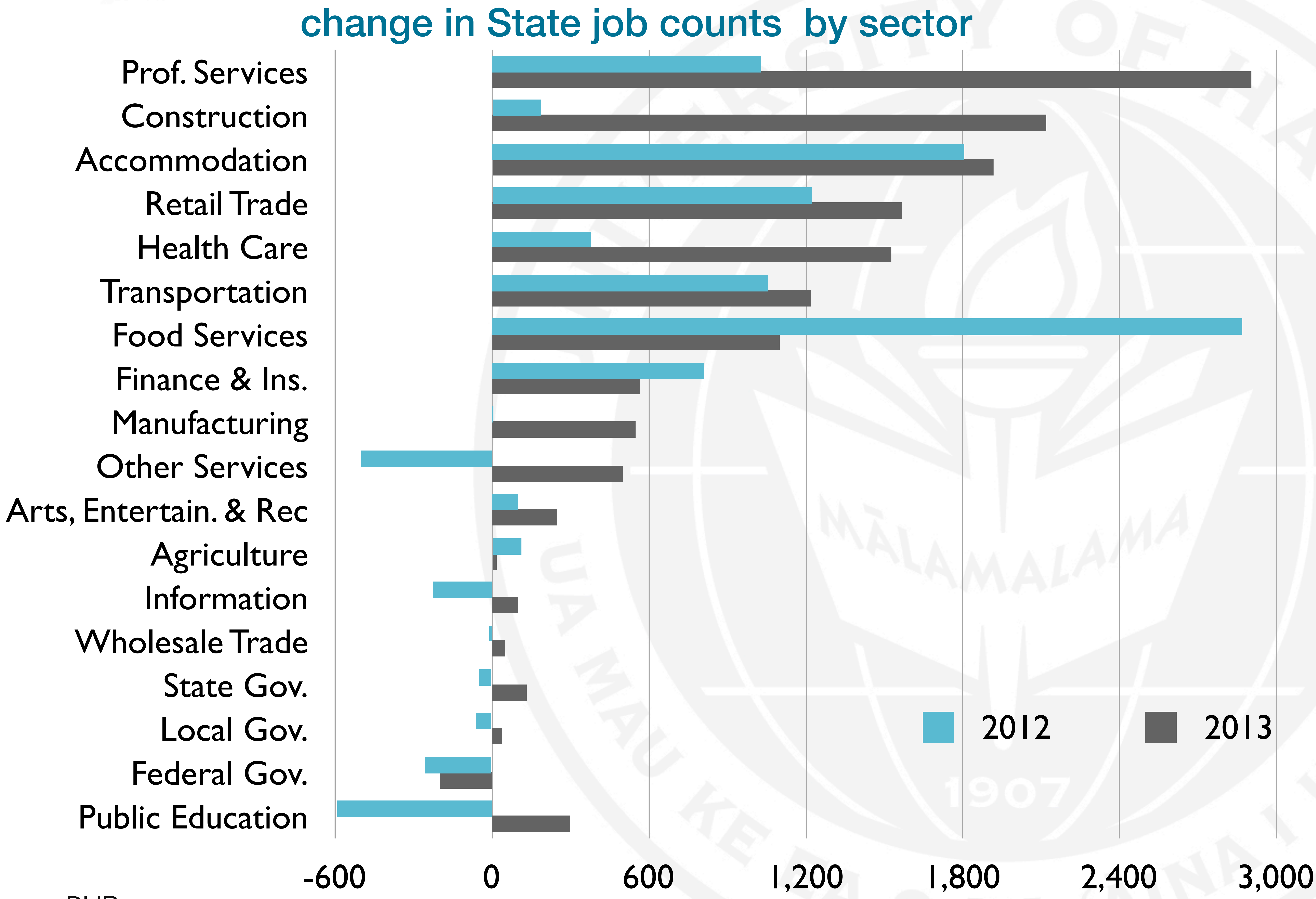
- No solution to debt sustainability problem.
- Sequestration only postponed for two months
- We passed the debt ceiling on Monday.
- Continuing resolution expires at the end of March

Remember Debt Debacle I

- Aug 2. —Budget Control Act of 2011 signed, the same day the Treasury expected to exhaust the its borrowing authority.
- Aug 5. S&P downgrades the US credit rating
- Market volatility soars to highest level since Lehman

Hopefully this time will be different

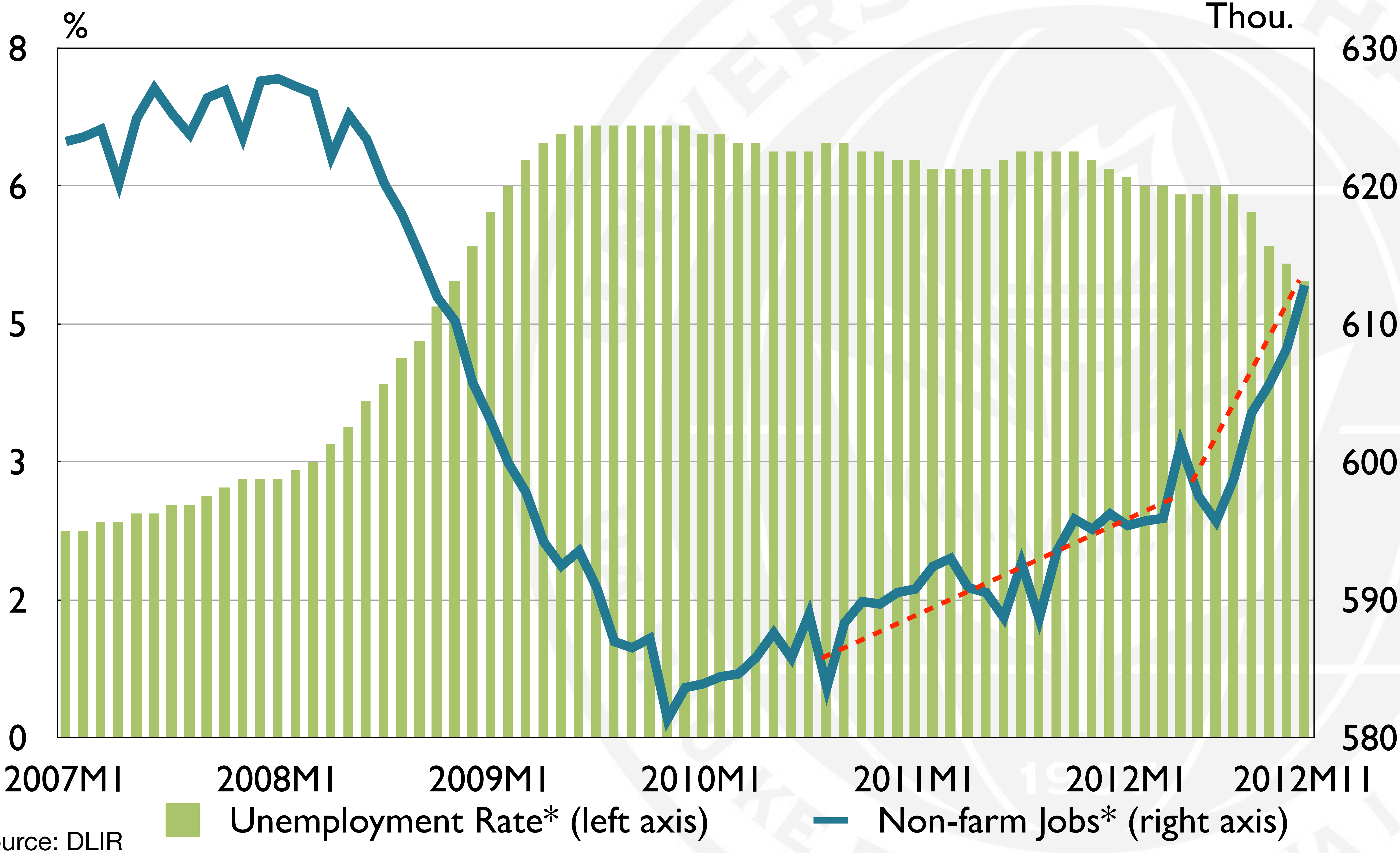
TOURISM BOOM TO SPREAD IN 2013



Source: DLIR

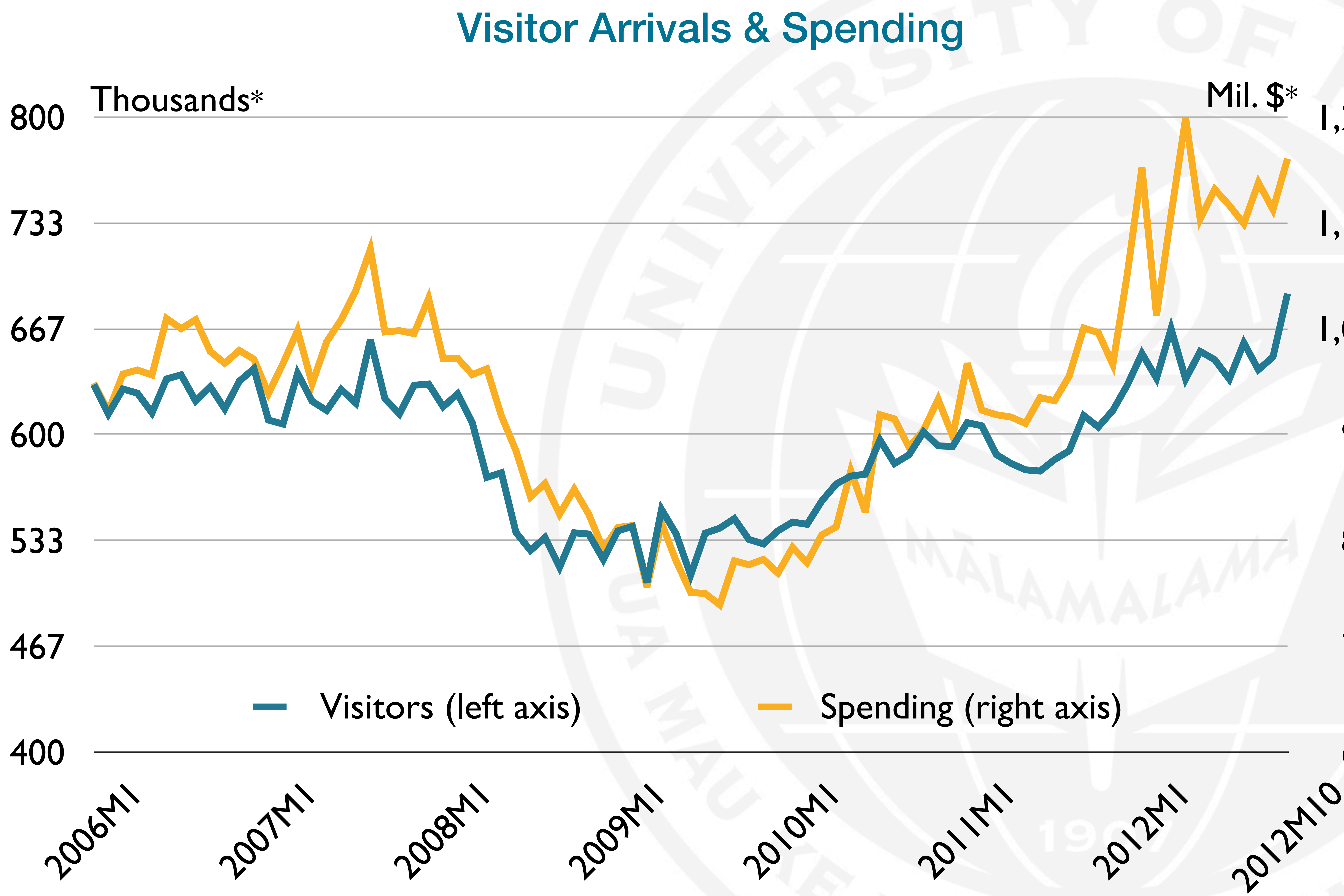
Job Market improvement—accelerating

State Job Count vs Unemployment Rate



* Source: DLIR
Seasonally adjusted—UHERO

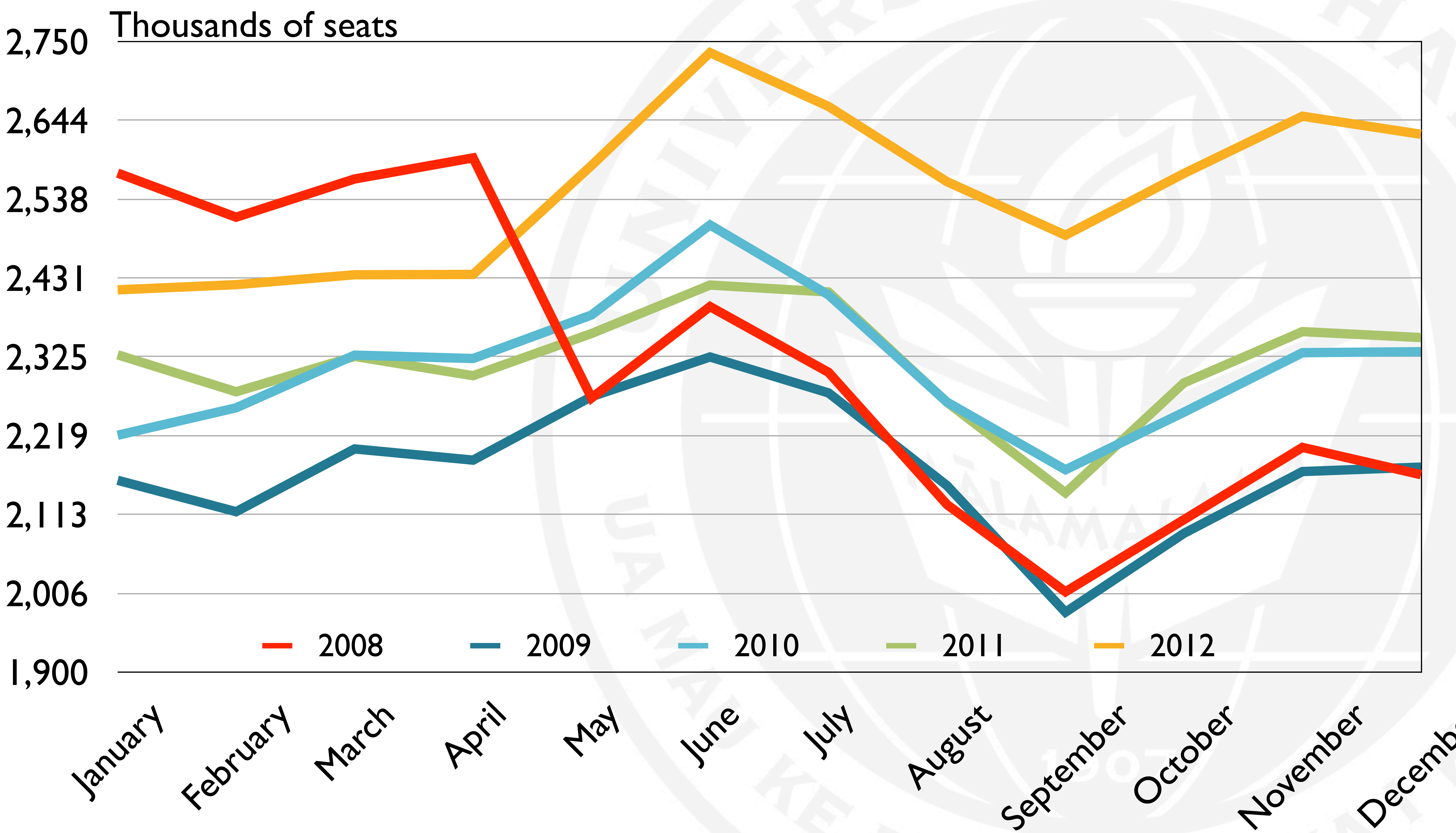
Can the tourism surge continue?



* Source: HTA; Seasonally adjusted by UHERO

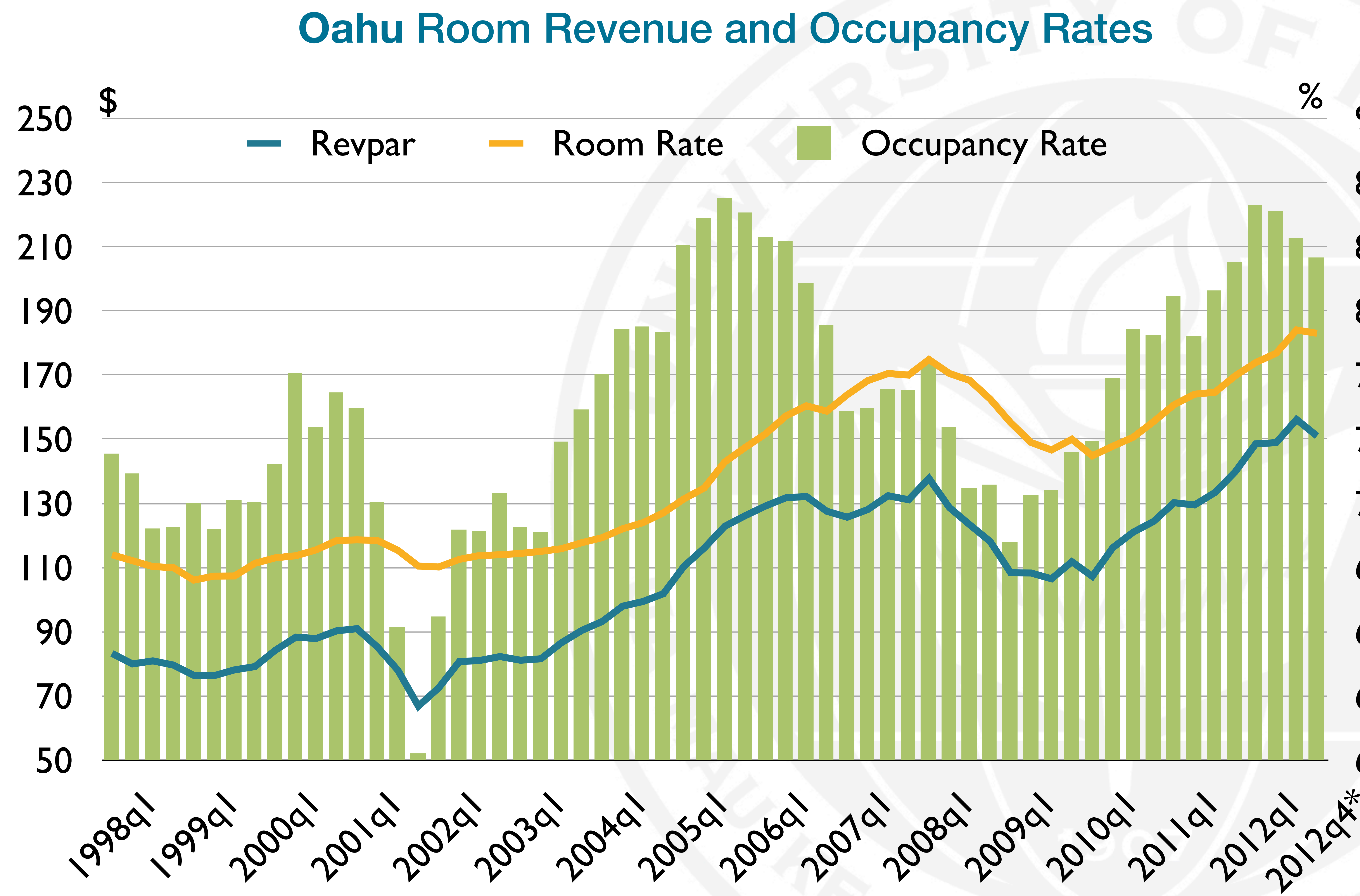
Can the tourism surge continue?

Scheduled Seats Outlook



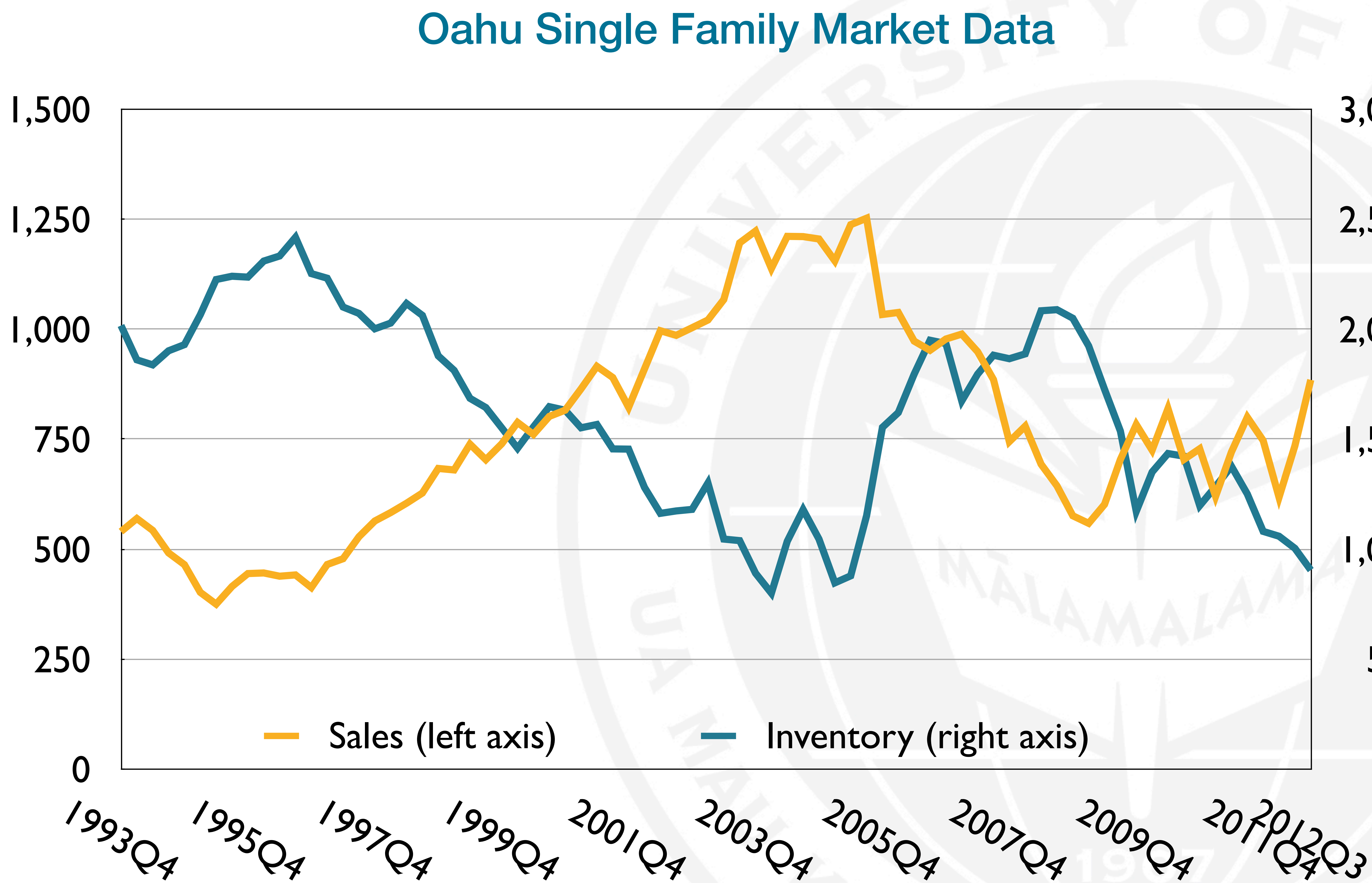
* Source: HTA

Can the tourism surge continue?



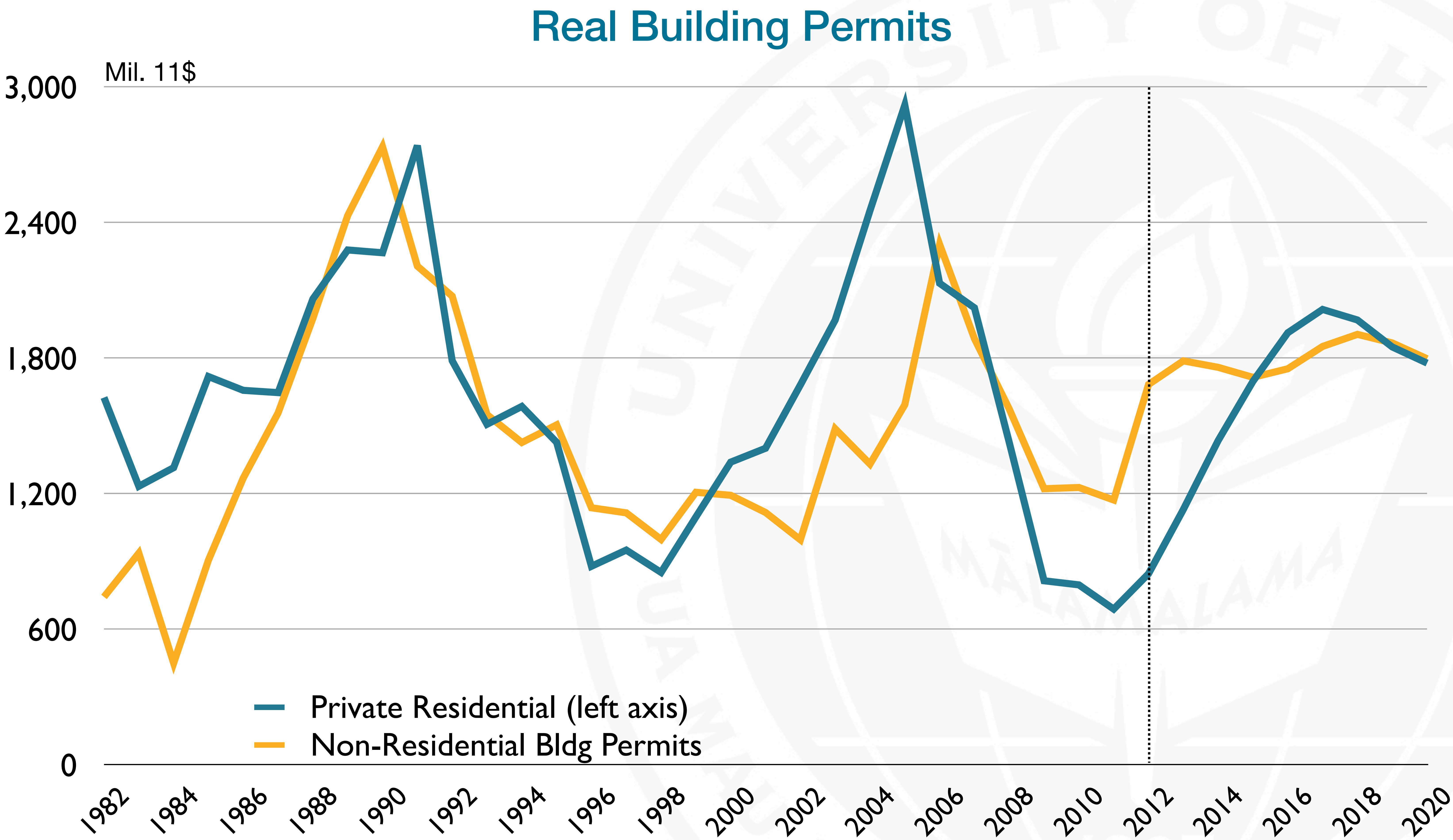
* Source: Hospitality Advisors & UHERO

Housing market in balance? NOT

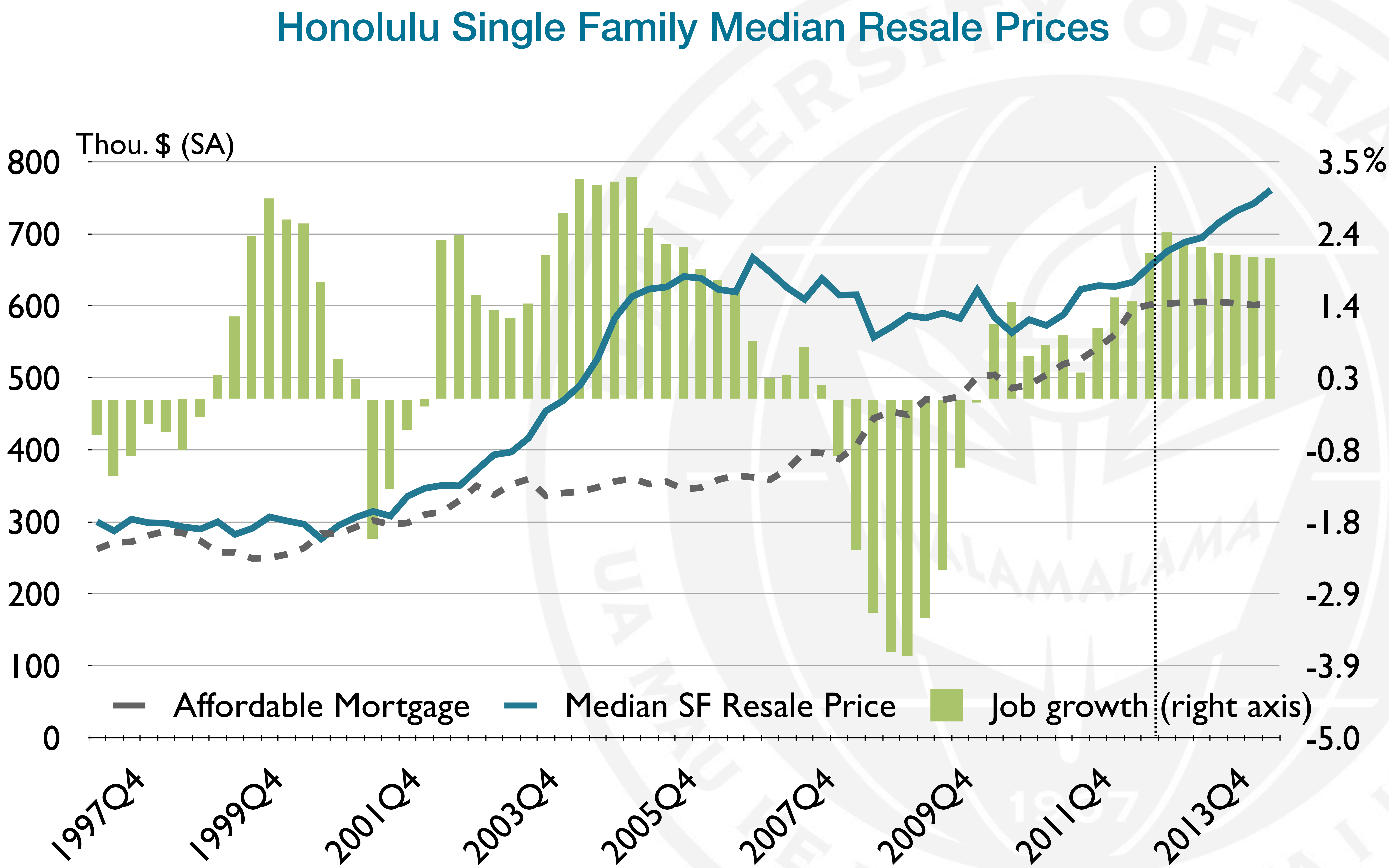


* Seasonally adjusted—UHERO
Source: Prudential Locations

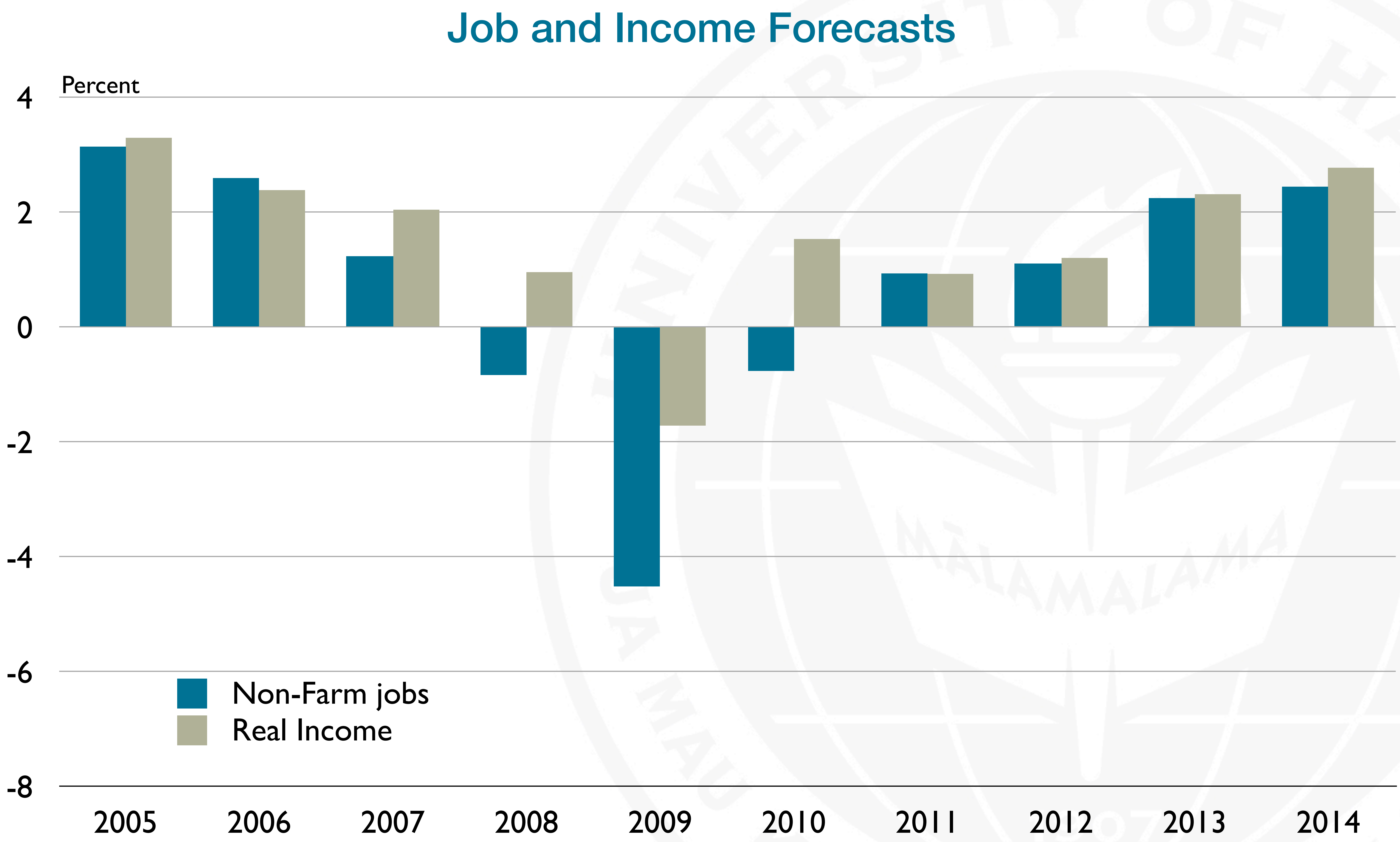
And Supply of New Homes at Record Lows



Best Affordability in a Decade—for Now



Slow recovery from deep recession



http://www.uhero.hawaii.edu/ — Home | UHERO

Like Us on Facebook | Become a Sponsor | Join Mailing List

UHERO

THE ECONOMIC RESEARCH ORGANIZATION AT THE UNIVERSITY OF HAWAI'I

Search

- ABOUT UHERO
- DATA
- RESEARCH
- PEOPLE
- PRODUCTS
- NEWS
- SPONSOR
- CONTACT

EXPLORE

UHERO's Award Winning Website

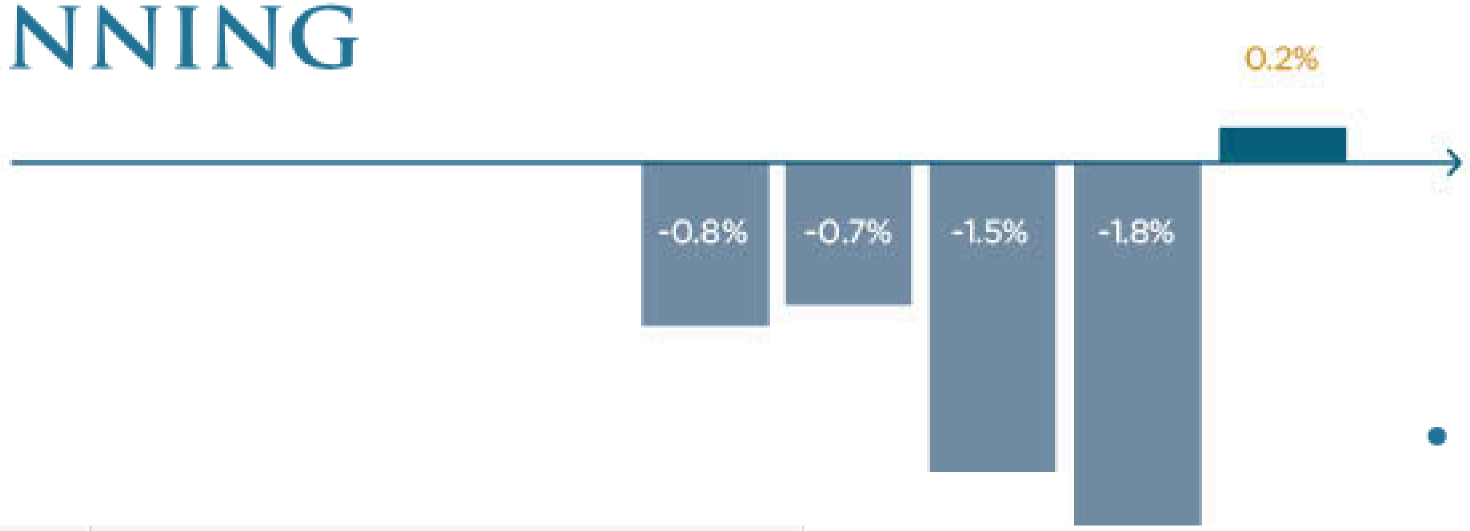


CHART GALLERY

UPDATES

NOVEMBER 18, 2011

KITV Project Economy: Super Committee With Super Deadline

Q & A: Super Committee Decisions Due Next Week

NOVEMBER 11, 2011

KITV Project Economy: APEC's Impact On Local Economy

MORE NEWS | MORE PRODUCTS

BLOG

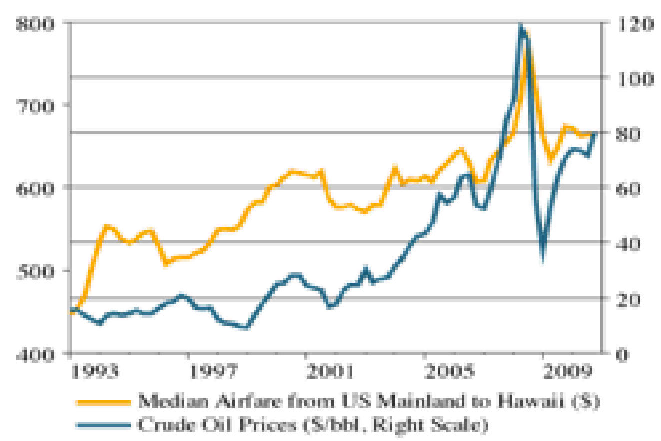
Almost four years after the start of the great recession total output of goods and services in the US has surpassed its pre-recession peak.

Read more...

MORE UHERO ANALYSIS

VISUALIZE

Median Airfare from US Mainland to Hawaii



BLOG POST

UHERO 2424 Maile Way, Saunders Hall 540 • Honolulu, Hawaii 96822
(808) 956-2325 • uhero@hawaii.edu

External Links Department of Economics | Social Science Research Institute | College of Social Sciences

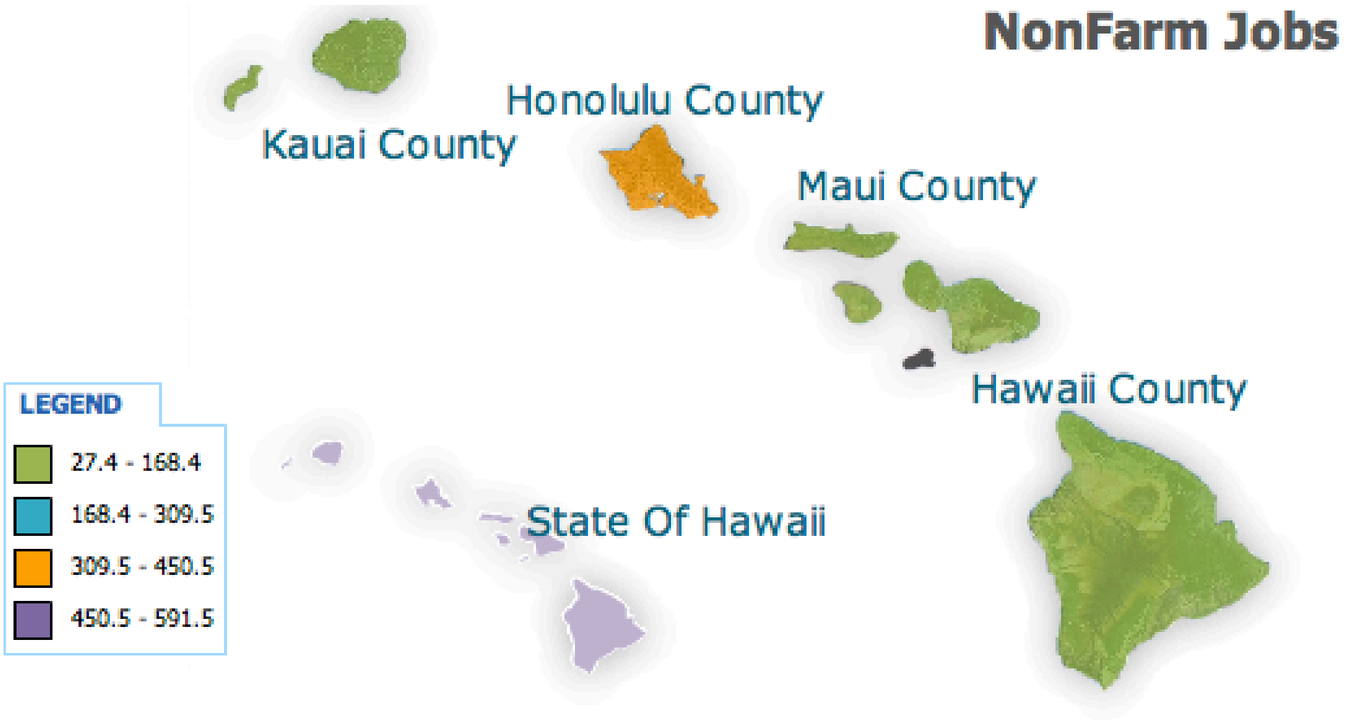
Website Design & Development Wall-to-Wall Studios

UHERO DATA PORTAL
powered by Prognoz

supported by Bank of Hawaii

AT A GLANCE | TABLES | GRAPHS | ANALYZER | FORECASTS | UHERO HOME | HELP | EXPORT | PRINT

NonFarm Jobs (Thou.), 2009

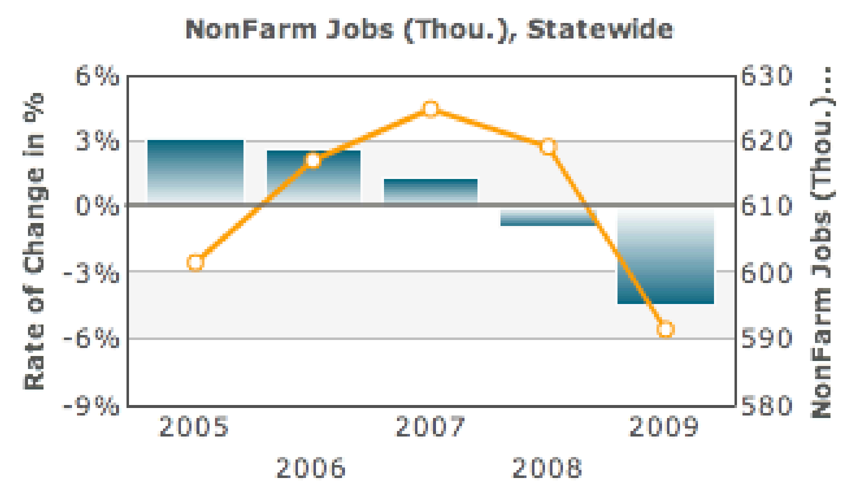


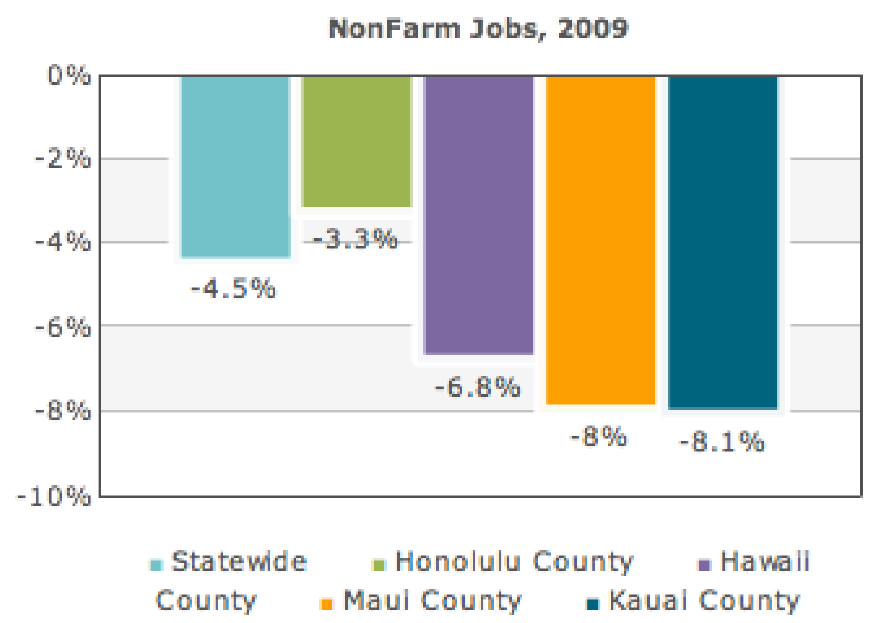
Annual | Statewide

Statewide At a Glance

Indicators	Source	2005	2006	2007	2008	2009
NonFarm Jobs (Thou.)		601.6	617.1	624.9	619.2	591.5
Population (Thou.)		1,264.5	1,275.3	1,277.4	1,288.2	1,295.2
Real Per Capita Income (1982-84$Thou.)		18.1	18.4	18.6	18.4	
Visitors (Thou.)		7,416.6	7,528.1	7,496.8	6,713.4	6,419.1
Unemployment Rate (%)		2.7	2.5	2.6	4.0	6.8

Click here for more detailed information






MAHALO

Current Hawaii Economic Conditions

Eugene Tian

Department of Business, Economic Development & Tourism

to the

Committee on Ways and Means
and
Committee on Finance

January 4, 2013

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

DBEDT November 2012 Forecast
Key Economic Indicators for Hawaii are positive in 2012 and continue to be positive in 2013

(Annual % Change)

	Actual CY 2011	Forecasted CY 2012	Forecasted CY 2013
Total Population	**1.0%**	**1.0%**	**1.0%**
Visitor Arrivals	**4.0%**	**9.4%**	**3.9%**
Visitor Expenditures	**10.7%**	**18.8%**	**5.2%**
Honolulu CPI-U	**3.7%**	**2.5%**	**2.4%**
Personal Income	**5.7%**	**4.3%**	**4.8%**
Real Personal Income	**1.9%**	**1.8%**	**2.3%**
Total Non-Ag Wage and Salary Jobs	**0.9%**	**1.5%**	**2.0%**

Source: Department of Business, Economic Development & Tourism

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Latest developments in Hawaii's Economy

- **State general fund tax revenues increased 13.0% during the 1st 11 months of 2012. For the current fiscal year FY 2013, general fund revenues increased 12.3%**

- **Visitor industry performed better than expected with 9.9% increase in visitor arrivals, and 19.2% increase in spending during first 11 months. Passenger count for December increased by 6.9%**

- **Labor market continues improving. Non-Ag wage and salary job counts increased 1.5% during the 1st 11 months of 2011. Initial unemployment claims for the whole year of 2012 were 11.1% lower that those in 2011**

- **Construction activities measured by value of building permit during the 1st 11 months of 2011 was 40.4% higher than the 2011 level. Construction jobs start increasing since August 2012**

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Latest developments in Hawaii's Economy

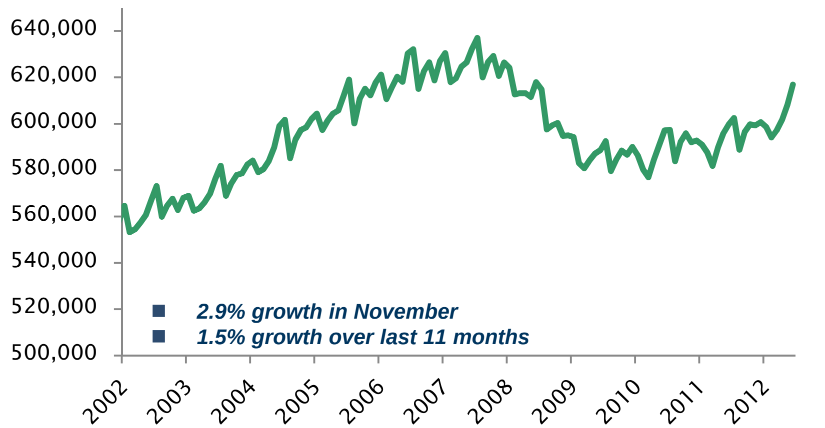
- **Council on Revenues revised state tax revenue forecast upward on January 3, 2013**

- **Federal Fiscal Cliff, Sequestration, the loss of US Senate seniority add more uncertainties to the economy**

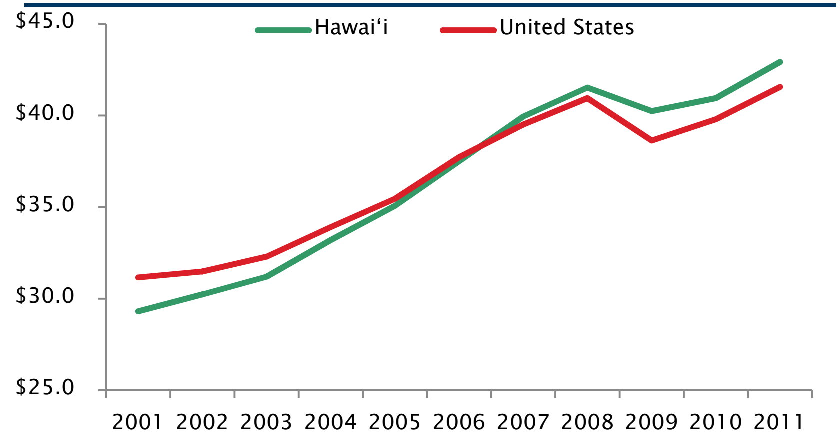
Personal Income and Labor Market

Employment and Income Metrics are Strong

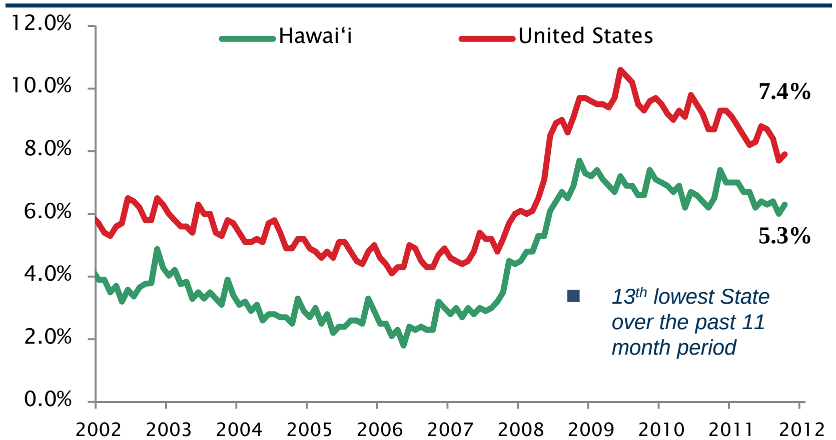
Non-Ag Wage and Salary Jobs[1]



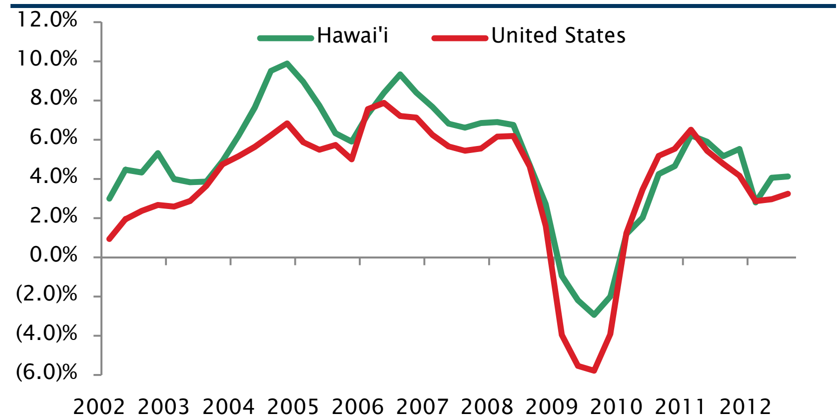
Per Capita Income ($000)



Unemployment Rates[1]



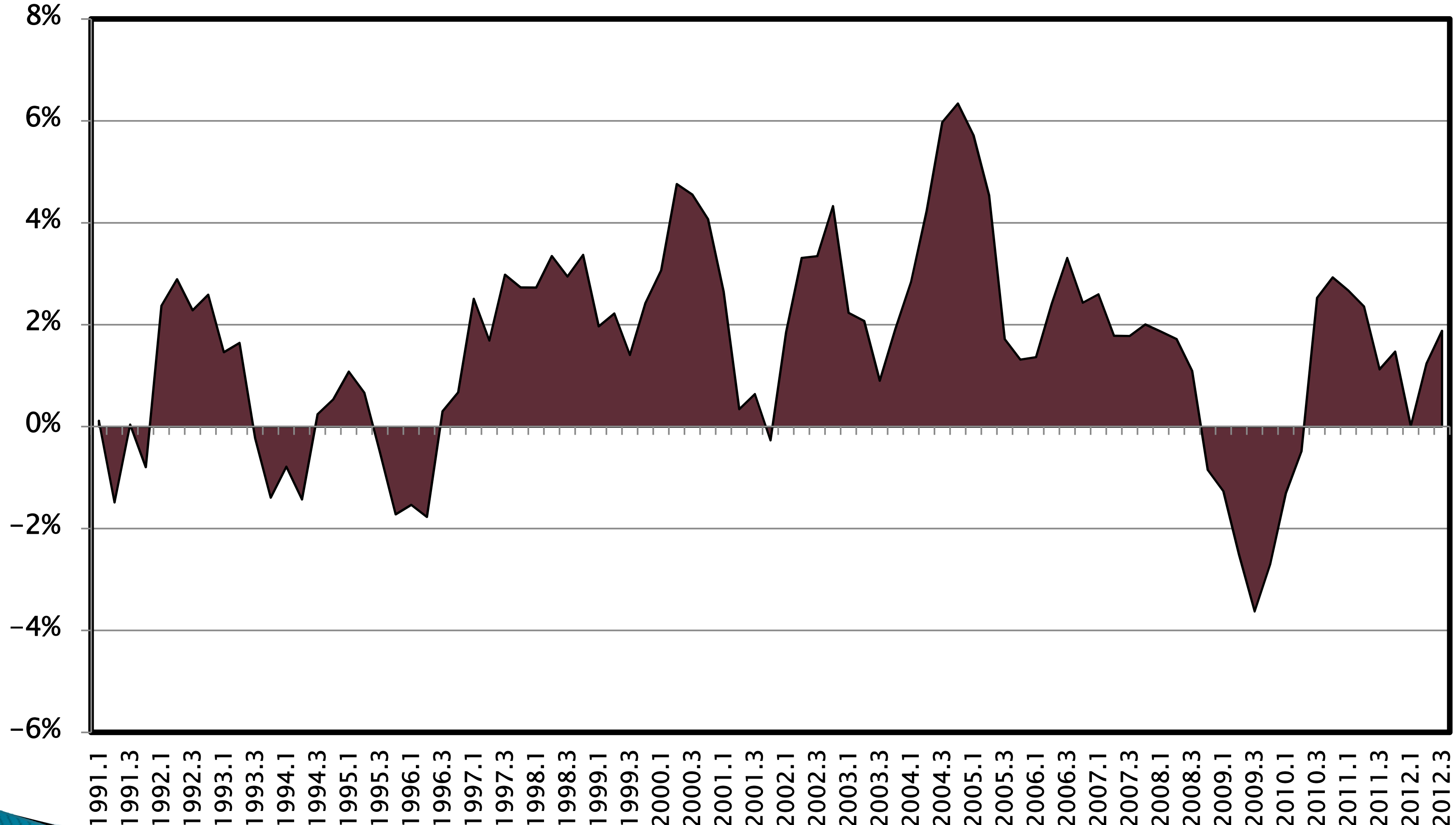
Quarterly Personal Income Growth[2] (Compared to Same Period in Previous Year)



Source: DBEDT, Bureau of [illegible] Statistics, U.S. Department of Labor
[1] As of November 2012
[2] As of 3Q 2012

Real personal income growth turned positive in the 3rd quarter of 2010

(deflated by Honolulu CPI, quarterly year-over-year growth)

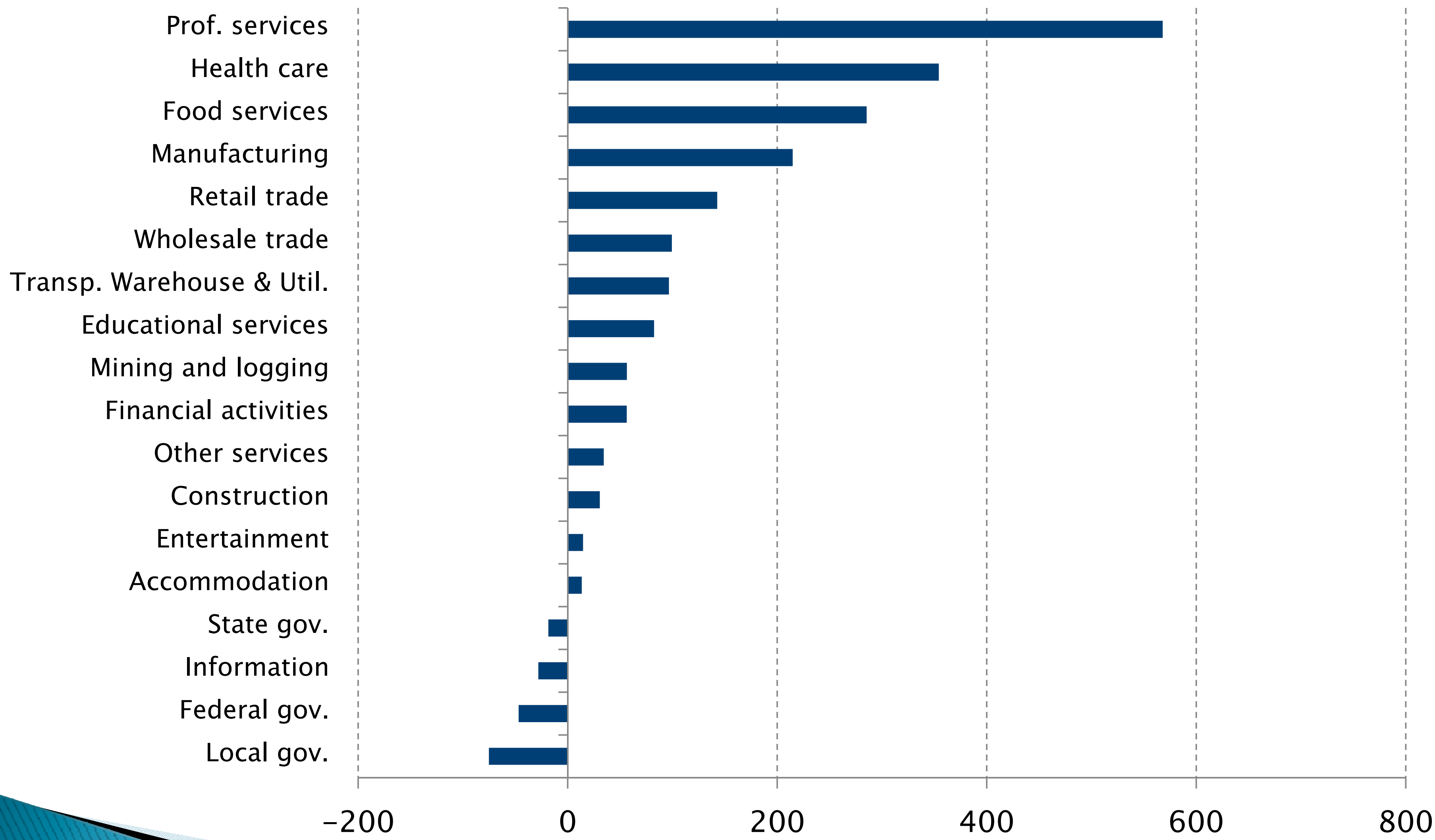


Source: U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

In the United States, most of the industries gained jobs during the 1st 11 months of 2012

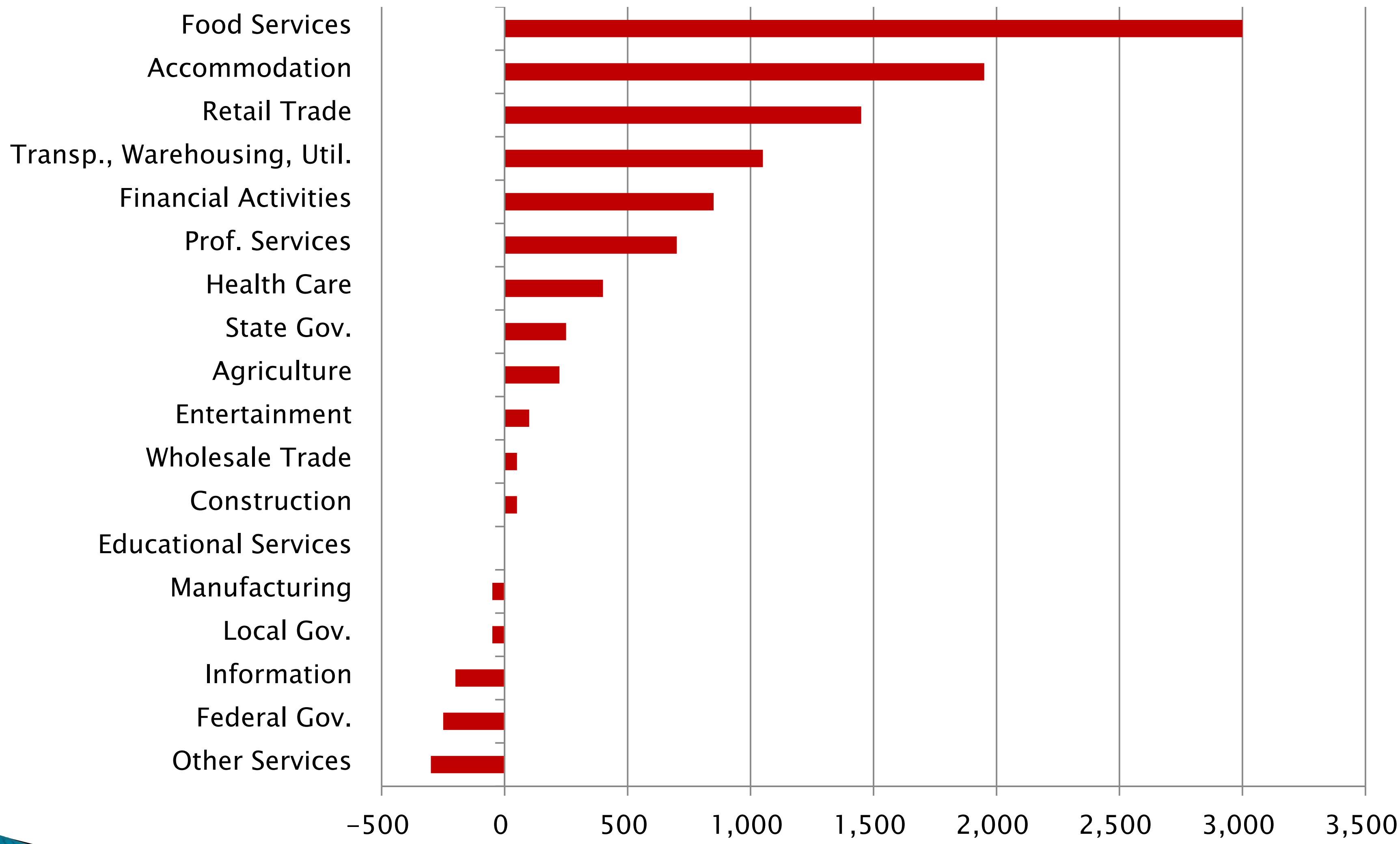
(change in jobs from same period in prior year, in 1,000 jobs)



Source:* *BLS, **Employment, Hours, and Earnings – National(Current Employment Statistics - CES) <http://www.bls.gov/data/>**

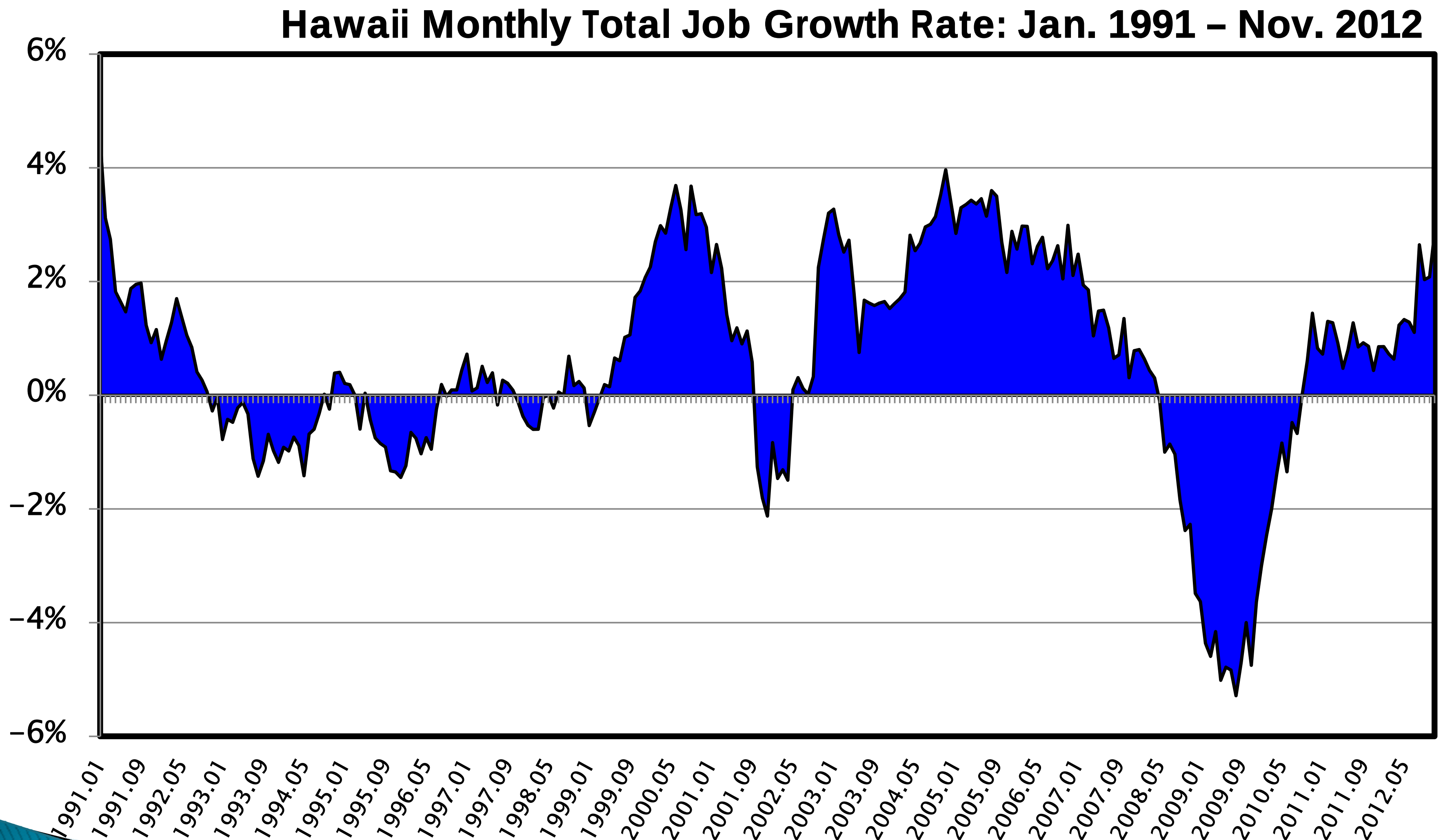
DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

In Hawaii, most of the industries gained jobs during the 1st 11 Months 2012, tourism sector contributed most to the job gains



Hawaii Payroll Jobs Started to Grow in October 2010

(monthly year-over-year growth rate)

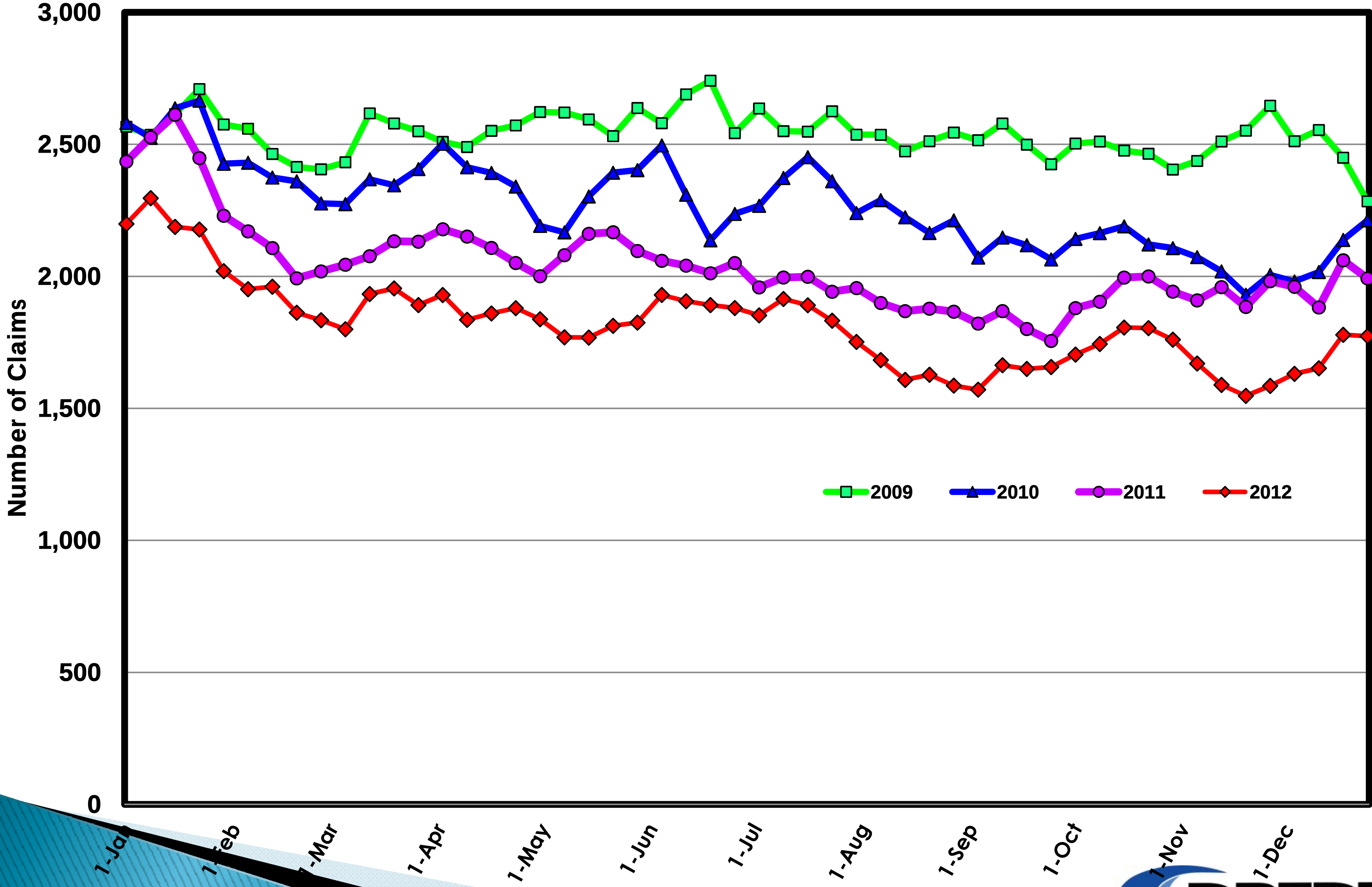


Source: Hawaii State Department of Labor and Industrial Relations

Updated thru November 2011

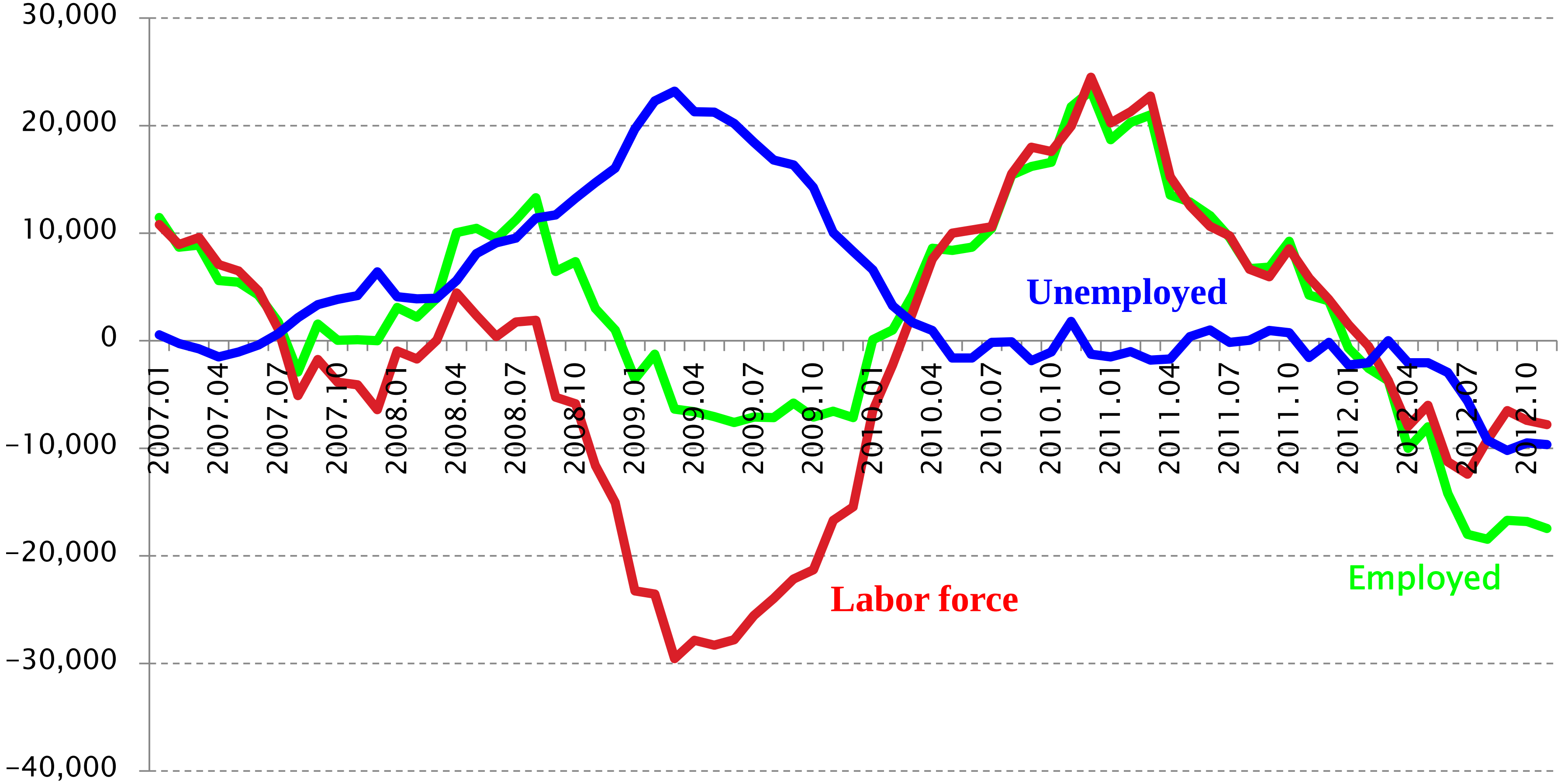
DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Initial unemployment claims have been declining since the beginning of 2010



In 2010 and 2011, number of new hires was the same as the number of people join the labor force, leaving number of unemployment at a constant level of 44,000, Hawaii labor force peaked in mid-2011. 2012 has a different pattern

Changes from the same month in prior year

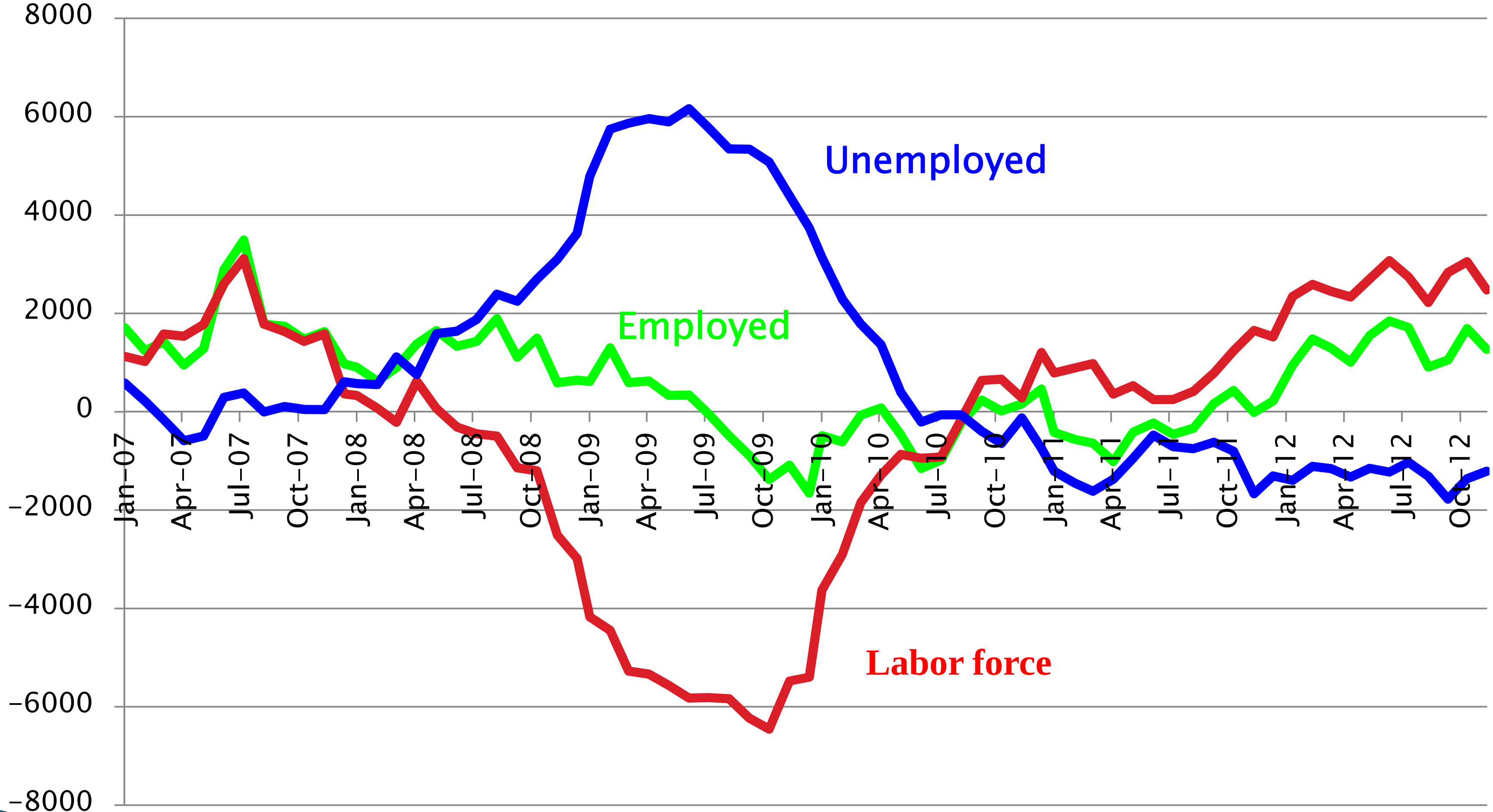


Source: Hawaii DLIR

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

In the United States, laborce and employment started to increase in late 2011 and continues the increasing trend

Changes from the same month in prior year



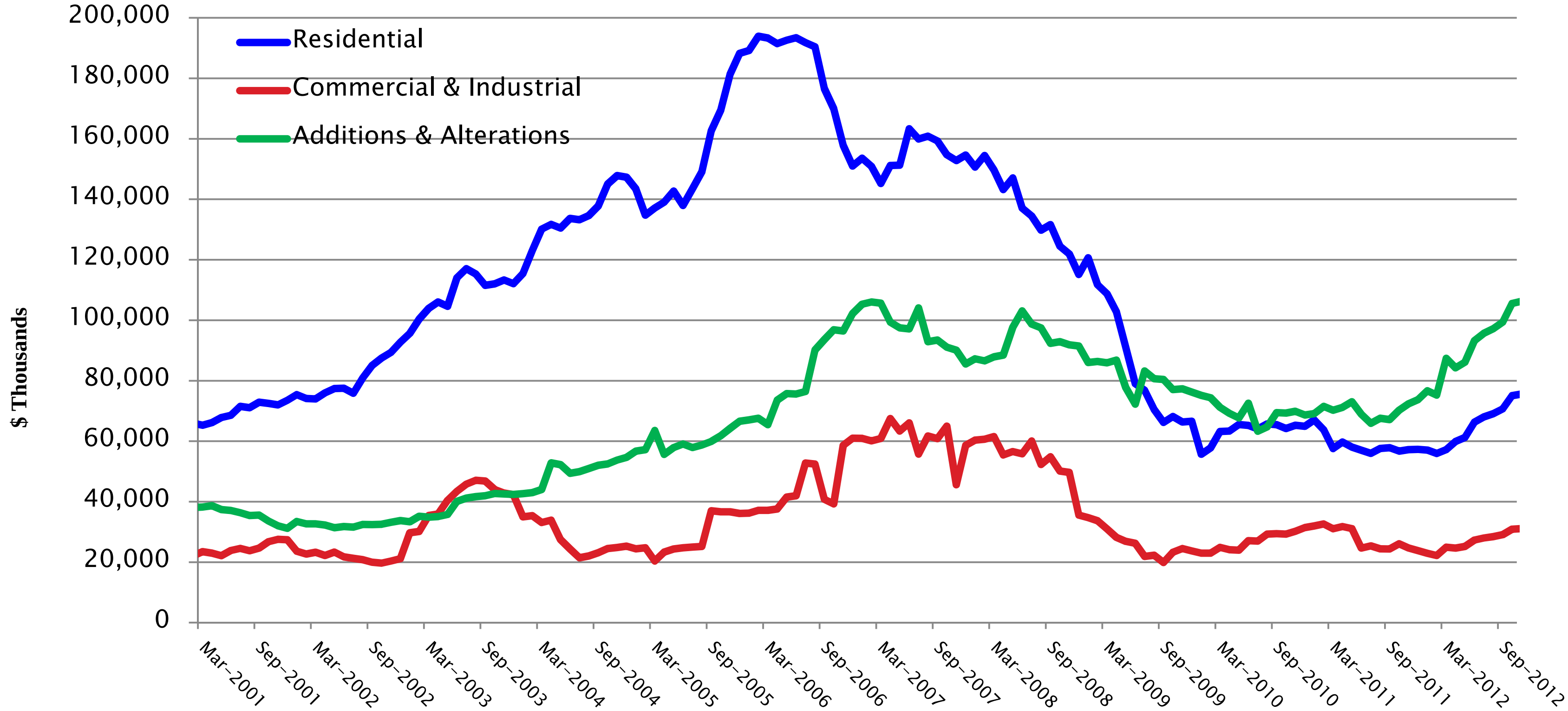
Source: Bureau of Labor Statistics

Construction and Real Estate

Private Construction Activity

Private Construction Activity Has Turned the Conner in 2012

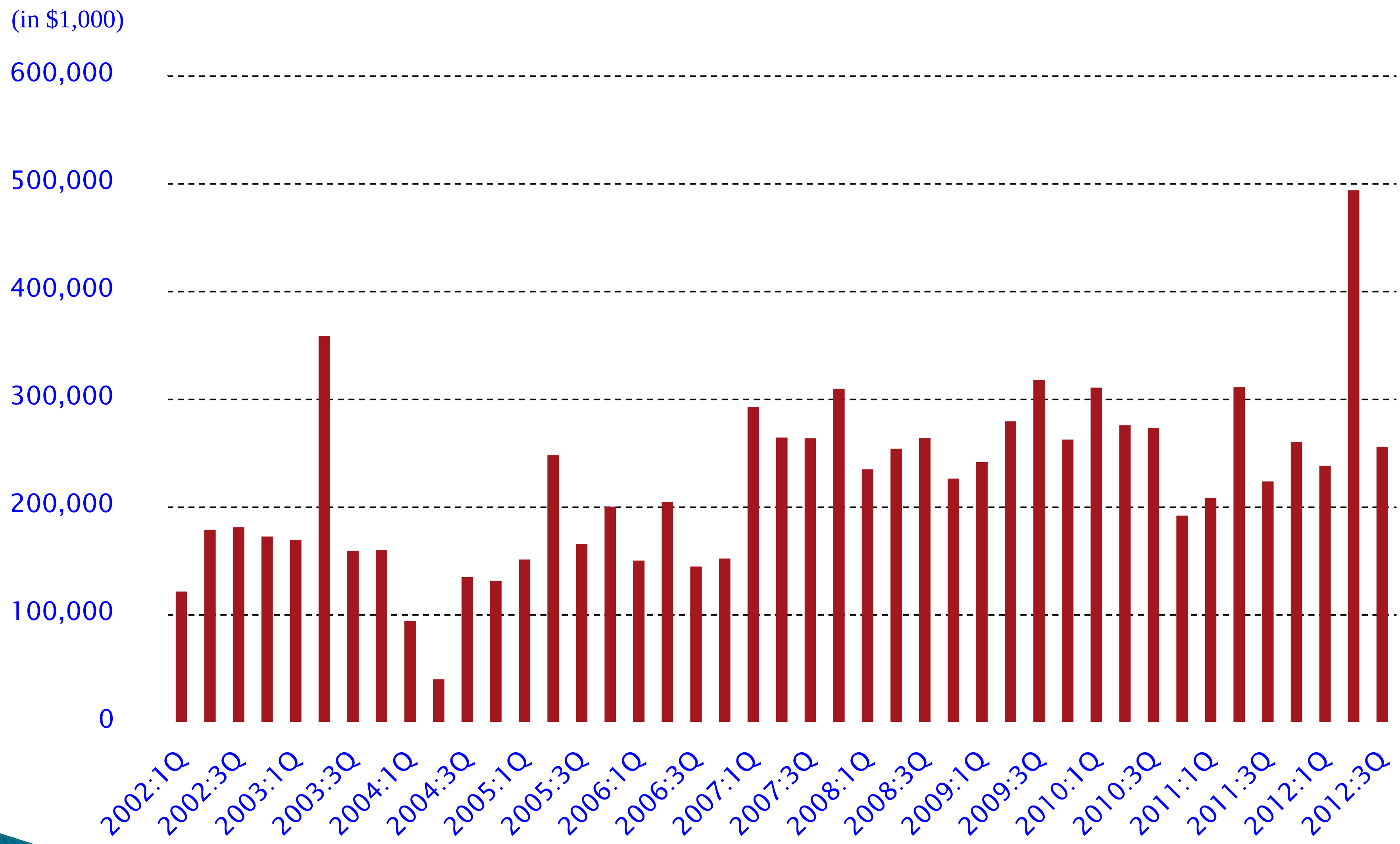
12-Month Moving Average of Building Authorization Components*



**Additions and Alterations and Commercial & Industrial data do not include Kauai. All data through November 2012.*

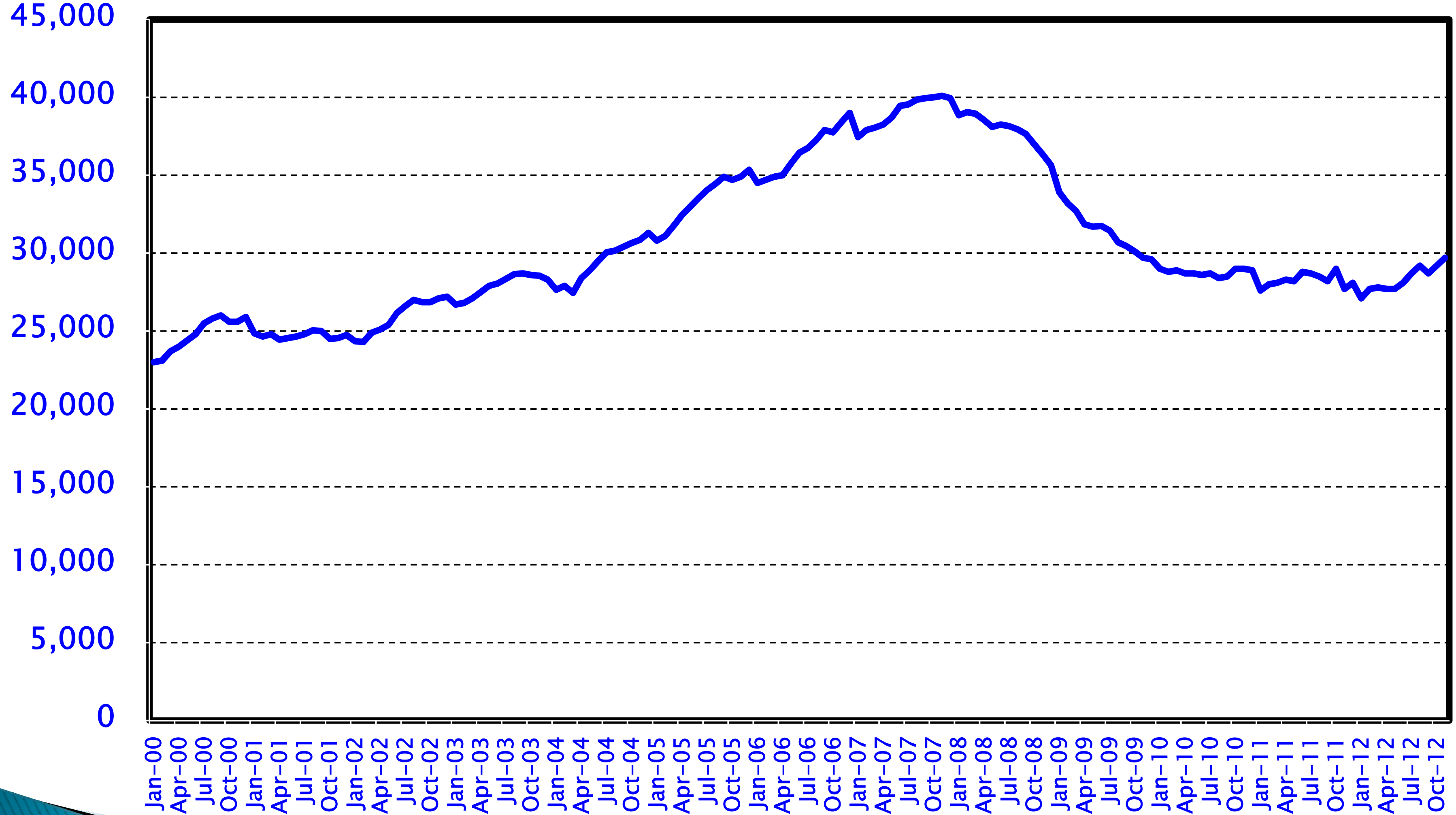
Source: County building departments and U.S. Census Bureau.

State Government CIP spending has been at over $1B level per year in the last 5 years, 3Qs 2012 increased 32.9%



Source: Hawaii State Department of Accounting and General Services

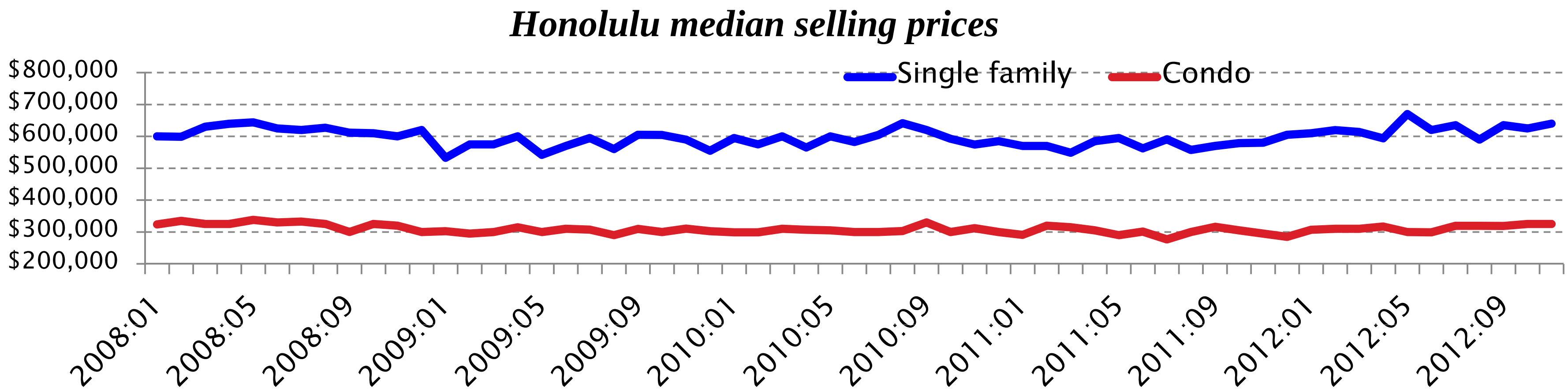
Construction sector has been losing jobs for 4 years. But since August 2012, this sector has been gaining jobs

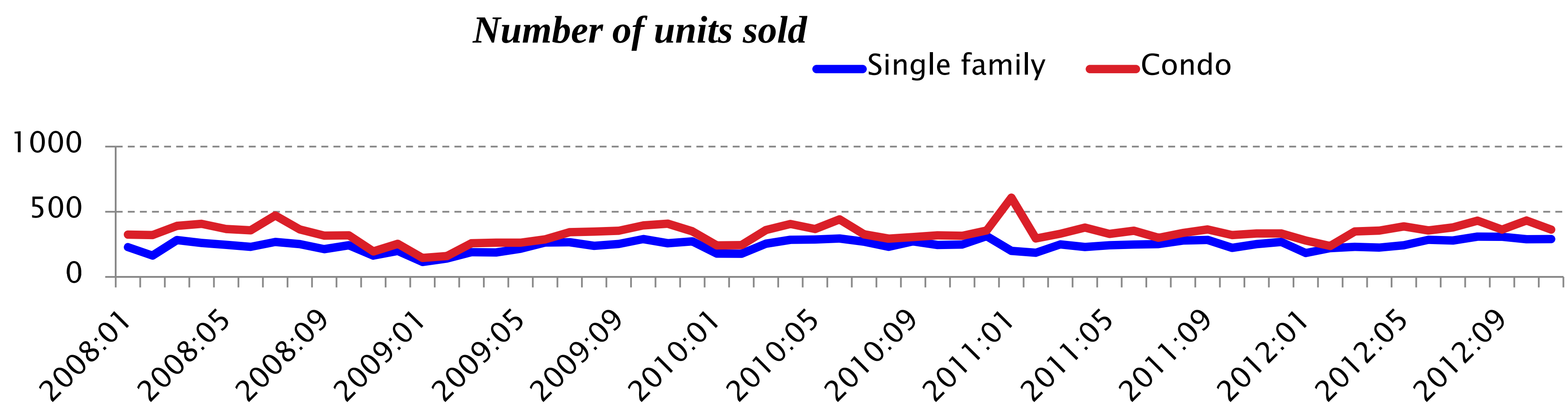


Updated thru December 2011

Source: Hawaii State Department of Labor and Industrial Relations

Honolulu housing prices have been stable even during the great recession

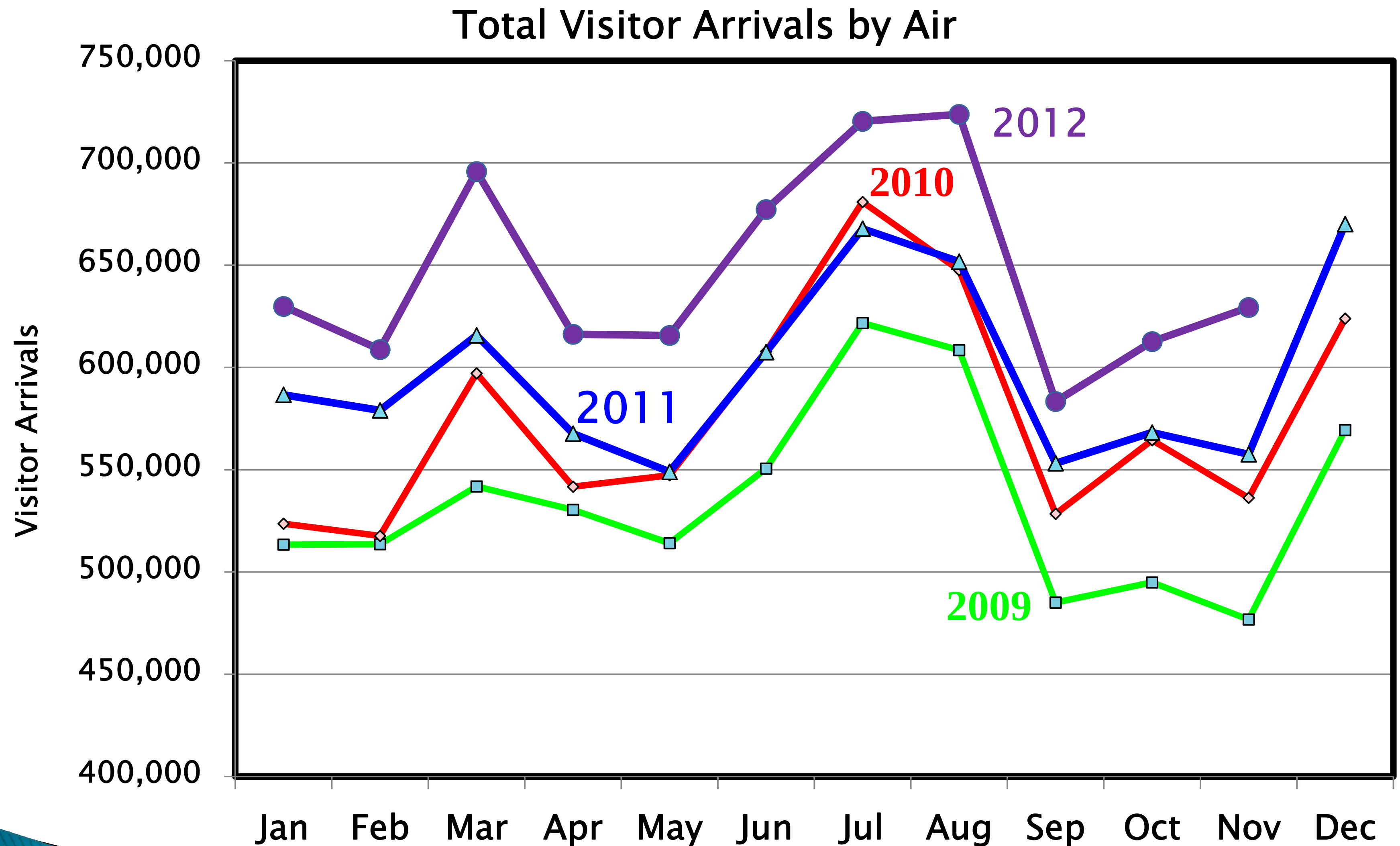




Source: Honolulu Board of Realtors

Tourism

Monthly Visitor Arrivals by Air 2009 to 2012



Through November 2012

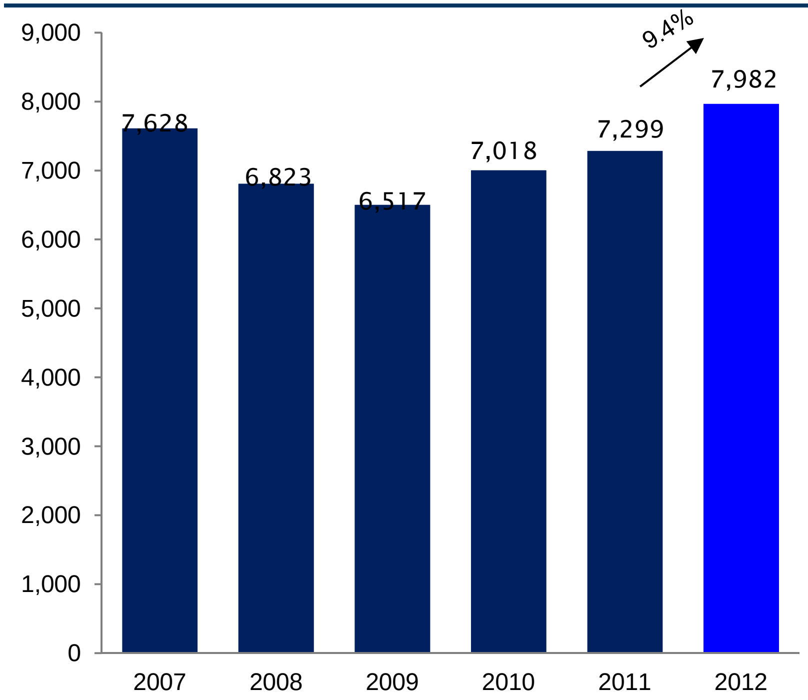
Source: Hawai'i Tourism Authority, DBEDT

DBEDT

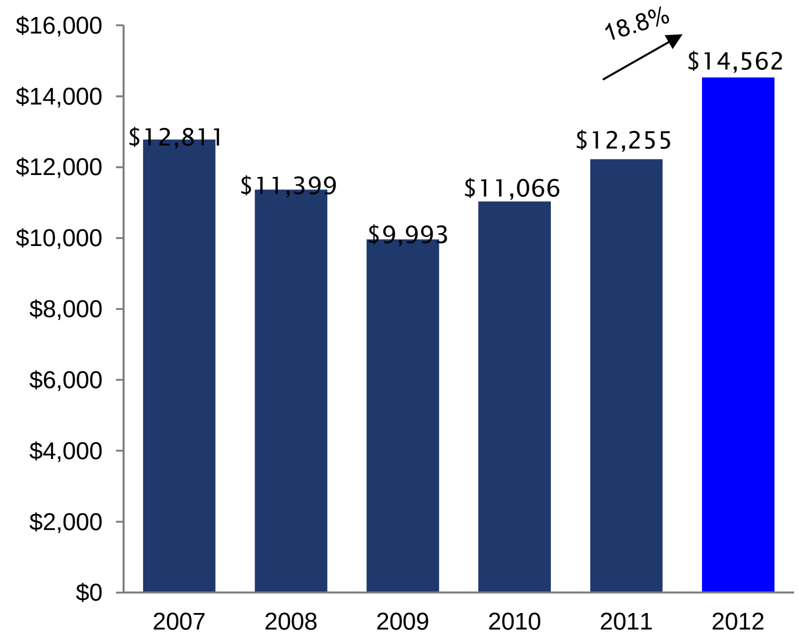
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Hawaii's Tourism Industry Continues to Show Remarkable Strength, Creating New Records in 2012

Visitor Arrivals Over the Last 5 Years (000)[1]



Visitor Expenditures Over the Last 5 Years ($mm)[1]



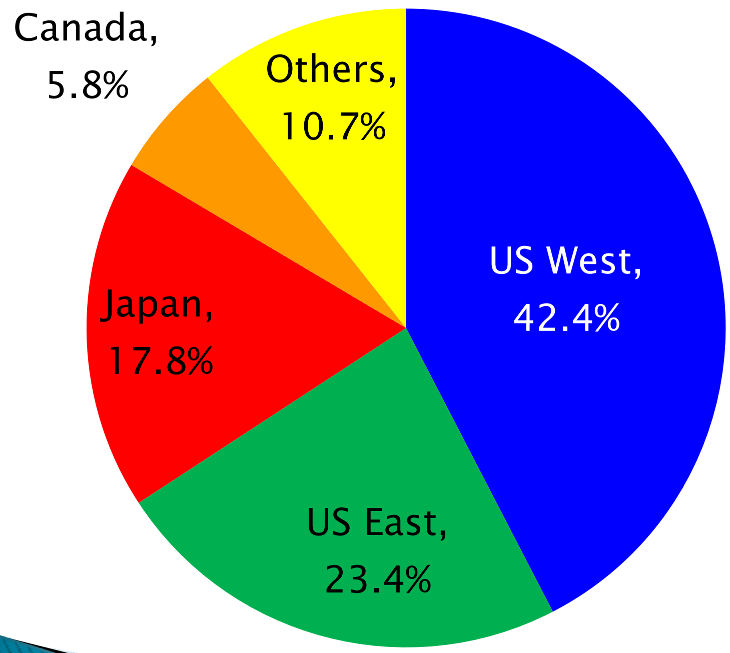
Source: DBEDT, HTA. 2012 figure is a projection

Visitor Activity

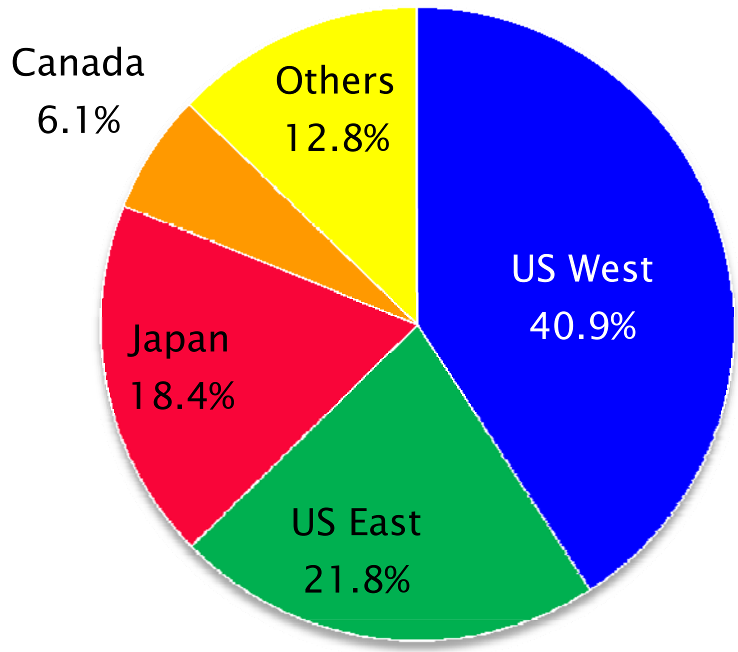
For the First 11 Months of 2012, 62.6% of Hawaii Visitors Were From the U.S. with Japanese Visitors Accounting for 18.4%

- Visitors from Canada and other markets are increasing
- Visa waivers for Taiwanese started on November 1 of 2012

2010



First 11 Months of 2012



Source: Hawaii Tourism Authority

Visitor statistics
First 11 Months of 2012

International Visitors Accounted For 43.5% of Total Visitor Spending

Market	Arrivals	Length of Stay (Days)	Daily Spending ($)	Total Expenditure ($M)
U.S. West	2,905,674	9.50	151.3	4,177.3
U.S. East	1,549,721	10.44	191.5	3,099.1
Japan	1,312,342	6.02	300.7	2,373.7
Canada	431,344	13.01	154.0	864.1
Other	913,950	10.13	254.3	2,354.8

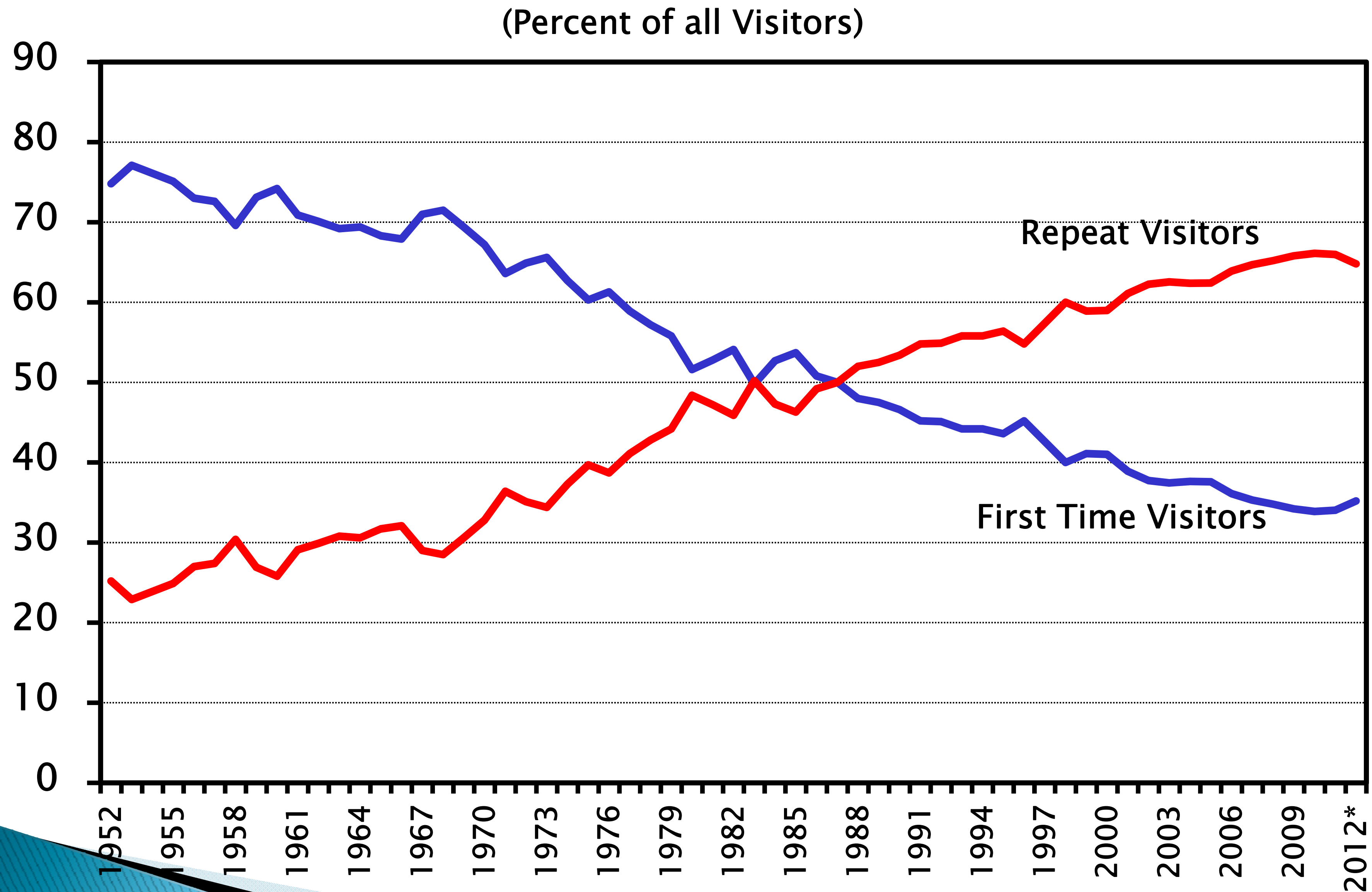
DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Smaller markets are creating new records while big markets are recovering

Region	Historical peak level	2008 Arrivals	LTM Arrivals[1]	% Change
US Mainland	5,173,264	4,452,343	4,804,721	7.9
Japan	2,216,890	1,175,199	1,388,056	18.1
Canada	477,564	459,580	494,472	7.6
China	81,738	54,235	99,273	83.0
Korea	122,902	38,110	146,289	283.9
Taiwan	88,193	11,482	10,335	-10.0
Australia	237,808	137,812	233,056	69.1
Europe	231,604	115,172	131,010	13.8
Latin America	22,116	18,896	24,272	28.5

Source: Department of Business, Economic Development & Tourism, Hawaii Tourism Authority
[1] Last Twelve months from October 2011 to September 2012

New Visitors Started to Increase



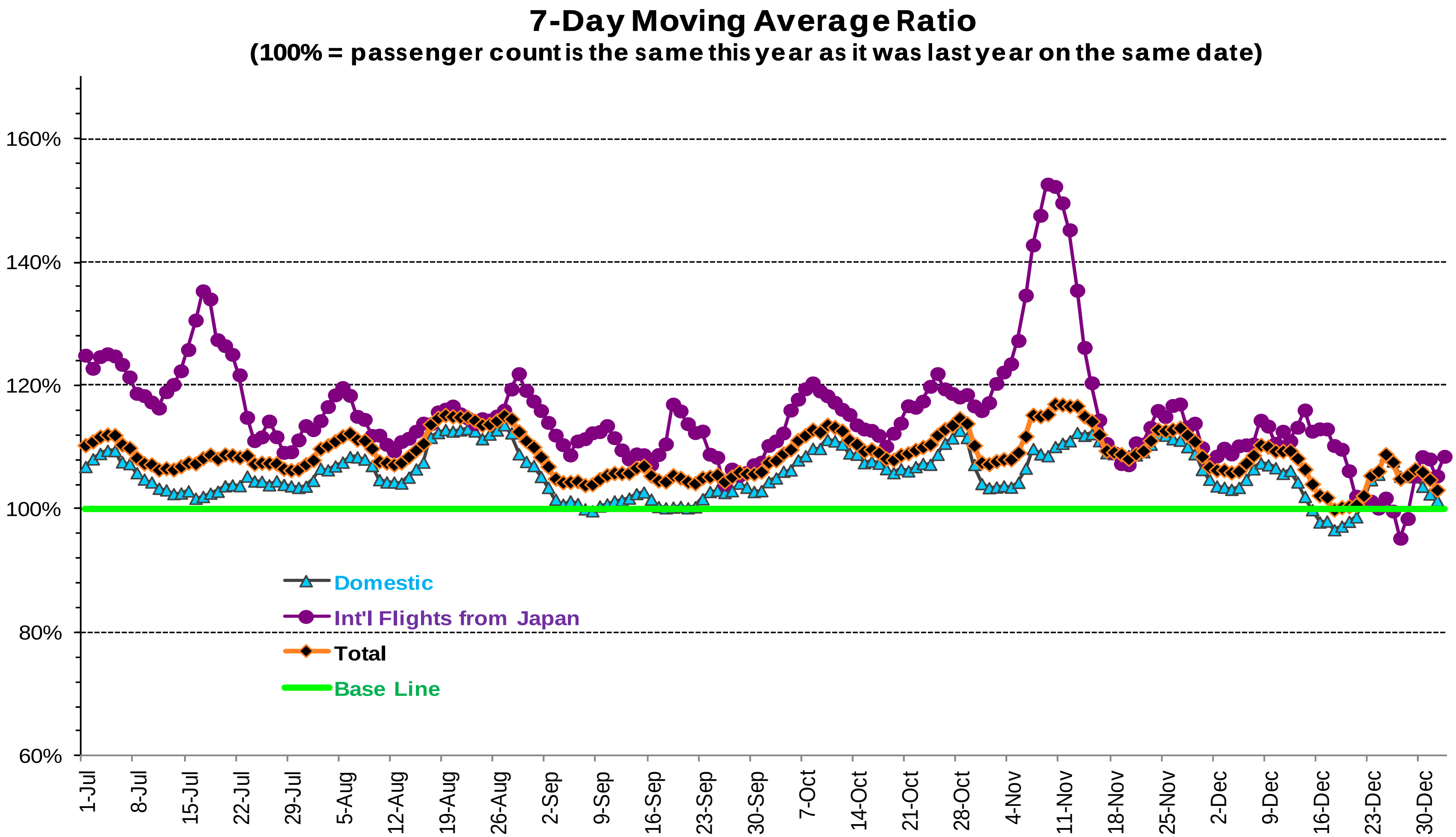
Source: Hawaii Tourism Authority, 2012 figure YTD thru November

DBEDT

STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

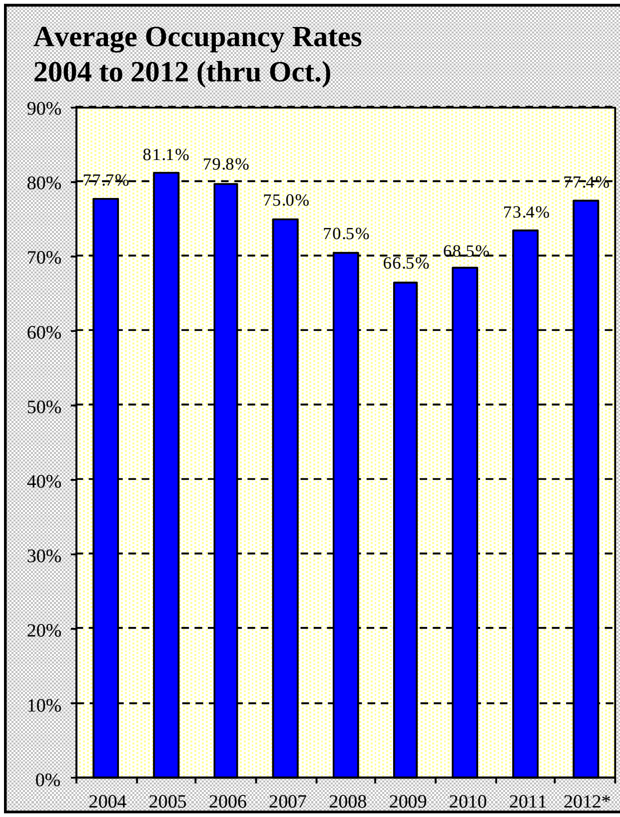
Visitor Activity

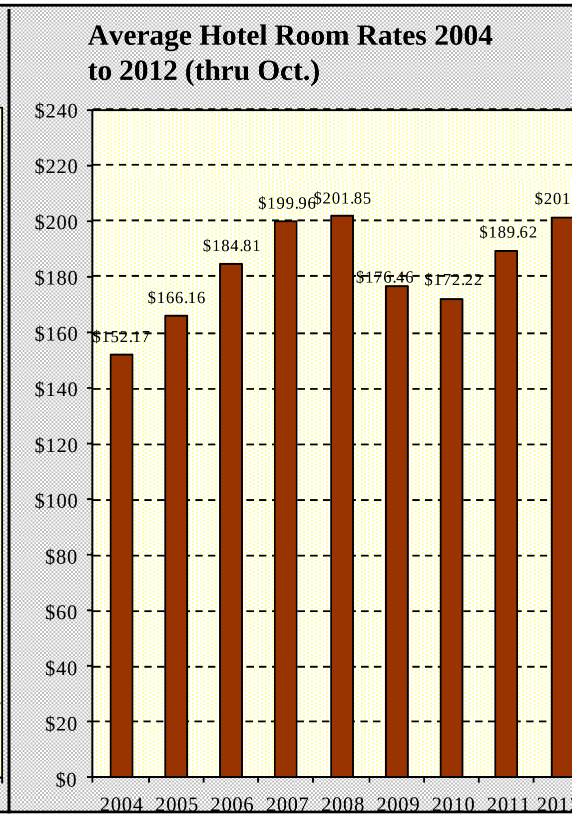
Daily Passenger Counts Continue Increasing

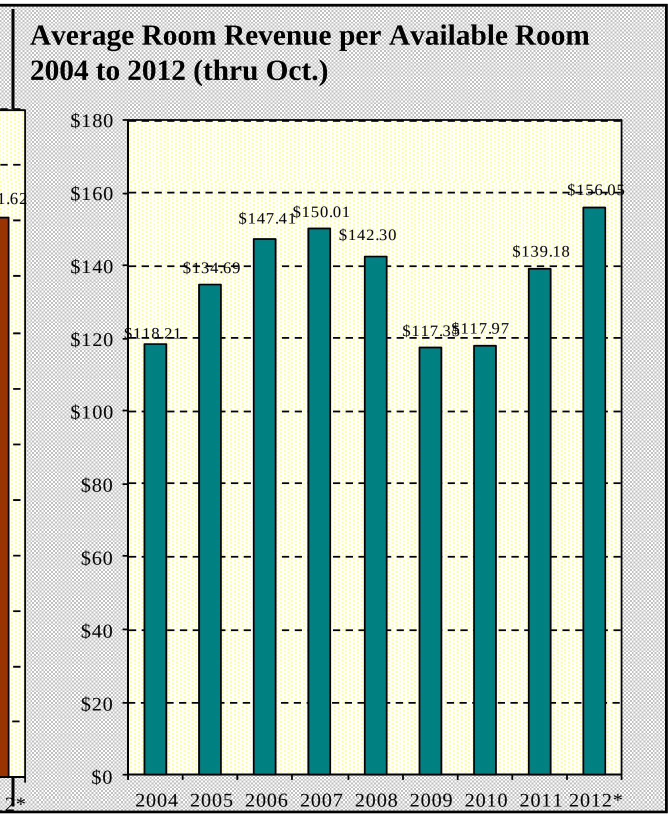


Note: Includes all direct out-of-state flights to the islands, excludes inter-island flights. Source: Department of Business, Economic Development & Tourism

Hotel Revpar Set New Records During the First 10 Months of 2012







*** First 10 months**

Source: Smith Travel Research, Hospitality Advisors LLC

The Aviation Sector Continues to Commit Substantial New Capacity to the Hawai'i Market

Select New Flights and Routes in 2012

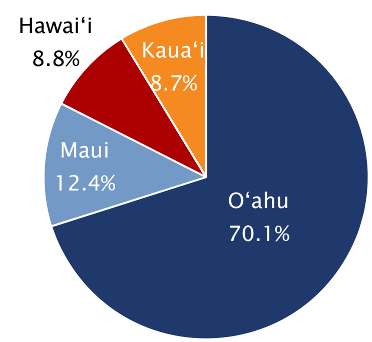
Airline	City	Frequency	Air Seats
Hawaiian	Fukuoka, New York, Brisbane, Sapporo	Varies	121,338
Alaska	San Diego, Oakland, San Jose	Daily	104,986
Asiana	Incheon	Varies	59,496
Allegiant	Las Vegas, Fresno, Bellingham, Eugene, Santa Maria, Stockton	Varies	49,500
United	Washington D.C.	Daily	48,645
China Eastern	Shanghai	Twice/Week	29,848

Hawaiian Airlines Expansion

- 28% capacity increase from summer 2011 to 2012
- Signed codeshare agreement with JetBlue Airlines, adding to route network on mainland
- New nonstop flights announced to Australia, New Zealand and Japan; opened sales offices in Beijing and Shanghai
- $435 million in total debt financing for 22 new aircraft since 2010
- Increase in inter-island capacity, including service to secondary markets in Hawai'i

New Trans-Pacific Air Seats in 2012[1]

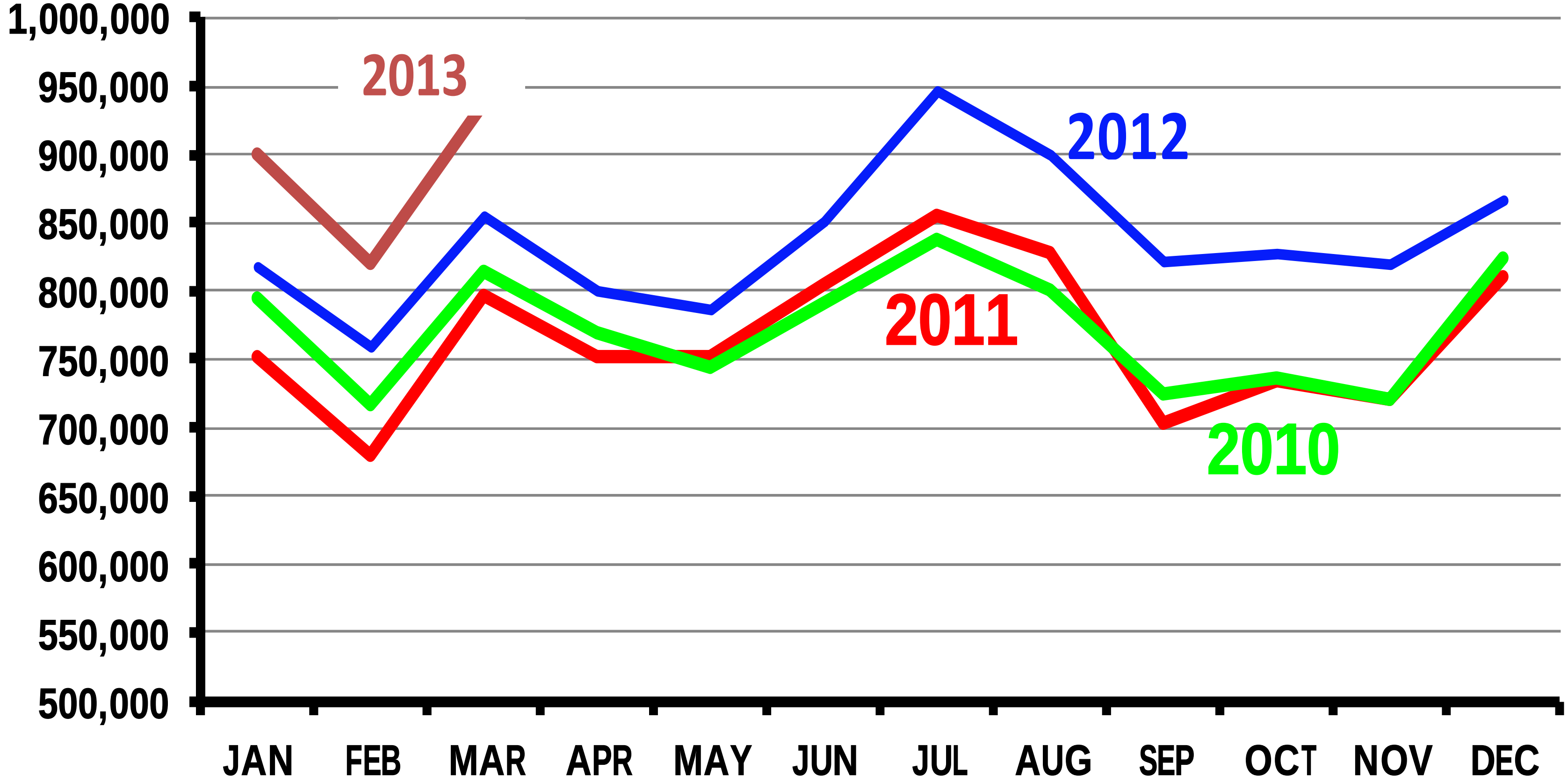
- Air seats capacity has increased by 8.8% in 2012



Total: 816,582[1]

Source: Public news, DBEDT
[1] Includes new flights, routes and up-gauging equipment on existing flights for all airlines

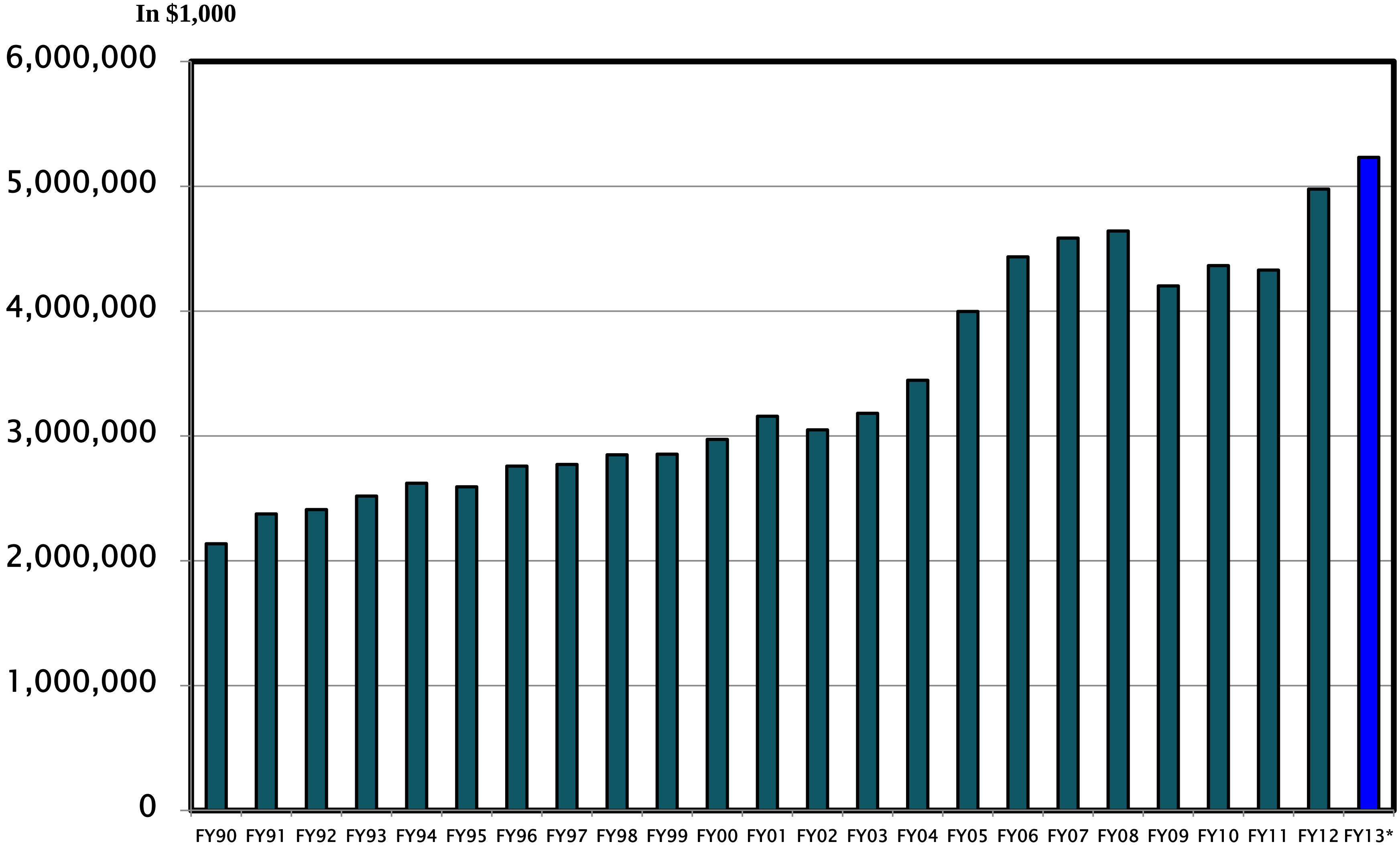
Scheduled airseats are expected to increase 9.4% during 1st quarter of 2013



Source: HTA

Tax Revenues

General fund tax revenue: FY 1990 to FY 2013*

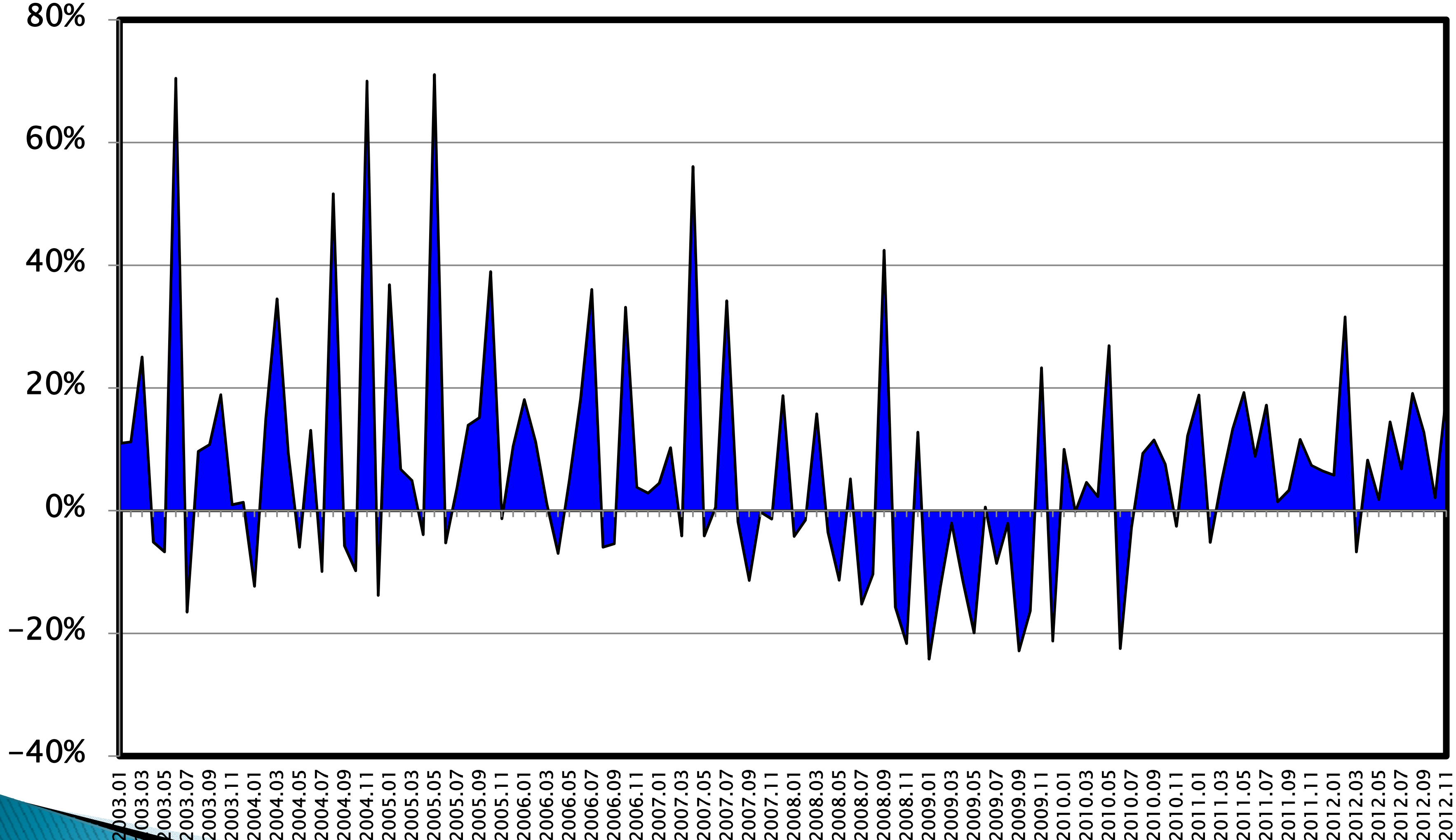


COR Forecast of 5.1% growth in January 3, 2013

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

General excise tax revenues continue to show improvement

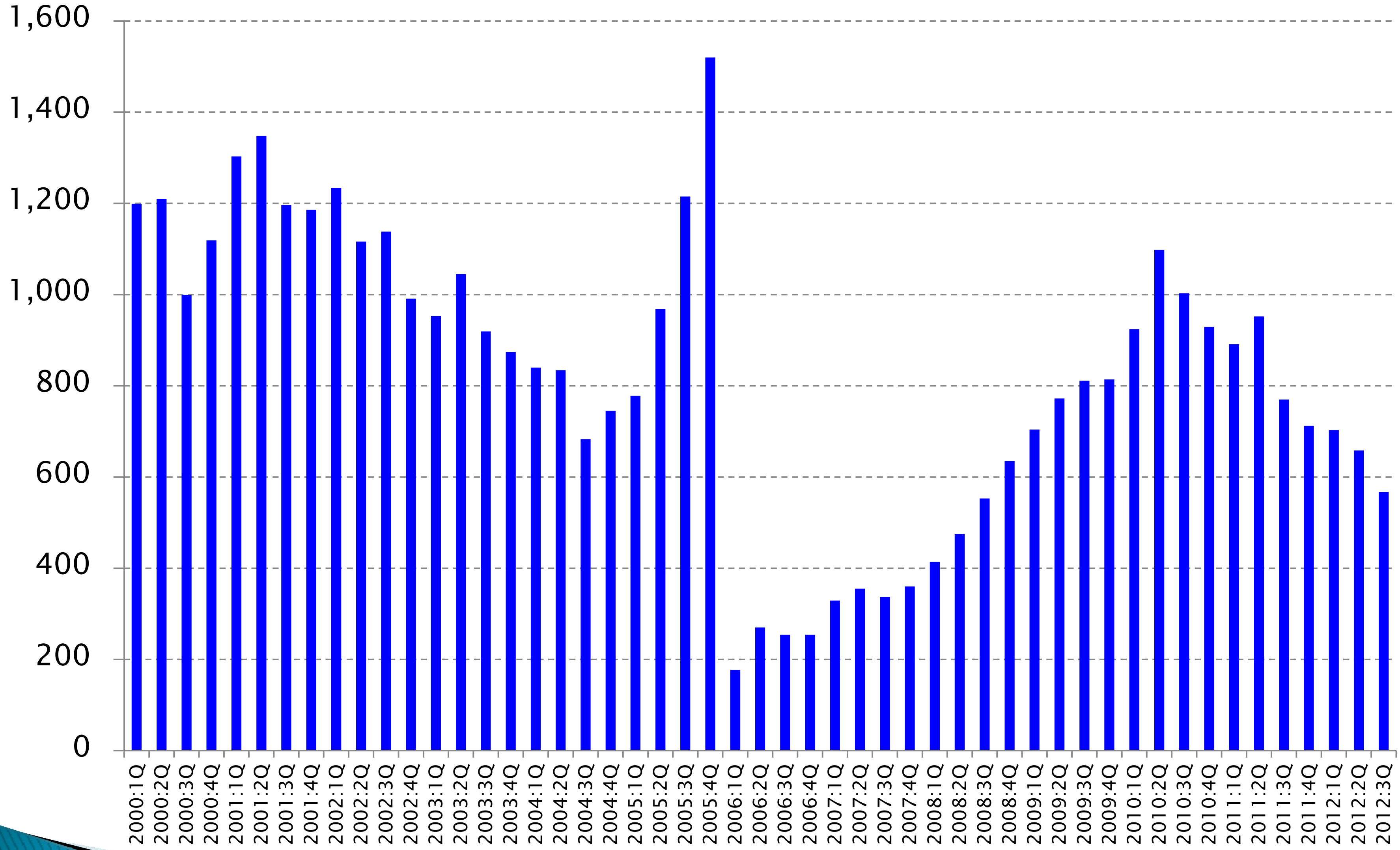
Monthly year-over-year growth rate



Source: Hawaii State Department of Labor Taxation *Through November 2012*

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Hawaii bankruptcy filings has been declining since the 3rd quarter of 2010



DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Summary

- All the economic indicators show that Hawaii's economy is on a normal growth path – though unemployment rate is still lagging
- Visitor industry performed very strong and will set another new record in 2013
- Labor market will continue to improve in 2013
- Construction industry shows signs of recovery in 2012, 2013 is a bright year for construction
- Personal income will continue to grow at a rate similar to the national average
- Hawaii's economy will grow at a higher rate than the nation in 2013.
- Hawaii's unemployment rate will still be better than the nation in 2013

DBEDT
STATE OF HAWAII • DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

Testimony

of

Paul H. Brewbaker, Ph.D., Principal, TZ Economics

TZ ECONOMICS

before a joint informational briefing of the
Hawaii State House Finance Committee
and
Hawaii State Senate Ways and Means Committee

Friday, January 4, 2013

Good morning and thank you this opportunity to present to you some ideas about the economic outlook and implications for State finances. My name is Paul Brewbaker and I am the Principal of TZ Economics, a Hawaii consultancy. This testimony provides a narrative to the accompanying slideshow.

The current economic expansion, at 3½ years, is approaching a plausible halfway point. Lengths of expansions aren't reliably predictable, but the last three have averaged eight years in duration, plus or minus a couple years (slide 2).[1] Though the Great Recession ended in June 2009, the gloom and doom of some economic forecasters has lingered on. Yet, real output has risen steadily (slide 3). Employment has risen (slide 4), even on the Neighbor Island where jobs fell farther (slide 5). The decline in unemployment rates has quickened, especially in Hawaii. Though bad, the Great Recession of 2008-09 did not yield the highest unemployment rates since the Great Depression (slide 6).

Even though economic recovery could be contemplated by early-2009, the recession was two or three times as bad as the worst forecast scenarios at that time.[2] Three years ago, in this briefing, we reviewed how Council on Revenues (COR) general fund forecasts during fiscal year 2009 consistently were too high (slide 7).[3] (The COR was not alone.[4]) Now, after three years of economic growth, forecasts may be too low.

---

[1] The average 8-year duration of the last three U.S. economic expansions was twice that of expansions in the half century prior to the 1980s, and twice that again of those in the seven decades ending in the Roaring Twenties. See National Bureau of Economic Research cycle dates at http://www.nber.org/cycles/cyclesmain.html.

[2] See my commentary, "Slowly, but surely," in *The Honolulu Advertiser* (April 19, 2009) archives (http://the.honoluluadvertiser.com/article/2009/Apr/19/op/hawaii904190343.html).

[3] In my January 2010 presentation, the sequence of slides 24-29 document downward revisions to Hawaii Council on Revenues (COR) forecasts as the financial crisis and economic recession intensified during fiscal year 2009 (http://www.state.hi.us/tax/cor/2010__01-05-paul_brewbaker_presentation.pdf). COR general fund revenue growth rates were *below* actual outcomes, 2004-06, and *above* actual outcomes 2007-2010. See slides 30-31.

[4] *Op. cit.*, slide 32, shows National Association for Business Economics forecast survey estimates for U.S. real GDP growth before and after the collapse of Lehman Brothers (September 2008).

The COR process yields average forecast growth estimates that smoosh out the business cycle. Dr. Leroy Laney of HPU observed this in the 1990s. My testimony in January 2010 reaffirmed it. The Council forecasts too high on the way down and too low on the way up the business cycle. In booms and busts one might place greater weight on extreme perspectives; the average doesn't. Revenue growth forecasts were too low during the 2000s expansion and too high around the 2008-09 contraction. Now, revenues are rising faster than forecast (slide 8).

General fund revenues have never been higher in nominal terms, and are close enough for horseshoes and hand grenades in real terms (slide 9). One could have taken the March 2009 COR forecast for fiscal year 2012 at face value and skipped three years: actual fiscal year 2012 revenues were higher than all succeeding forecasts (slide 10). Nothing that happened subsequently mattered.[5] COR forecasts for *the current* fiscal year, 2013, have been revised upward for the last three years. Despite economic recovery denial, revenue growth was better than and revenues higher than expected. Only a year ago, people remained skeptical.[6] Yet, as we'll see, 2012 blew Hawaii tourism's doors off.

I expect economic recovery to continue on its plodding path. Even a mild recession in first half 2013 would be a n00bular recession attributable to a dysfunctional U.S. Congress, a wannabe recession like the 2001 dot.com recession. We may not be hurtling off a Fiscal Cliff,[7] but we're still stumbling down a Fiscal Crumble. Federal deficit reduction *will* exert fiscal drag on economic growth. Impacts of reduced federal spending earmarks already are unfolding.[8] Still, Hawaii handled a 30 percent reduction in the U.S. military in Hawaii during the Clinton Administration, a template of things to come. It's manageable, but disruptive in the short-term.

The loss of federal earmarks is just a down payment on structural deficit reduction, 2-4 percentage points of GDP in either higher federal tax revenues or lower federal spending (slide

---

[5] In commentary for *The Honolulu Advertiser* in April 2010, I wrote that, "The U.S. recession likely ended in the third quarter of 2009," six months earlier. Eventually the NBER dated the recession's end as *June* 2009 (see fn 2), *nine* months earlier. Explaining that their readership was not ready to hear that economic *recovery* was almost over, the *Advertiser* published my commentary under the headline, "The recession [sic] is almost over. Really! Here's how you can tell," (May 2, 2010) (http://the.honoluluadvertiser.com/article/2010/May/02/op/hawaii5020305.html).

[6] Forecasting 2.6 and 2.7 percent visitor arrivals growth for the year 2012, in November 2011 (year-to-date 2012 actual visitor arrivals growth has been 9.4 percent through November), the UHERO 2012 forecast was entitled *Hawaii in Pause Mode*, (http://www.uhero.hawaii.edu/assets/11Q4StateUpdatePublicSummary.pdf (November 4, 2011)), and the title of First Hawaiian Bank's forecast was *Hopes for a Faster Hawaii Recovery Dampened* (https://www.fhb.com/pdf/FHB_OahuEconForecast2011.pdf (November 18, 2011)).

[7] An expression attributed to Federal Reserve Chairman Ben Bernanke by the media in the press conference on December 12, 2012 (http://www.federalreserve.gov/monetarypolicy/fomcpresconf20121212.htm; transcript at http://www.federalreserve.gov/mediacenter/files/FOMCpresconf20121212.pdf).

[8] Talk to my sister-in-law, who for about fifteen years thought she worked for DBEDT. Turns out she actually worked for Senator Inouye (LOL)—who knew? Seriously, after working at the Naval Ocean Science Center (NOSC), sistah worked with the National Defense Center for Excellence in Research in the Ocean Sciences (CEROS), a conduit for federal funding initiated by the Defense Advanced Research Projects Agency (DARPA), administratively attached to DBEDT. CEROS shut down in October 2012. Real jobs *are* being lost.

11).[9] This implies up to one-quarter reductions in defense *and* nondefense discretionary federal spending *plus* higher, more progressive marginal income tax rates. And why not? Since the 1970s the income distribution has changed dramatically. The U.S. income share of the top 10 percent rose from one-third to one-half of the total, the share of the top 1 percent rose from one-tenth to one-quarter, and the share of the top 0.1 percent quadrupled from 3 percent to 12 percent of all U.S. income. In Hawaii it changed almost as much (slide 12). Nowhere has the reversal of income equality since the 1970s exceeded America's (slide 13). It is largely absent from Europe and Japan (slide14). From a tax perspective, this income distribution shift cannot be ignored, but other structural changes may be even more important for Hawaii.

Hawaii needs to *contractually* rethink public service, rewarding public employees for their productivity growth, retaining more talented and experienced workers and attracting younger workers. Public *and* private sectors need an entirely different idea of the workplace and of retirement. Demographic reality is that from 10 working-age persons (aged 20-64) for each older person (aged 65 and over) in 1970, Hawaii now has 4 workers per older person (slide 15). DBEDT estimates 2 by 2040. Greater efficiency, higher productivity and faster economic growth, are the *only* ways to meet the challenges of population aging, fulfilling commitments to intergenerational transfers in Social Security and in public employee retirement systems.

Beyond that, Hawaii needs to revive investment, stop negating capital formation with boneheaded policies and redouble stewardship of its resource endowment. Faster economic growth creates the potential for *better* stewardship. Instead, Hawaii is where "energy independence," "food self-sufficiency," "buying local," versions of the economic concept of autarky—as in North Korea (http://en.wikipedia.org/wiki/Autarky), policies that make people worse off—have become the new fashion. This is an epic FAIL in economic policy-making.

Public investment in Hawaii has been shrinking for a half century, as a share of value-added (slide 15). New private residential investment hadn't been lower than it was in 2011 since World War II (slide 16). Still, a recent upturn bodes well for the next housing cycle (slide 17), validated by rising home prices: 2012 may only be the *second* worst year since the war. There was never less real new commercial construction in the last half century than there is now (slide 18). While the State obsesses over a *single*, 800-unit residential tower in Kakaako, new commercial construction has dwindled to Territorial Era levels.[10] Hundreds of millions of dollars in renewable energy tax credits that could have been deployed in public infrastructure investment are, instead, transferring wealth from poorer renters to richer homeowners, via rising additions and alterations (like rooftop PV installation) (slide 19). Any rise in real contracting receipts associated with energy tax credits has *not* translated into construction jobs (slide 20).

Don't misunderstand me: I'm down with more construction, more investment, greater physical *and* human capital formation. I'm down with productivity growth. A credible

---

[9] See data at http://www.cbo.gov/sites/default/files/cbofiles/attachments/43453-AugustUpdate-Budget_Projections.xls and a good discussion at http://www.cbo.gov/sites/default/files/cbofiles/attachments/43692-DeficitReduction_print.pdf.

[10] Andrew Gomes, "Forest City selected to build Super Tower in Kakaako," *The Honolulu Star-Advertiser* (December 13, 2012) (http://www.staradvertiser.com/news/breaking/183409111.html?id=183409111)

commitment to transparent regulatory rules of the game should *facilitate* investment. In Hawaii, regulation *denies* investment. I'm not talking about 800 units in one building, *maybe*, by the end of the decade. I'm talking about *thousands* of new housing units every year. Within a credible urban boundary, can't regulatory posture be: "it's already city, knock yourself out?" Instead, it's "all you buggahs over there: stop at 300 feet; only us guys can build to 650."

Constraints on tourism capacity, specifically, threaten to stifle Hawaii's tourism export-led expansion. Tourism is our comparative advantage (slide 22), but Hawaii's various jurisdictions bend over backwards to limit investment in new tourism capacity. On Kauai, no more than 1.5 percent of existing capacity can be built annually.[11] On Maui, converting *existing* transient accommodation units to timeshare requires *additional* construction of an equal number of new, affordable housing units.[12] Construction of a Kuhio Avenue tower as high as existing Trump and Hilton towers requires a "Waikiki Special District Major permit and a resolution from the City Council allowing the tower to rise 350 feet," as if one could tell the difference.[13]

Why stifle Hawaii's principle export? Tourism in 2012 reached new record volumes in spite of dismal forecasts one year earlier (slide 23; footnote 6). Dismal expectations reflected dim views about travel demand, but it was travel *supply* that unleashed the deluge (slide 24). Unlike new building, entry in U.S. commercial passenger aviation is *deregulated*. Forecasters may have been hung up on oil prices and seismic shocks in 2011 but, recently, Hawaii tourism actually has enjoyed comparative tranquility from the most extreme events (slide 25), despite cyclical variation. Nevertheless, partly because of capacity constraints on Hawaii's main export, tourism has shrunk as a share of GDP during the last two decades (slide 26). Moreover, real tourism receipts have declined *absolutely* in real, inflation-adjusted terms since the 1980s, when current tourism strategic policies limiting capacity growth began to be adopted (slide 27).[14]

---

[11] No obvious consideration is given for years *with* hurricanes. See the 2011 ordinance at http://www.kauai.gov/LinkClick.aspx?fileticket=aCNsJljBrj4%3d&tabid=628&mid=3136 pursuant to the 2008 County Charter amendments incorporated in section 3.19.C. of http://www.kauai.gov/LinkClick.aspx?fileticket=9%2fsupUXrAJA%3d&tabid=362&mid=1186

[12] Personal communication from a North Kaanapali Beach hotel management.

[13] Andrew Gomes, "Ritz-Carlton puts brand on property in Waikiki," *The Honolulu Star-Advertiser* (December 20, 2012) (http://www.staradvertiser.com/business/20121220__Ritz-Carlton_puts_brand_on_property_in_Waikiki.html?id=184222101).

[14] Policy evolved in the mid-1980s, see Hawaii Department of Planning and Economic Development, *Proceedings, Governor's Tourism Congress, December 10 and 11, 1984* (1985) Honolulu, Hawaii. By decade's end a new posture emerged. See Hawaii Department of Business Economic Development and Tourism, *The Hawaii State Plan: Tourism State Functional Plan* (1991), p. 8, which defines "the optimum growth rate of tourism…[as] a rate which balances the economic, social and environmental objectives of the State (p. 12)." The most recent strategic vision for Hawaii tourism was adopted "To move toward a *sustainable* and *responsible* tourism industry [sic] for the State [emphasis in the original]..." hoping by 2015 to "honor Hawaii's people and heritage; value and perpetuate Hawaii's natural and cultural resources; engender mutual respect among all stakeholders; support a vital and sustainable economy; and provide a unique, memorable and enriching visitor experience." See Hawaii Tourism Authority, *Hawaii Tourism Strategic Plan 2005-2015* (2004) (http://www.hawaiitourismauthority.org/default/assets/File/about/tsp2005_2015_final.pdf)

Tourists are just consumers. Over time, the benefits of innovation, technological progress, rising productivity and falling costs accrue to them through more efficient delivery of travel and tourism services and through lower real costs for many retail items (slide 28). In constant dollars, real travel and tourism outlays have been falling across segments (slide 29). After the 1980s, capacity constraints came to bear on Hawaii accommodation inventory growth.[15] Hawaii total visitor arrivals growth slowed to a 0.5 percent annualized rate over the last two decades. Peaking in 1989, total real tourism receipts *fell* at a 0.8 percent annualized rate through 2011.

Capping tourism accommodation capacity eventually limits the growth of arrivals volumes in sold-out seasons. Constraints raise the sensitivity of room rates to vacancy (slide 30), mostly benefiting hotels (slide 31). The downward trend in tourist outlays attributable to productivity growth ultimately swamps slower volume growth. In 2011, the last with full-year data, the same number of arrivals (6.5 million) yielded little more than $12 billion in receipts, versus nearly $17 billion in 1989 (in 2011 dollars). Even with record volumes in 2012, tourism is running out of headroom. At 8 million arrivals in 2012, real tourism receipts of $14-15 billion *still* will be less than what Hawaii earned from 6.5 million visitors. Working harder for less money: so Hawaii.

Tourists spend less money and get better value like everybody else. That's why Downtown Honolulu Macy's is closing, not Ross Dress For Less,[16] why obesity is spreading and why traffic is clogged with pick-up trucks. The real costs of food and clothing are lower than ever. In constant dollars, oil prices are no higher today than in 1980, but vehicles are vastly safer, more comfortable and more efficient. *De facto* tourism capacity constraints allow productivity growth to erode real tourism export receipts. Don't let a good tourism year in 2012 fool you: filling off-peak season months with new visitors from Asia is no substitute for relieving constraints on urbanization. More and different kinds of accommodations, more efficient utilization of the urban core and in destination resorts, responsible integration of transient accommodation in non-resort communities *can* restore trend growth of Hawaii's principle export and generate the economic surplus needed to achieve Hawaii's strategic goals. Restricting development cannot.

Mahalo,

Paul H Brewbaker

Paul H. Brewbaker, Ph.D.

---

[15] Lodging capacity grew less than 0.3 percent per annum after the 1980s, between the 1992 enumeration of 73,089 accommodation units in the State of Hawaii DBEDT's and predecessor *Visitor Plant Inventory* reports, and the 2011 enumeration of 77,731 units. *All* of the net increase occurred after 2006: the inventory was 73,089 in 1992, and was still 73,220 in 2007. Arrivals had peaked at 7.53 million (2006) and 7.50 million (2007), pre-recession.

[16] Dave Segal, "Macy's to close downtown Honolulu store," *The Honolulu Star-Advertiser* (January 3, 2012) (http://www.staradvertiser.com/news/breaking/Macys_to_close_downtown_Honolulu_store.html).

Appendix

Council on Revenues General Fund Revenue forecasts and actual outcomes

billion$	March 2008 forecast	March 2009 forecast	March 2010 forecast	March 2011* forecast	March 2012 forecast	September 2012 forecast	
2007	4.5865	4.5865	4.5865	4.5865	4.5865	4.5865	
2008	4.7652	4.6419	4.6419	4.6419	4.6419	4.6419	
2009	4.9615	4.4098	4.2023	4.2023	4.2023	4.2023	
2010	5.2032	4.4318	4.0972	4.3646	4.3646	4.3646	
2011	5.4476	4.6534	4.3431	4.3879	4.3293	4.3293	
2012	5.7192	4.9094	4.6037	4.8724	4.8488	4.9778	**
2013	6.0727	5.2137	4.8799	5.1666	5.2125	5.2231	†
2014	6.4390	5.5370	5.1727	5.4757	5.1210	5.4272	°
2015		5.8083	5.4313	5.8045	5.7571	5.6982	‡
2016			5.7029	6.1530	5.9874	5.7672	
2017				6.5213	6.2867	6.0104	
2018					6.6011	6.3159	
2019						6.6085	

* before Japan's seismic event

**Forecasts did not account for approximately $170 million in energy tax credits

†Would be approximately $260 million higher but for energy tax credits

°Would be approximately $320 million higher but for energy tax credits

‡Would be approximately $340 million higher but for energy tax credits

Mar-08 http://www.state.hi.us/tax/cor/2008gf03_with0314_Ltr2Gov-Final.pdf
Mar-09 http://www.state.hi.us/tax/cor/2009gf03-12_with0313_Rpt2Gov.pdf
Mar-10 http://www.state.hi.us/tax/cor/2010gf03-11_with0315_Rpt2Gov.pdf
Mar-11 http://www.state.hi.us/tax/cor/2011gf03-10_with0315_Rpt2Gov.pdf
Mar-12 http://www.state.hi.us/tax/cor/2012gf03-07_with0309_Rpt2Gov.pdf
Sep-12 http://www.state.hi.us/tax/cor/2012gf09-06_with0910_Rpt2Gov.pdf

Sources: TZ Economics, Hawaii Department of Taxation

Sustaining economic growth in the 20teens

slides prepared for a joint informational briefing of the

Hawaii State House Finance Committee

Hawaii State Senate Ways and Means Committee

by Paul H. Brewbaker, Ph.D.
TZ Economics, Kailua, Hawaii

January 4, 2013

Testimony

of

Paul H. Brewbaker, Ph.D., Principal, TZ Economics

before a joint informational briefing of the
Hawaii State House Finance Committee
and
Hawaii State Senate Ways and Means Committee

Friday, January 4, 2013

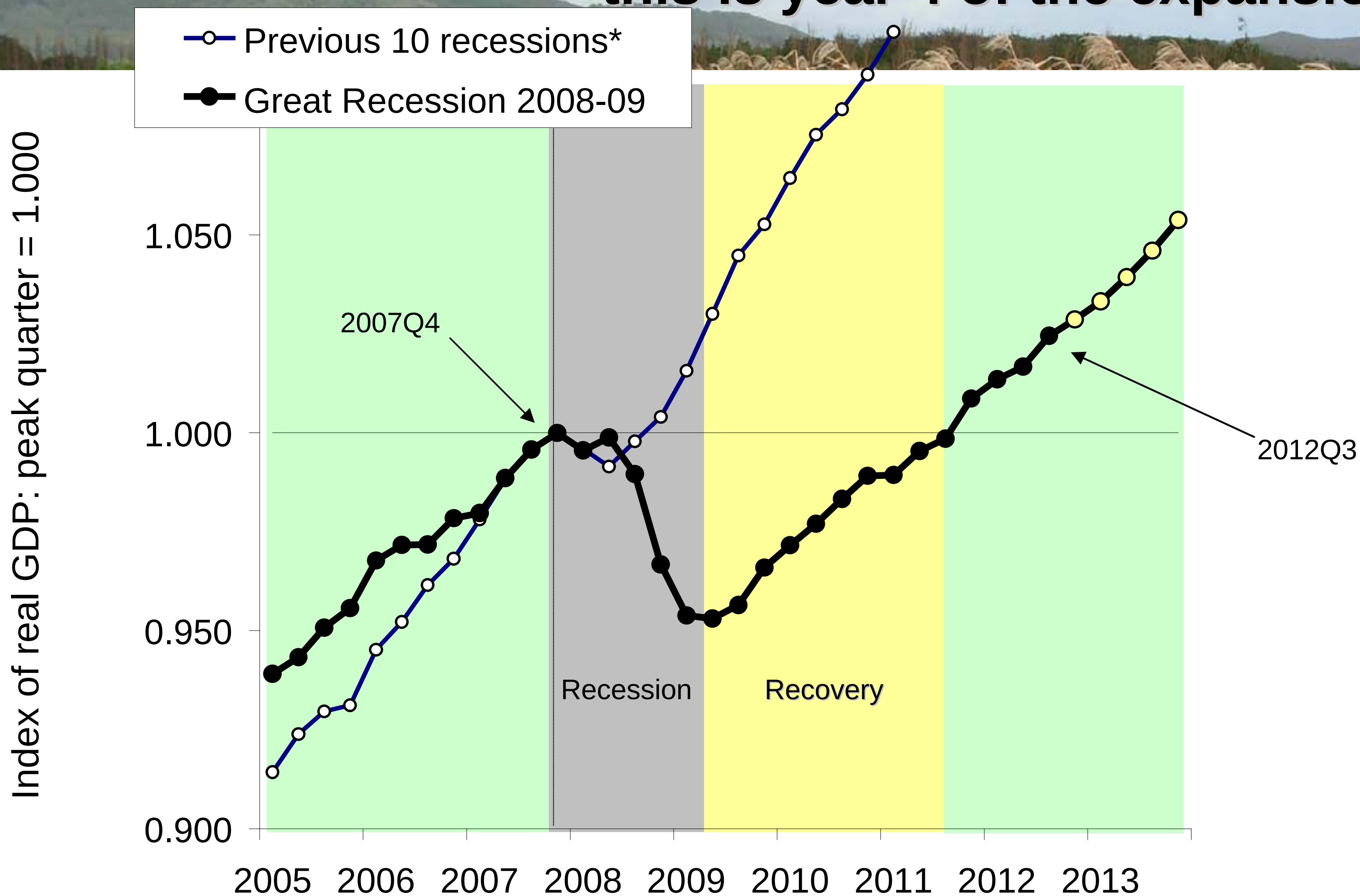
Duration of economic expansions lengthening

Duration of economic recoveries + expansions
from NBER troughs to peaks

months, or as noted	Mean	Median	Max	s.d./mean (%)	skew	n
1857-1927	25.5	22	46	38.0	0.641	19
1928-1982	46.2	39	106	59.0	1.123	11
1983-2010	95.0	92	120	24.9	0.562	3
20-teens expansion		(*2010-2018?*)				

Source: NBER (http://www.nber.org/cycles/cyclesmain.html); statistics calculated by TZ Economics

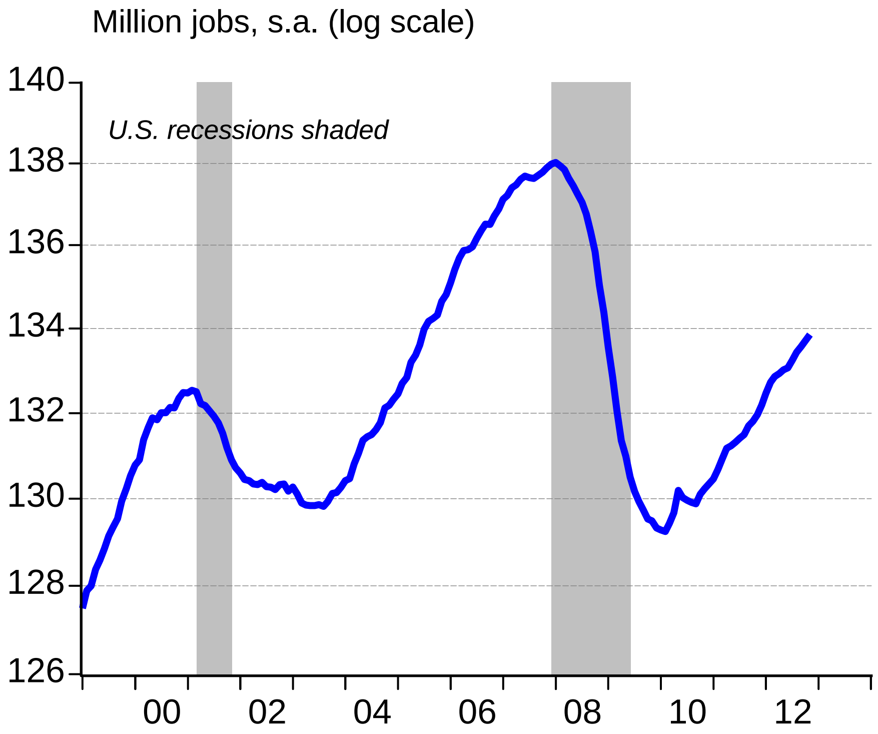
U.S. real GDP indexed to cyclical peaks: this is year 4 of the expansion



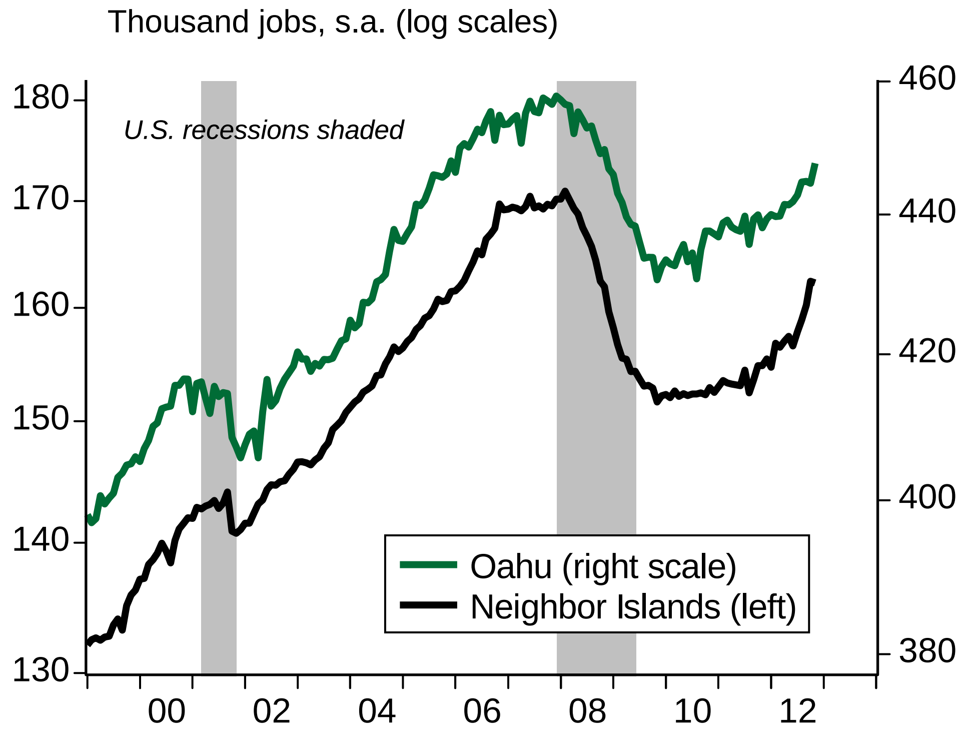
*Recessions since World War II—averages aligned to peak quarter of each business cycle and to 2007Q4

Source: Professor Robert Hall, Stanford University and Chair, NBER Dating Committee; BEA, U.S. Department of Commerce; includes revised 2012Q3 data and NABE December 2012 quarterly forecasts though 2013Q4

Nonagricultural payroll employment



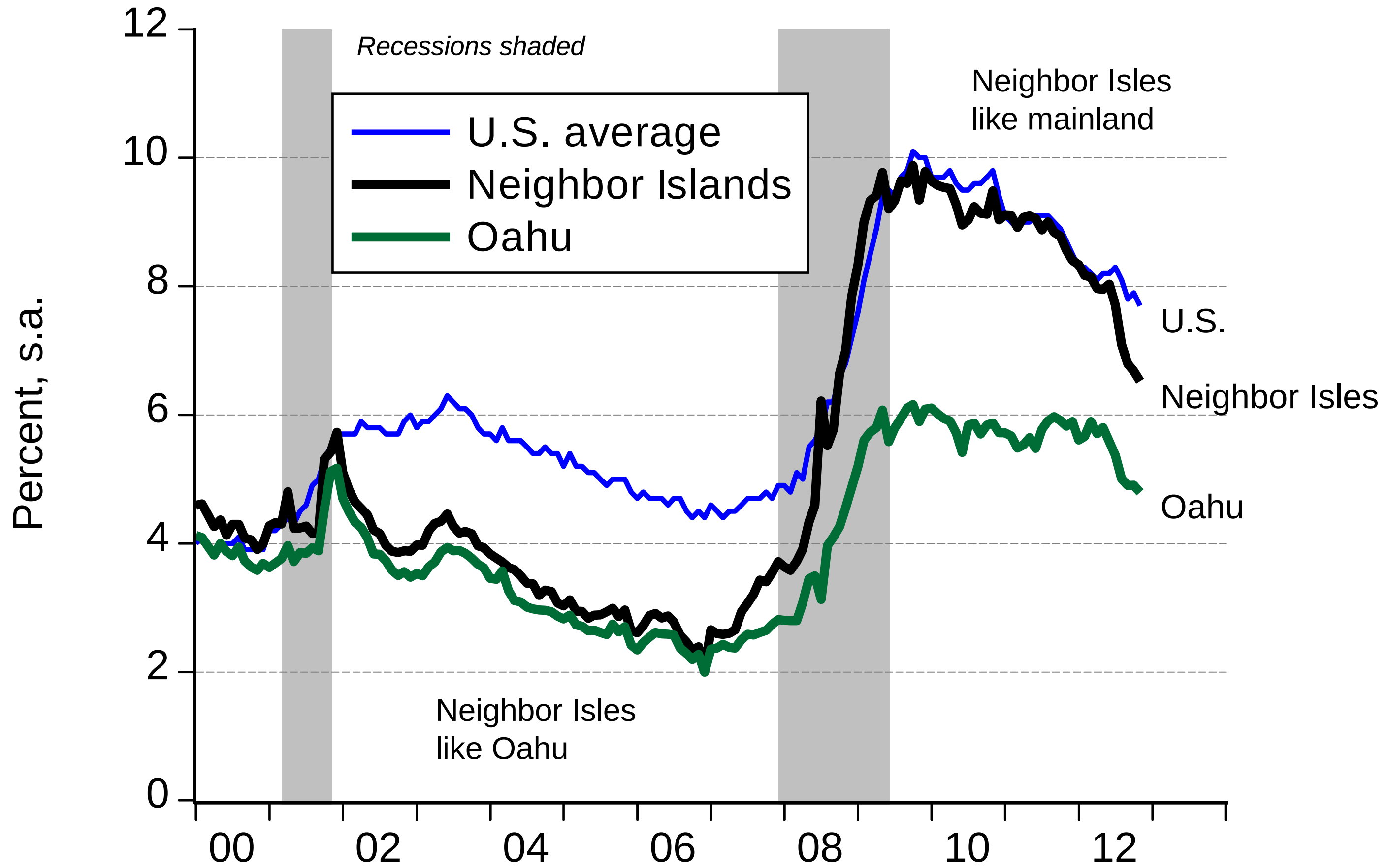
U.S.



Hawaii

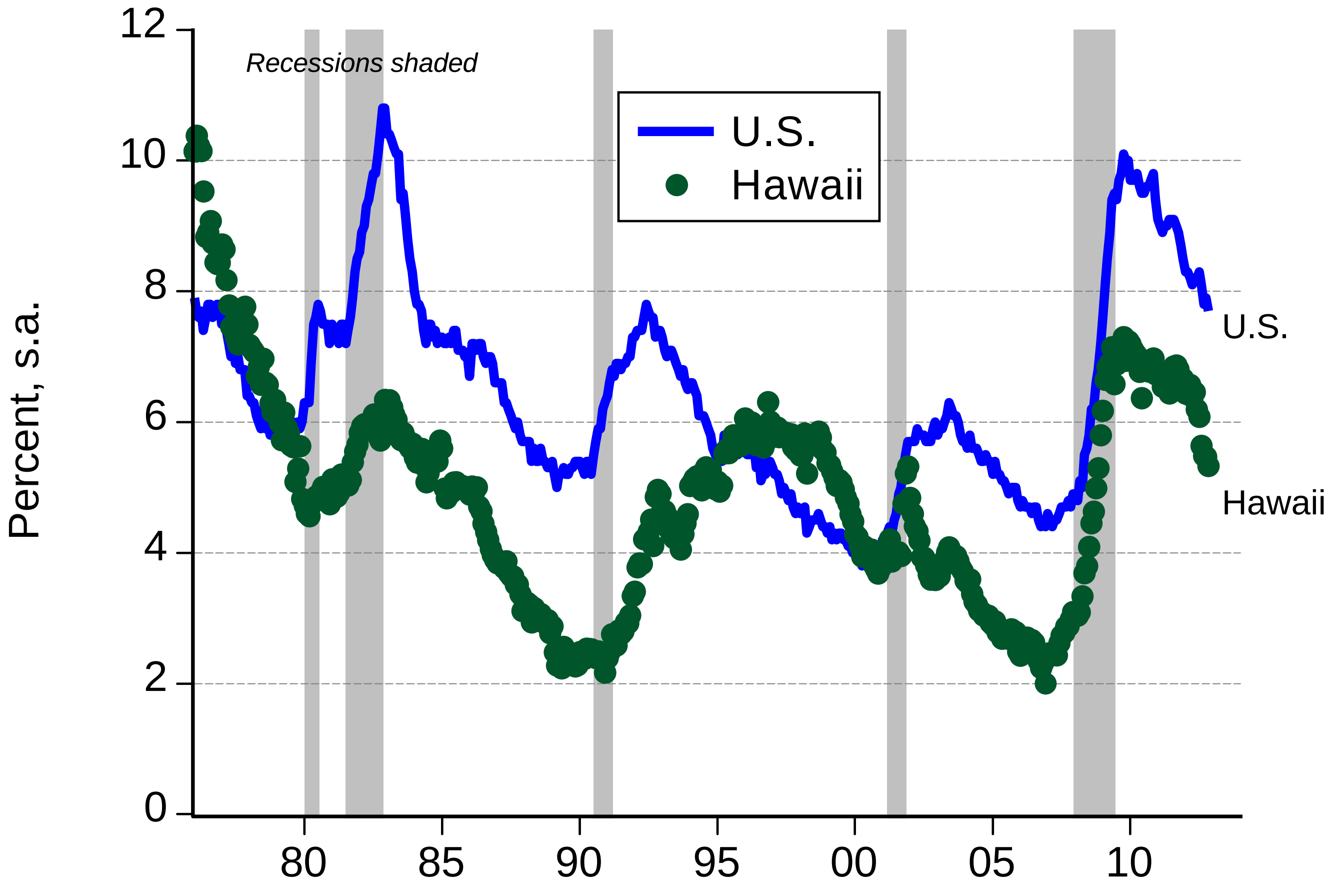
Sources: Hawaii DLIR and DBEDT, U.S. Bureau of Labor Statistics; monthly data through November 2012, seasonal adjustment of Hawaii data by TZE

Recent U.S. and Hawaii unemployment rates



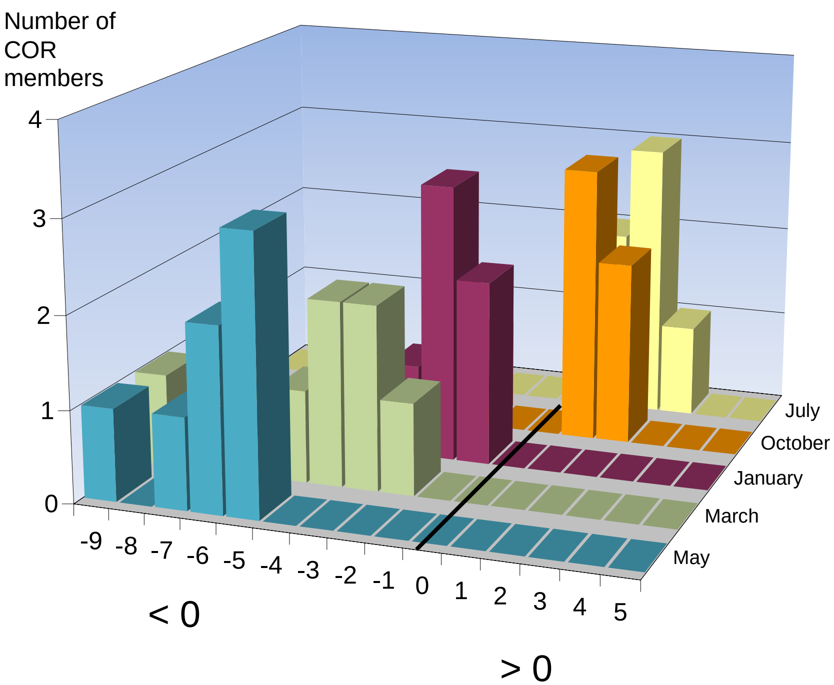
Source: Bureau of Labor Statistics, U.S. Department of Labor, Hawaii DLIR, Hawaii DBEDT; data through November 2012, seasonal adjustment of Hawaii data by TZE

Historical U.S. and Hawaii unemployment rates

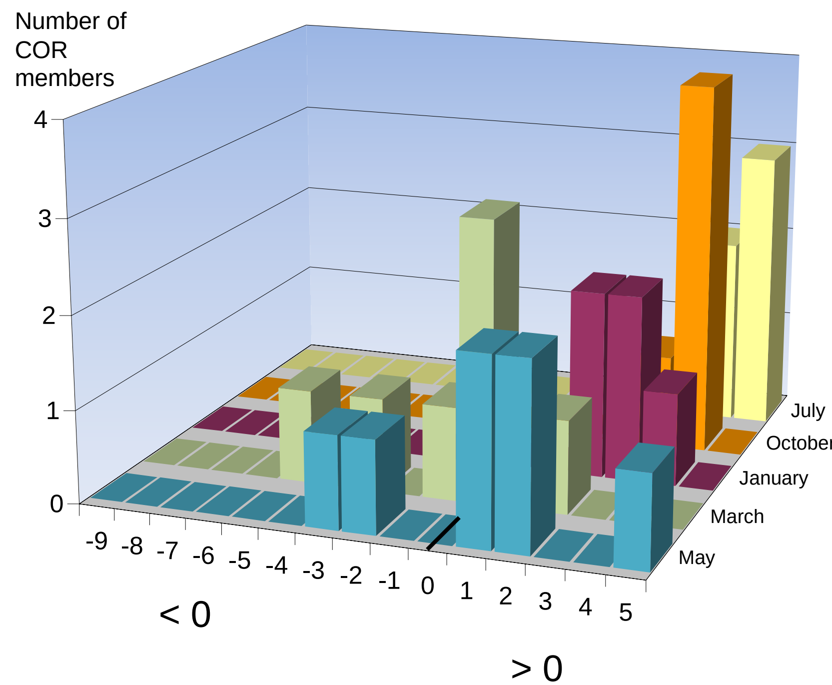


Source: Bureau of Labor Statistics, U.S. Department of Labor, Hawaii DLIR, Hawaii DBEDT; data through November 2012, seasonal adjustment of Hawaii data by TZE

COR general fund revenue growth estimates chased recession down and recovery up



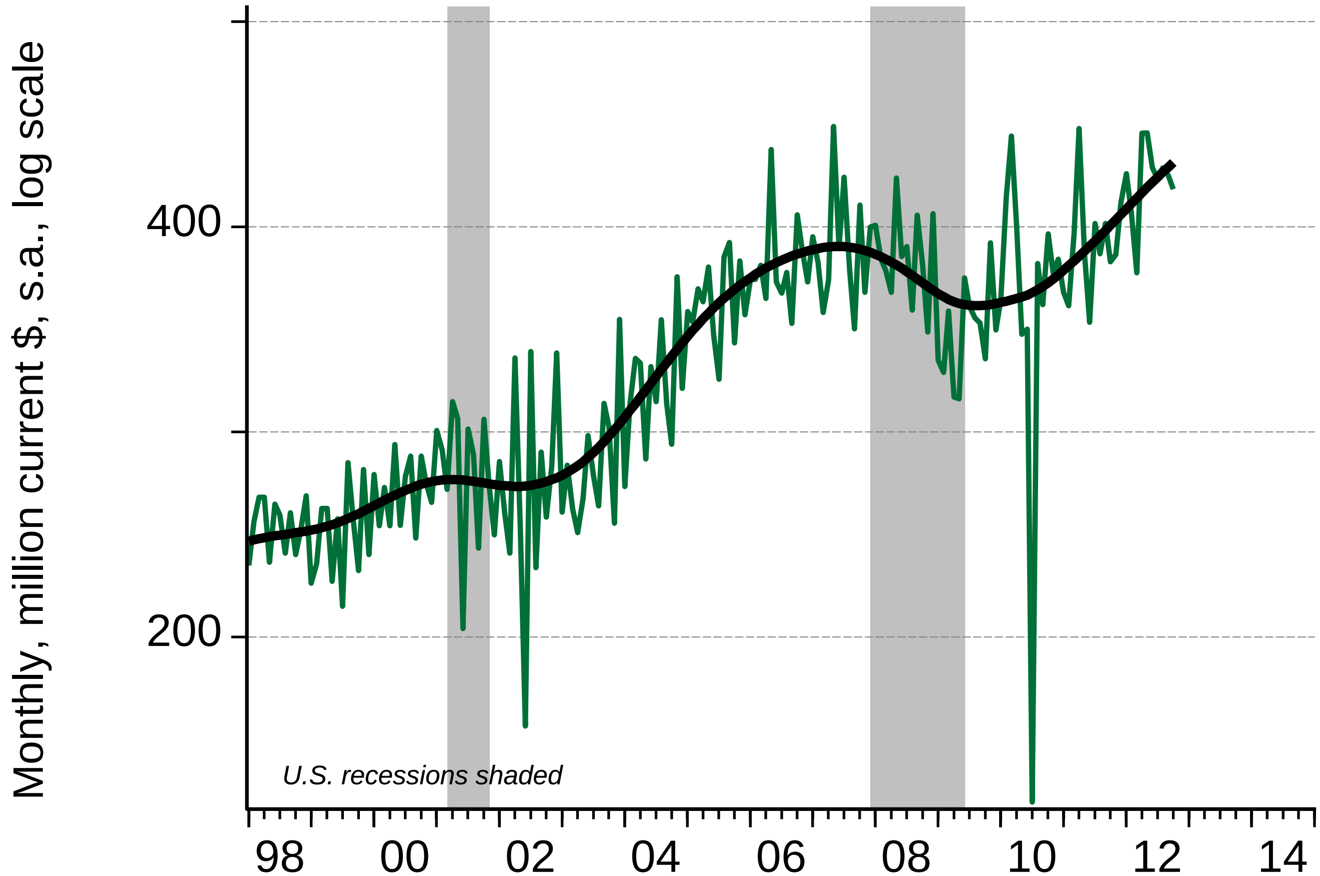
Distributions of forecast general fund revenue growth rates for FY2009



Distributions of forecast general fund revenue growth rates for FY2010

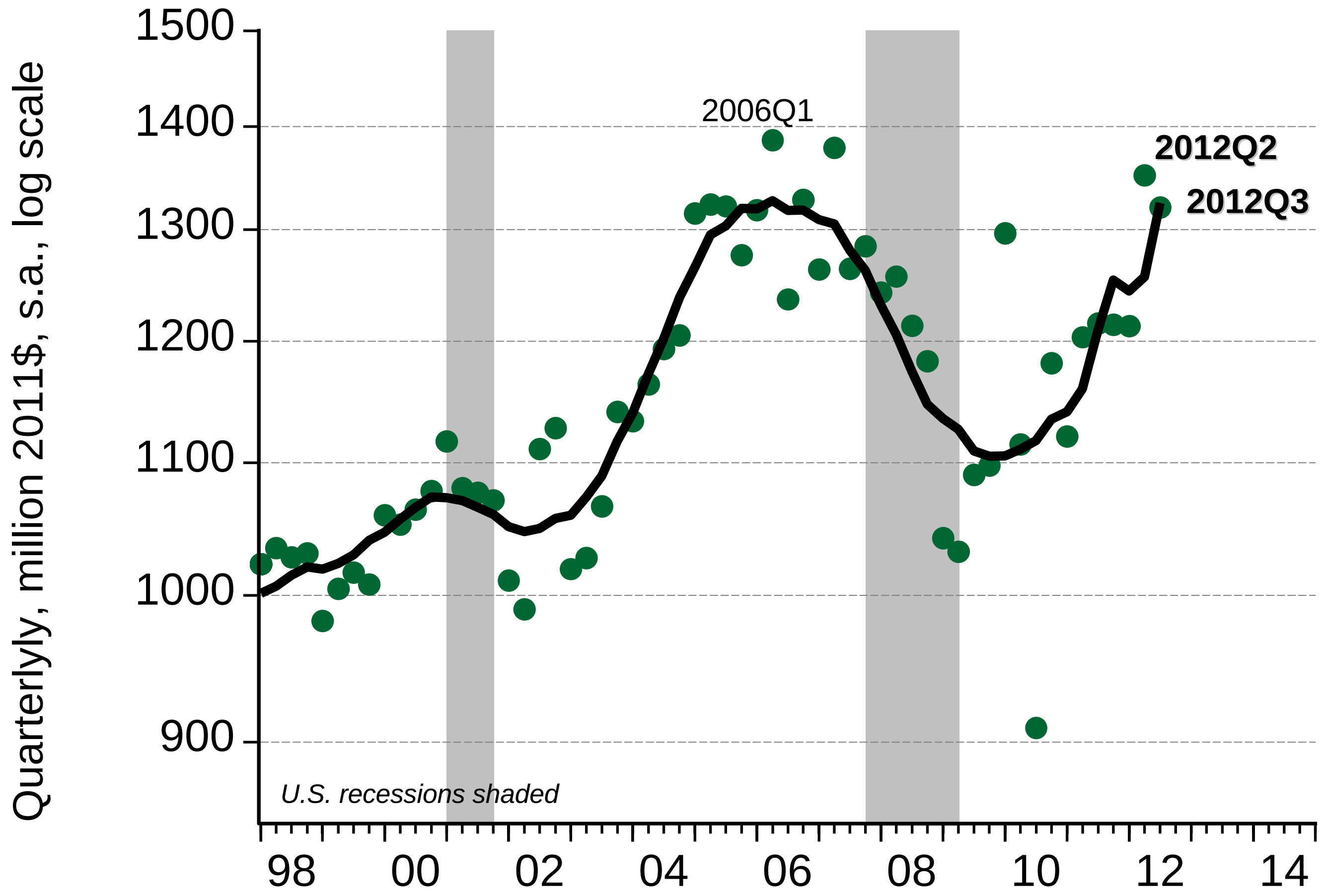
Sources: Hawaii Council on Revenues meetings, Tax Research and Planning, Hawaii Department of Taxation and personal records.

(Nominal) Hawaii general fund revenues: "it's so bad it's never been better"



Sources: Hawaii DoTax, DBEDT; seasonal adjustment (Census X-12 ARIMA) and trend (Hodrick-Prescott (1997)) estimates by TZE through October 2012

(Real) Hawaii general fund revenues: "it's so bad it's the same as the last peak"



Sources: Hawaii DoTax, DBEDT; seasonal adjustment (Census X-12 ARIMA), trend (Hodrick-Prescott (1997) and deflation (using interpolated Honolulu CPI-U) estimates by TZE through third quarter 2012

Council on Revenues General Fund Revenue forecasts and actual outcomes

billion$	March 2008 forecast	March 2009 forecast	March 2010 forecast	March 2011* forecast	March 2012 forecast	September 2012 forecast	
2007	4.5865	4.5865	4.5865	4.5865	4.5865	4.5865	
2008	4.7652	4.6419	4.6419	4.6419	4.6419	4.6419	
2009	4.9615	4.4098	4.2023	4.2023	4.2023	4.2023	
2010	5.2032	4.4318	4.0972	4.3646	4.3646	4.3646	
2011	5.4476	4.6534	4.3431	4.3879	4.3293	4.3293	
2012	5.7192	4.9094	4.6037	4.8724	4.8488	4.9778	**
2013	6.0727	5.2137	4.8799	5.1666	5.2125	5.2231	†
2014	6.4390	5.5370	5.1727	5.4757	5.1210	5.4272	°
2015		5.8083	5.4313	5.8045	5.7571	5.6982	‡
2016			5.7029	6.1530	5.9874	5.7672	
2017				6.5213	6.2867	6.0104	
2018					6.6011	6.3159	
2019						6.6085	

* before Japan's seismic event

**Forecasts did not account for approximately $170 million in energy tax credits

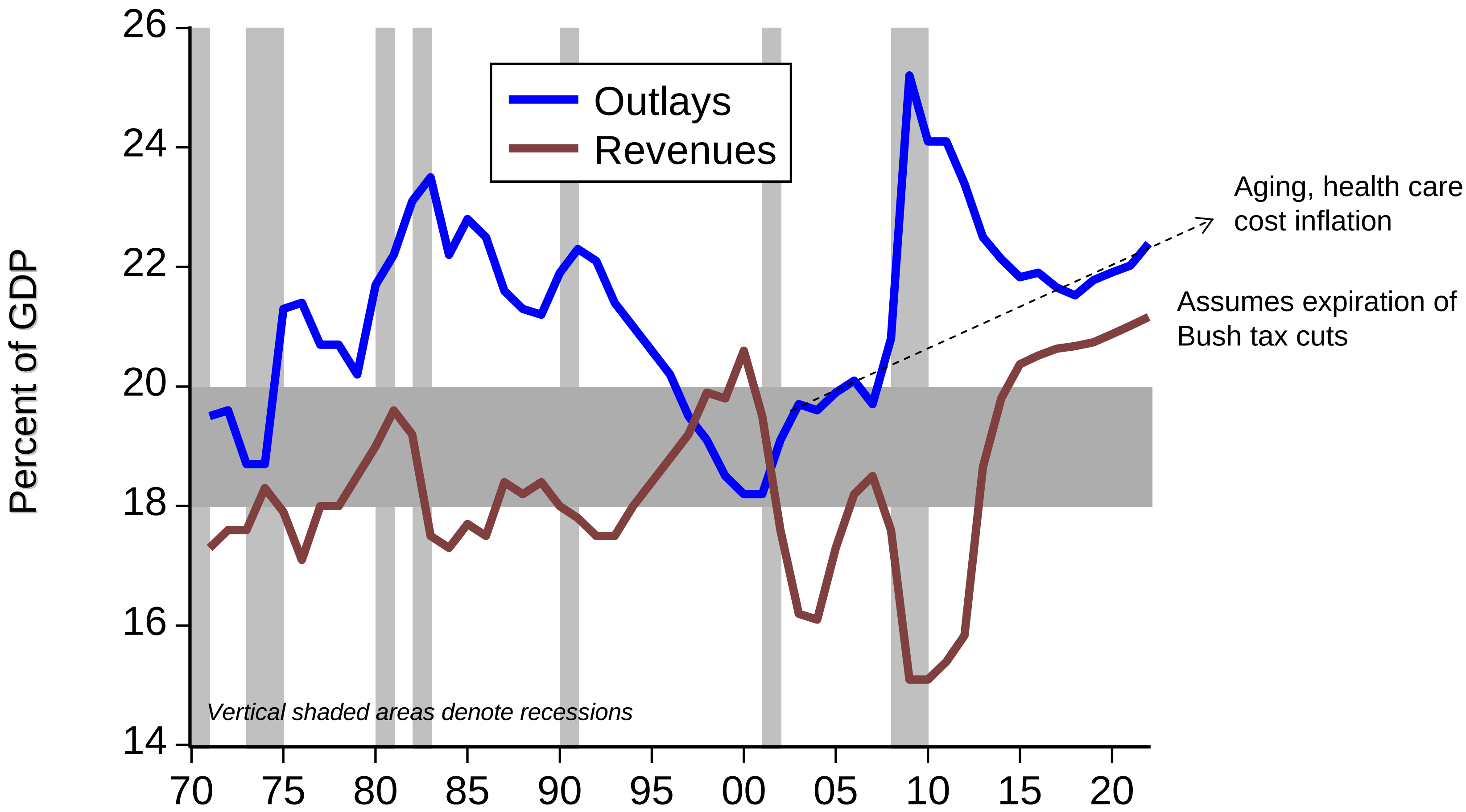
†Would be approximately $260 million higher but for energy tax credits

°Would be approximately $320 million higher but for energy tax credits

‡Would be approximately $340 million higher but for energy tax credits

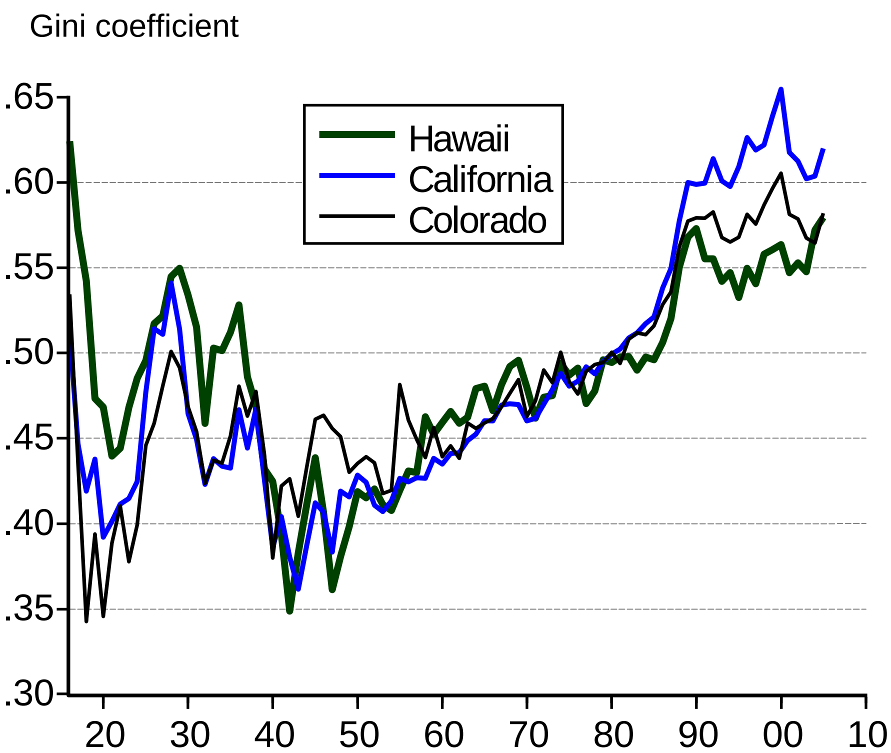
Mar-08 http://www.state.hi.us/tax/cor/2008gf03_with0314_Ltr2Gov-Final.pdf
Mar-09 http://www.state.hi.us/tax/cor/2009gf03-12_with0313_Rpt2Gov.pdf
Mar-10 http://www.state.hi.us/tax/cor/2010gf03-11_with0315_Rpt2Gov.pdf
Mar-11 http://www.state.hi.us/tax/cor/2011gf03-10_with0315_Rpt2Gov.pdf
Mar-12 http://www.state.hi.us/tax/cor/2012gf03-07_with0309_Rpt2Gov.pdf
Sep-12 http://www.state.hi.us/tax/cor/2012gf09-06_with0910_Rpt2Gov.pdf

Federal government revenue and outlays as a percent of GDP through FY2011, projected to FY2022

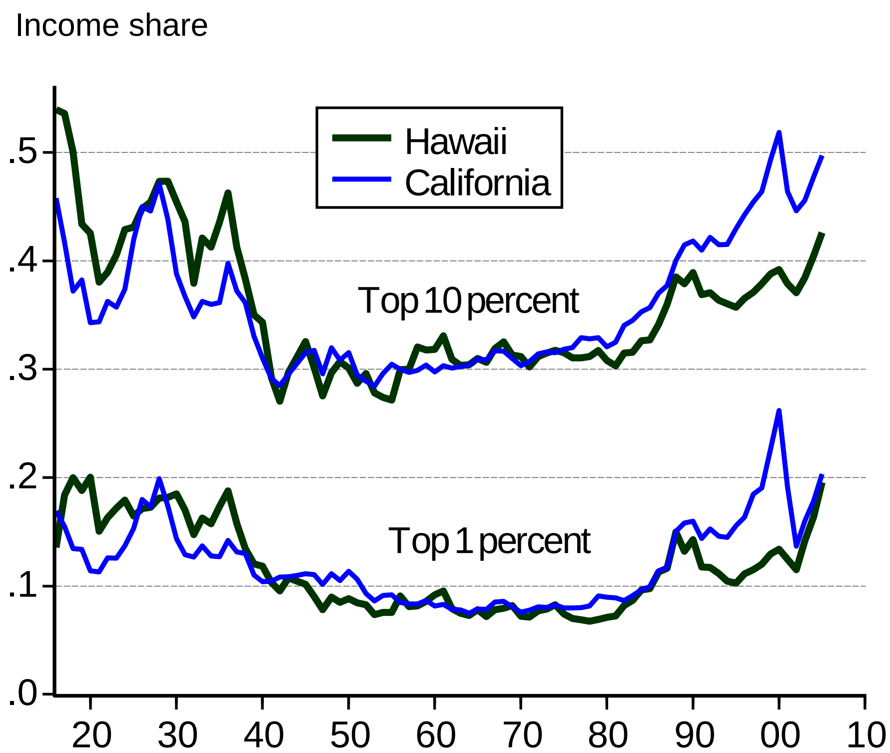


Source: Congressional Budget Office, *Budget and Economic Outlook Fiscal Years 2012 Through 2022* (March 2012; updated August 2012) (http://cbo.gov/sites/default/files/cbofiles/attachments/BudgetProjectionsMarch2012.xls; update at http://cbo.gov/publication/43539)

Rising inequality returns Hawaii to Plantation Era



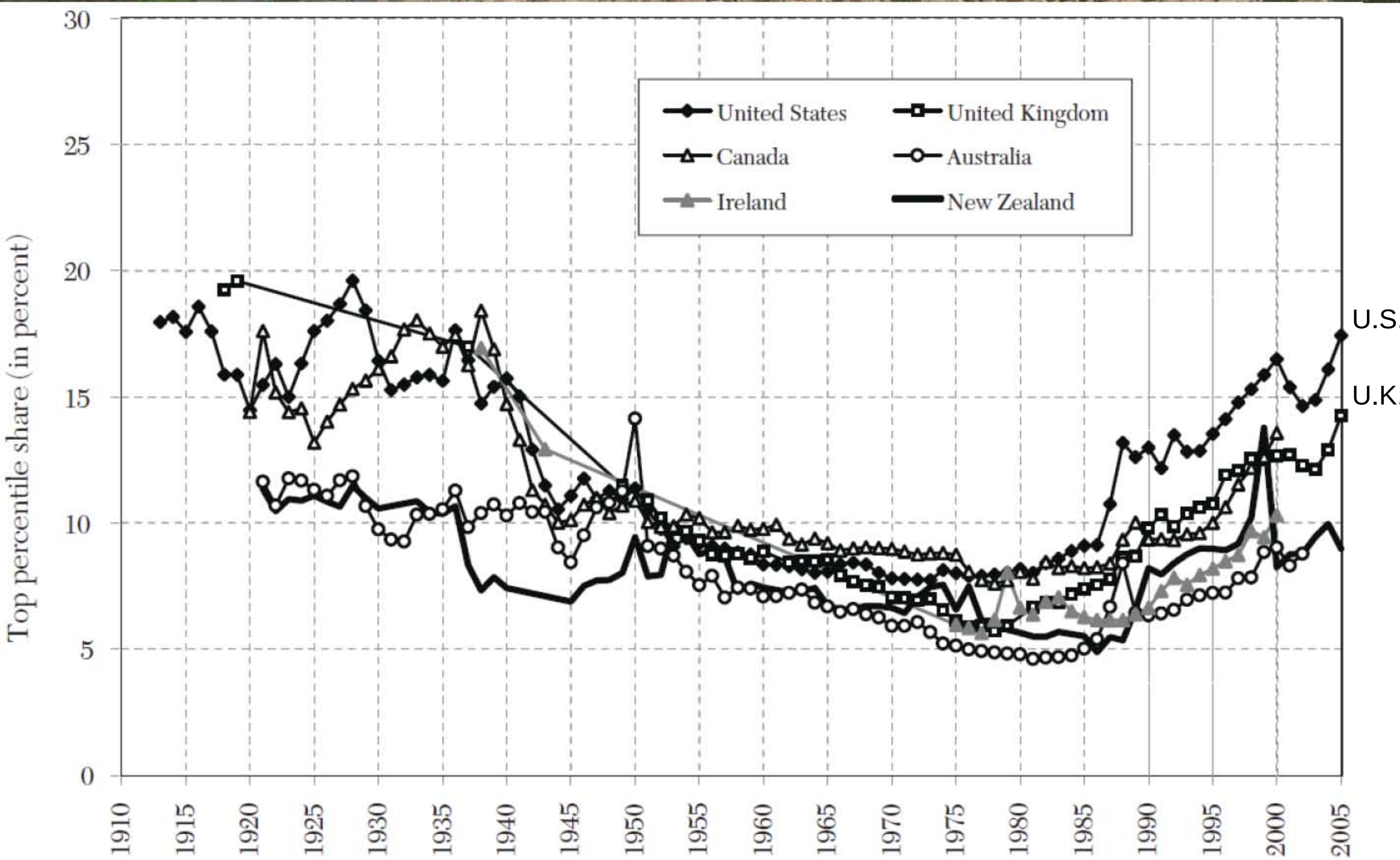
Gini coefficients



Top income quantile shares

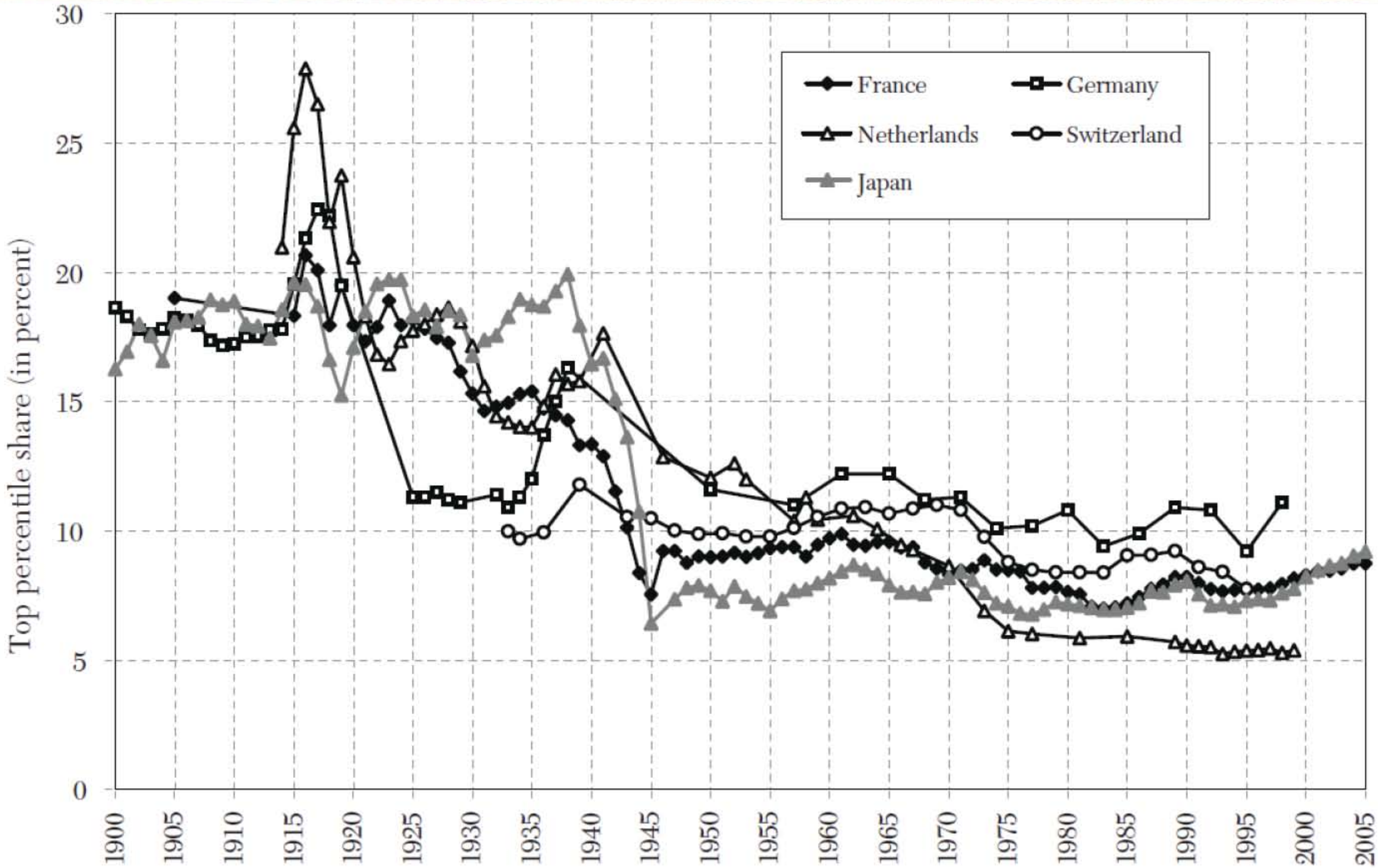
Source: Mark W. Frank, "Inequality and Growth in the United States: Evidence from a New State-Level Panel of Income Inequality Measure," *Economic Inquiry* vol. **47**, no. 1 (2009) pp 55-68; http://www.shsu.edu/~eco_mwf/unequal/Frank_All.csv

Top 1 percent share: English speaking countries (*U*-shaped) 1910-2005—rising since the 1970s



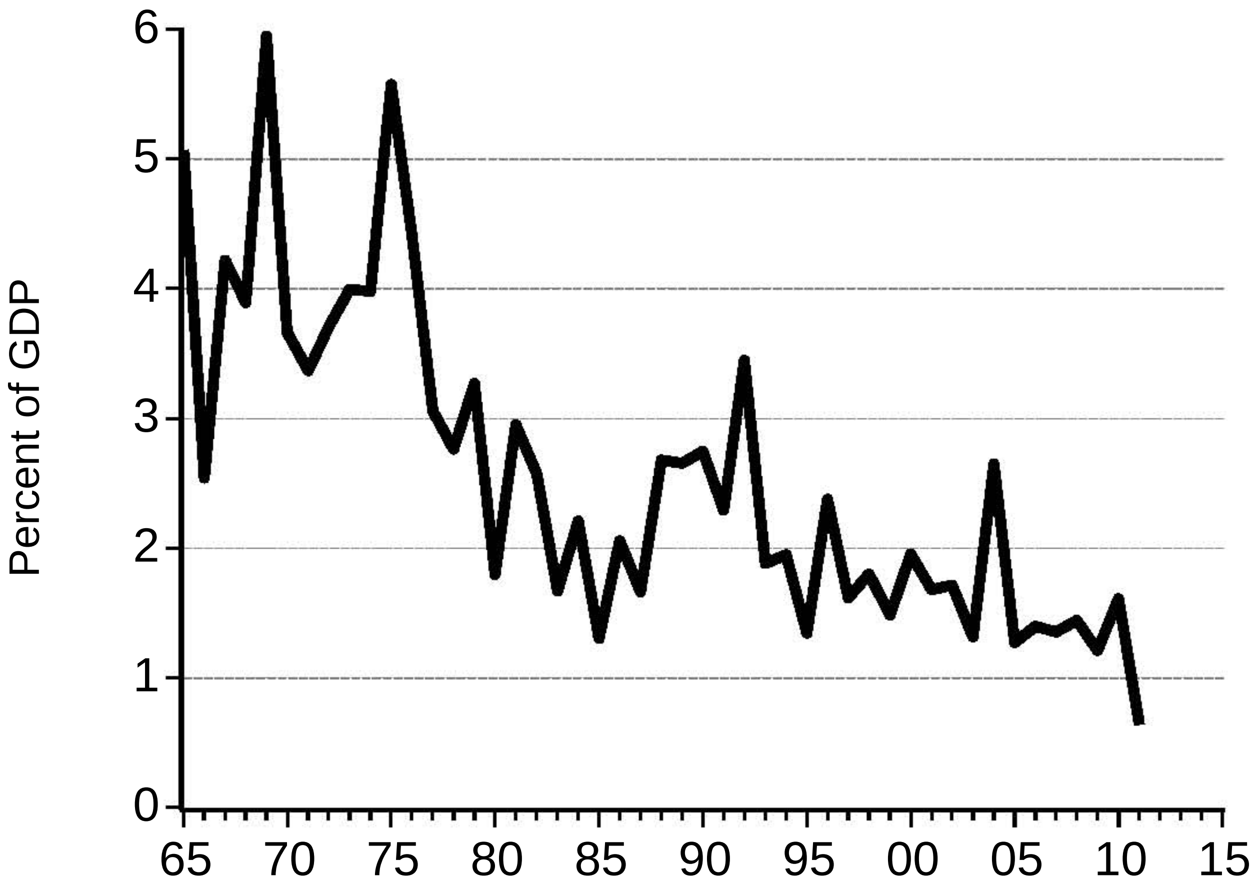
Sources: Anthony B. Atkinson, Thomas Piketty, and Emmanual Saez, "Top Incomes in the Long Run of History," *Journal of Economic Literature* **49**:1 (2011) pp. 3-71 ftp://emlab.berkeley.edu/pub/users/saez/atkinson-piketty-saezJEL10.pdf

Top 1 percent share: middle Europe and Japan (*L*-shaped) 1900-2005—relatively steady shares



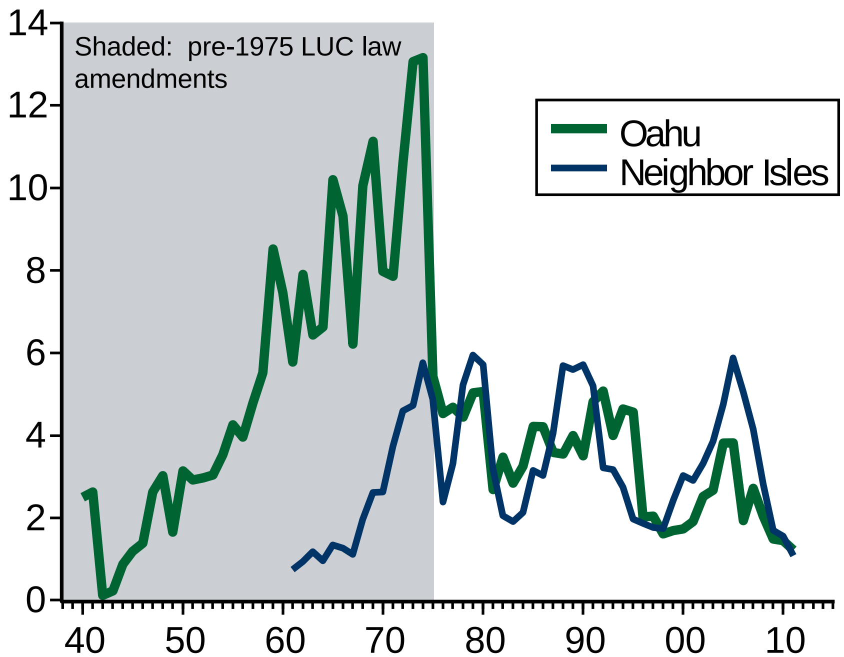
Sources: Anthony B. Atkinson, Thomas Piketty, and Emmanual Saez, "Top Incomes in the Long Run of History," *Journal of Economic Literature* **49**:1 (2011) pp. 3-71 ftp://emlab.berkeley.edu/pub/users/saez/atkinson-piketty-saezJEL10.pdf

Public construction at *all* levels of government in Hawaii falling on trend as a percent of gross product

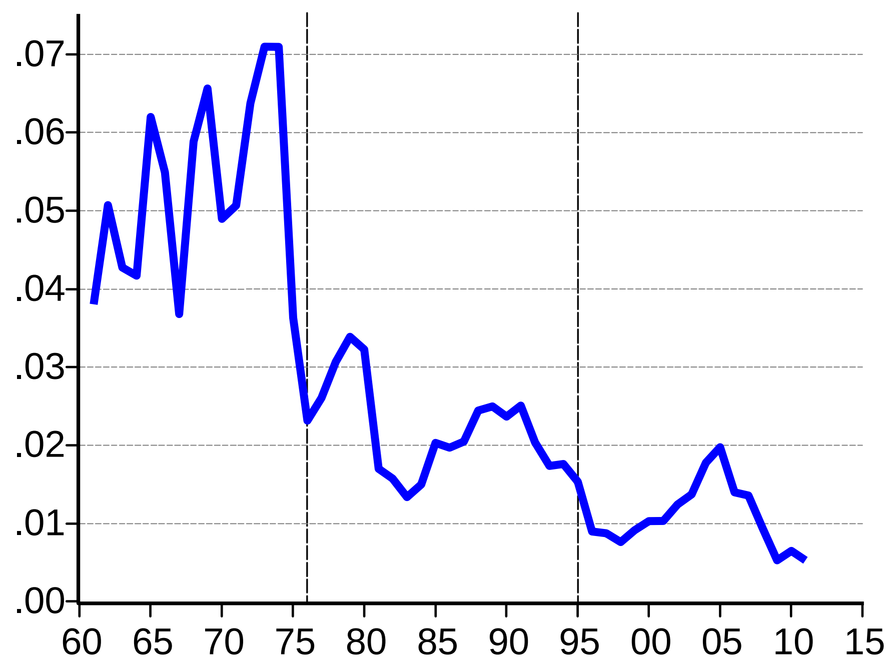


Sources: BEA, Hawaii DPED, Hawaii DBEDT, Bank of Hawaii TZE database; estimates are crudely bridged over the 1997 SIC- and NAICS-based GDP transition by assuming a constant of proportionality

New Hawaii housing formation is lower than *at any time* since the Second World War



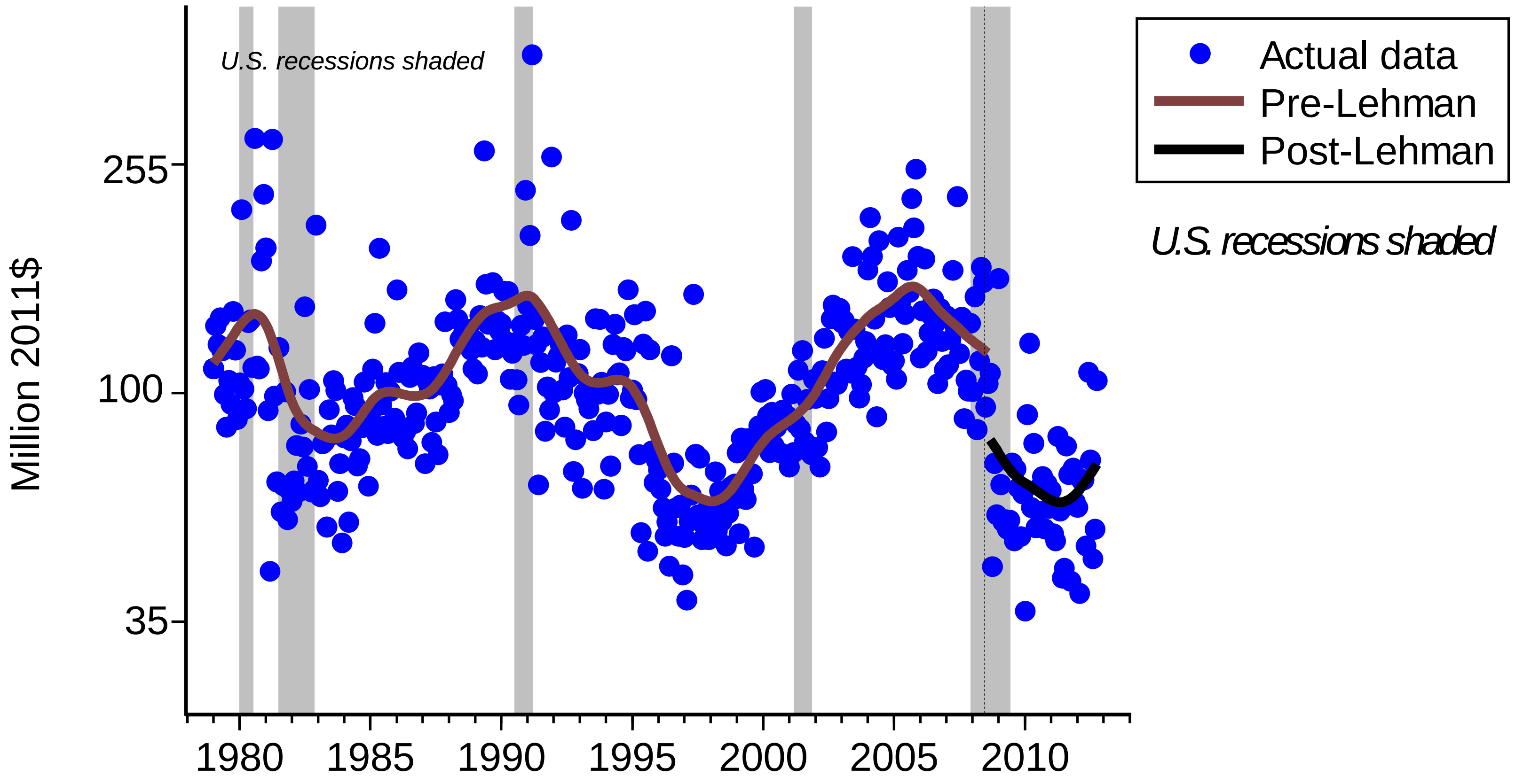
New housing unit authorizations by building permit



Investment/capital ratio ($\Delta K_t / K_t$): new units/existing inventory

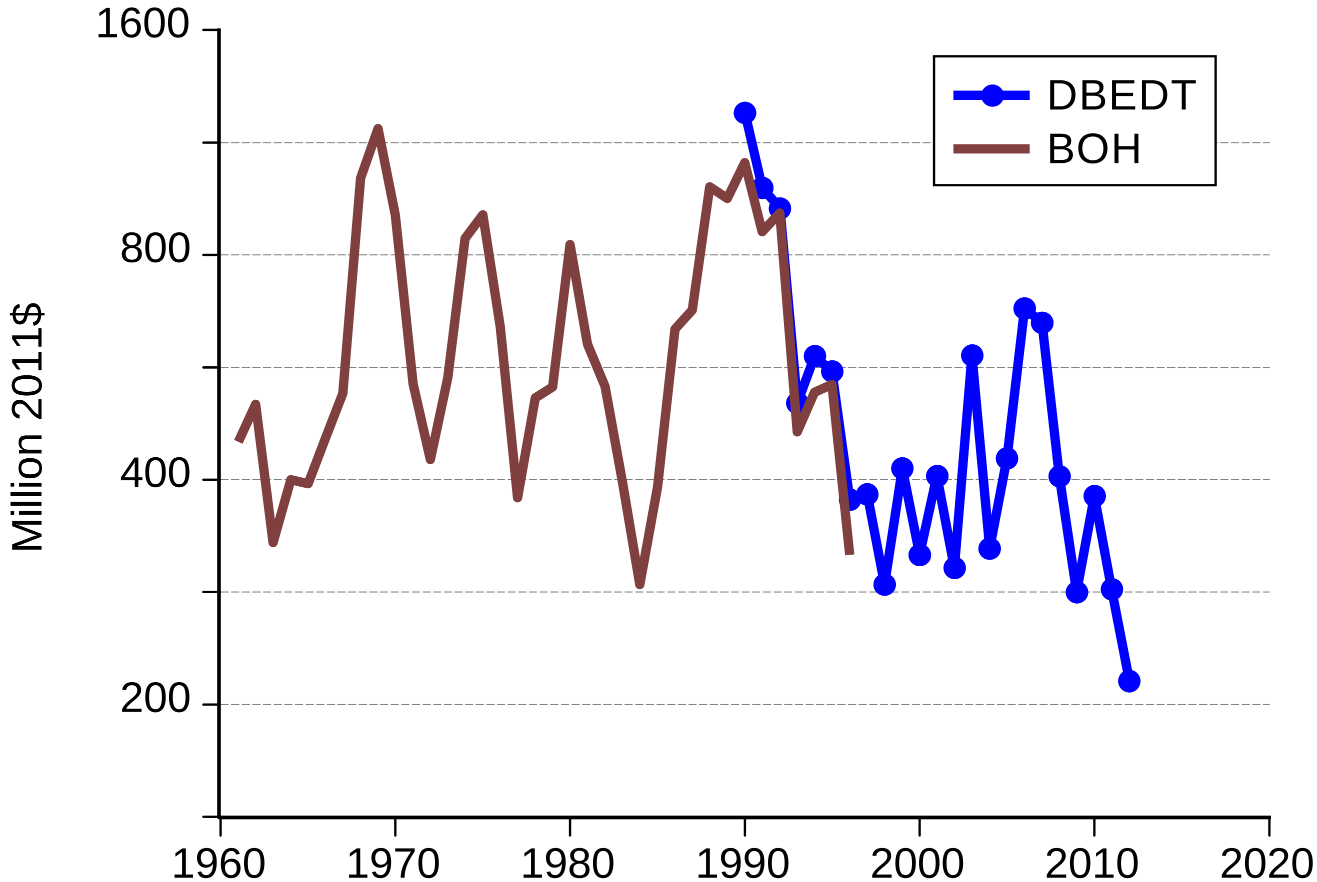
Sources: Robert C. Schmitt *Historical Statistics of Hawaii;* Hawaii DBEDT, Bank of Hawaii, TZE data through 2011

Monthly real new residential building permits



Sources: County building departments, Bank of Hawaii, Hawaii DBEDT, U.S. Census Bureau; TZE database; deflation uses a Fisher index of *residential* construction cost and trend is from a Hodrick-Prescott (1997) filter

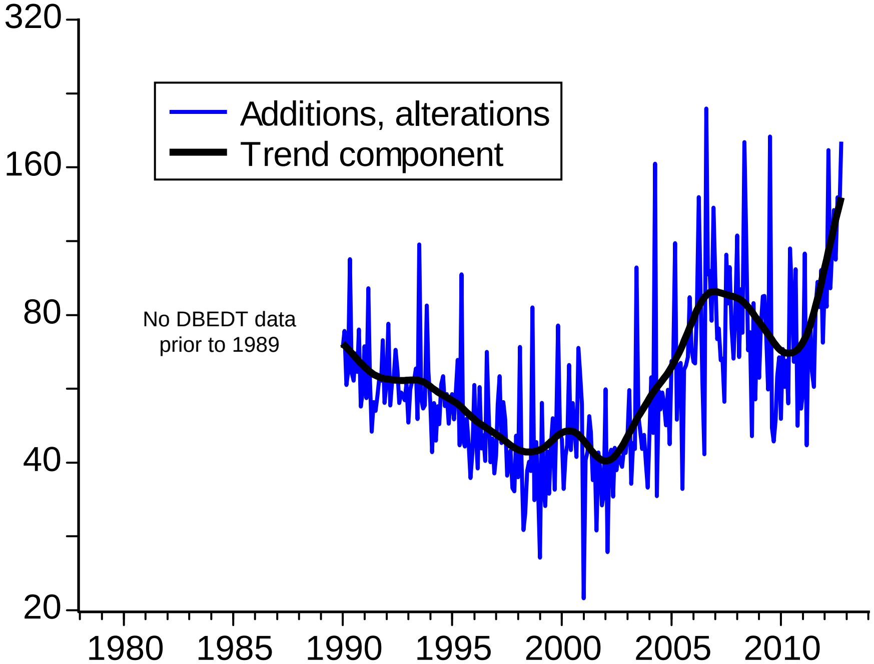
Annual new Hawaii commercial building permit values lower than ever recorded



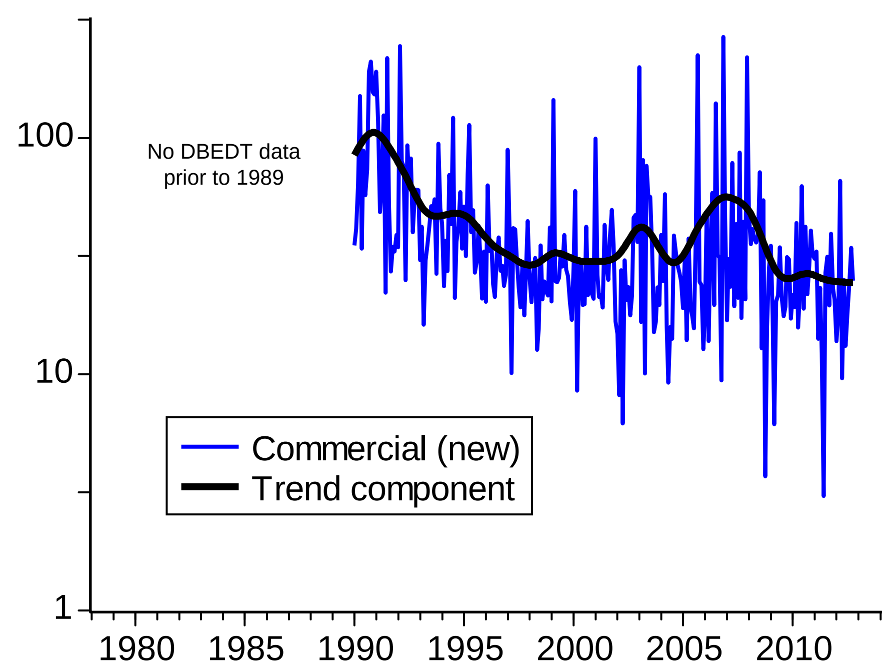
Slide copyright 2012, TZ Economics

Sources: County building departments, Bank of Hawaii, Hawaii DBEDT, U.S. Census Bureau; TZE database; deflation uses a Fisher index of *residential* construction cost

Real private building permit values for additions and alterations and for new commercial structures



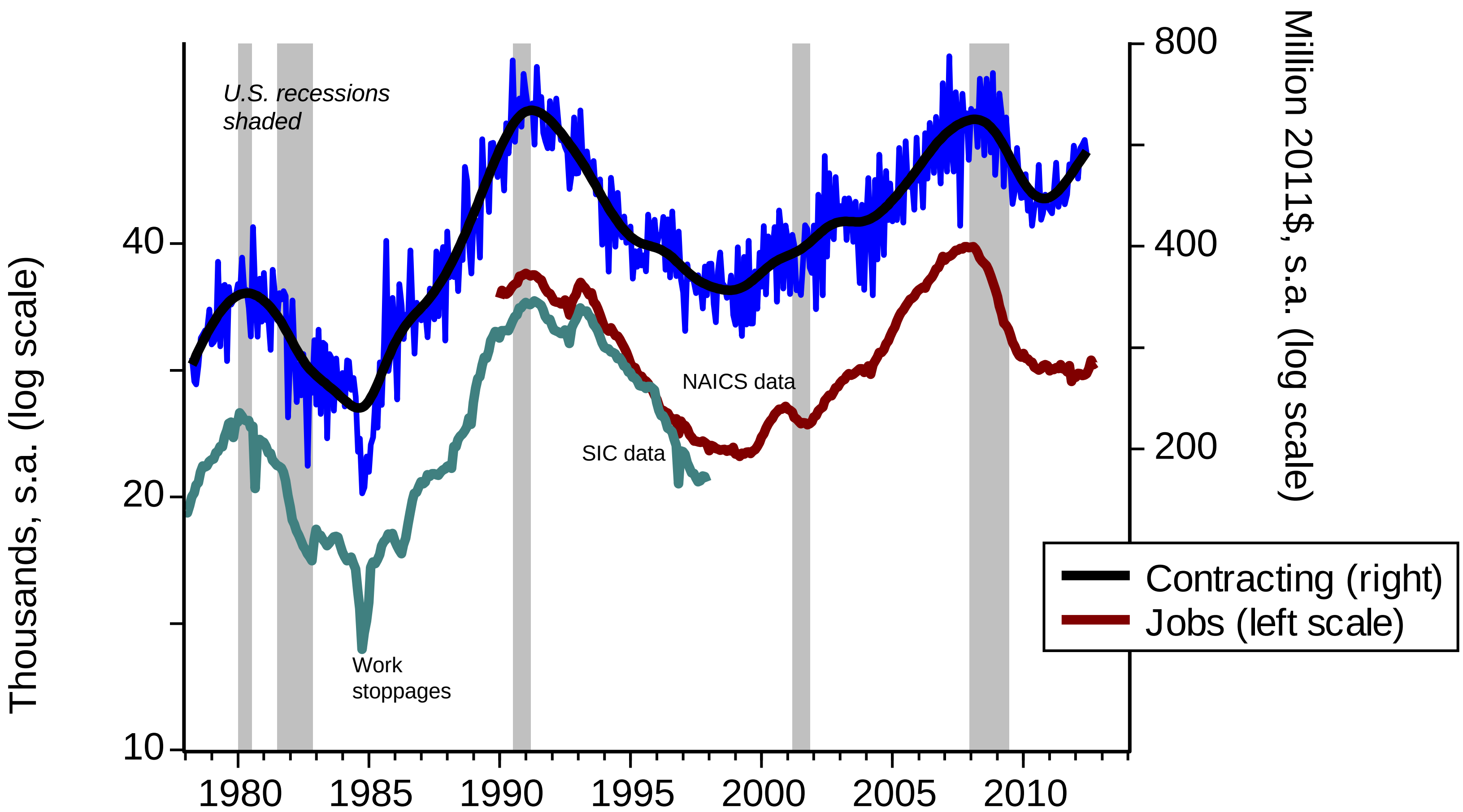
Additions and alterations (residential *and* nonresidential)



New commercial

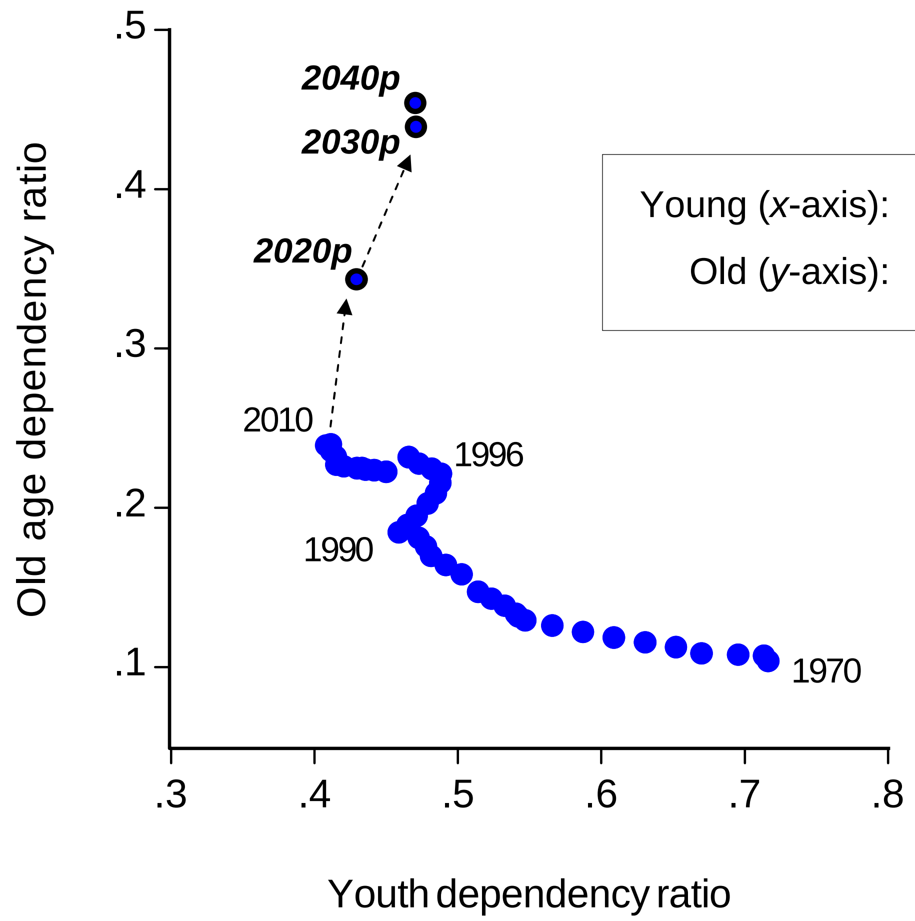
Sources: County building departments, Bank of Hawaii, Hawaii DBEDT, U.S. Census Bureau; TZE database; deflation uses a Fisher index of *residential* construction cost and trends are from a Hodrick-Prescott (1997) filter

Recent growth in construction spending (mostly energy investments) is *not* translating into jobs



Sources: Bank of Hawaii, Hawaii DoTax, DLIR and DBEDT, U.S. Census Bureau; TZE database; deflation of monthly data uses a Fisher index of *residential* construction cost and trend is from a Hodrick-Prescott (1997) filter

Demographic dynamics: rising old age dependency; Hawaii "workers/old peeps" 10 (1970), 4 (2010), 2.3 (2030)

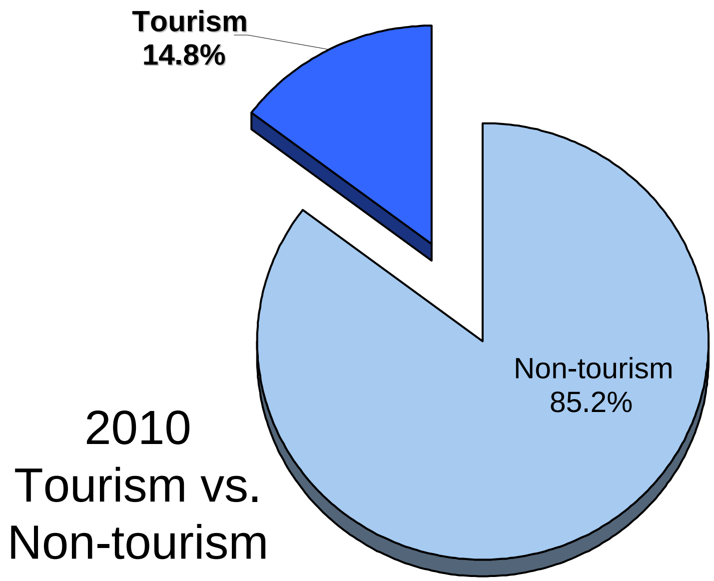


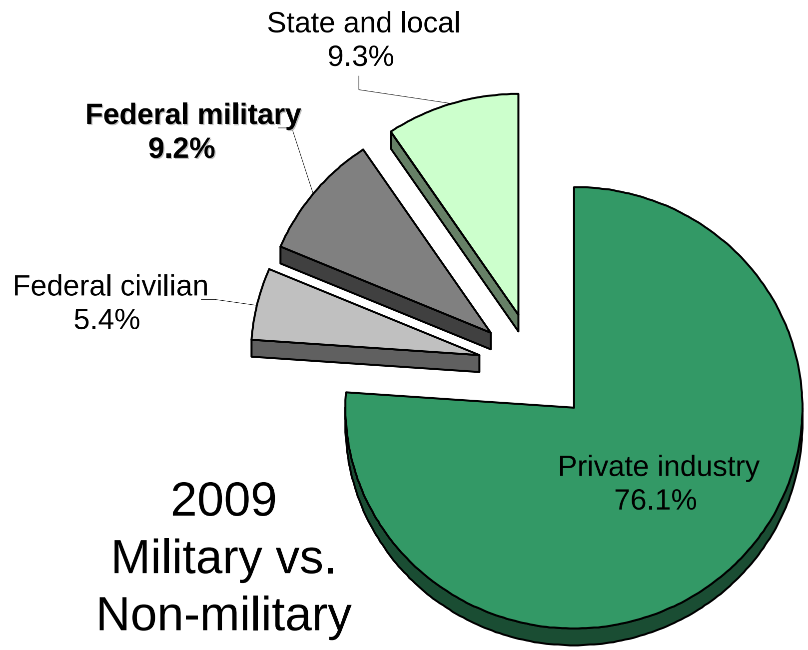
Young (*x*-axis): [(Pop < 20) / (Pop 20-64)]

Old (*y*-axis): [(Pop ≥ 65) / (Pop 20-64)]

Source: Hawaii DBEDT State of Hawaii projections from table 1.28, *State of Hawaii Data Book* http://hawaii.gov/dbedt/info/economic/databook/db2011/section01.xls (historical data, TZE database)

Hawaii economic value-added (GDP) shares in tourism and military: *combined* approx. 25%





See also:

James Mak, 2005. "Tourism demand and output in the U.S. Tourism Satellite Accounts: 1998-2003," *Journal of Travel Research*, **44** (1), pp. 4-5

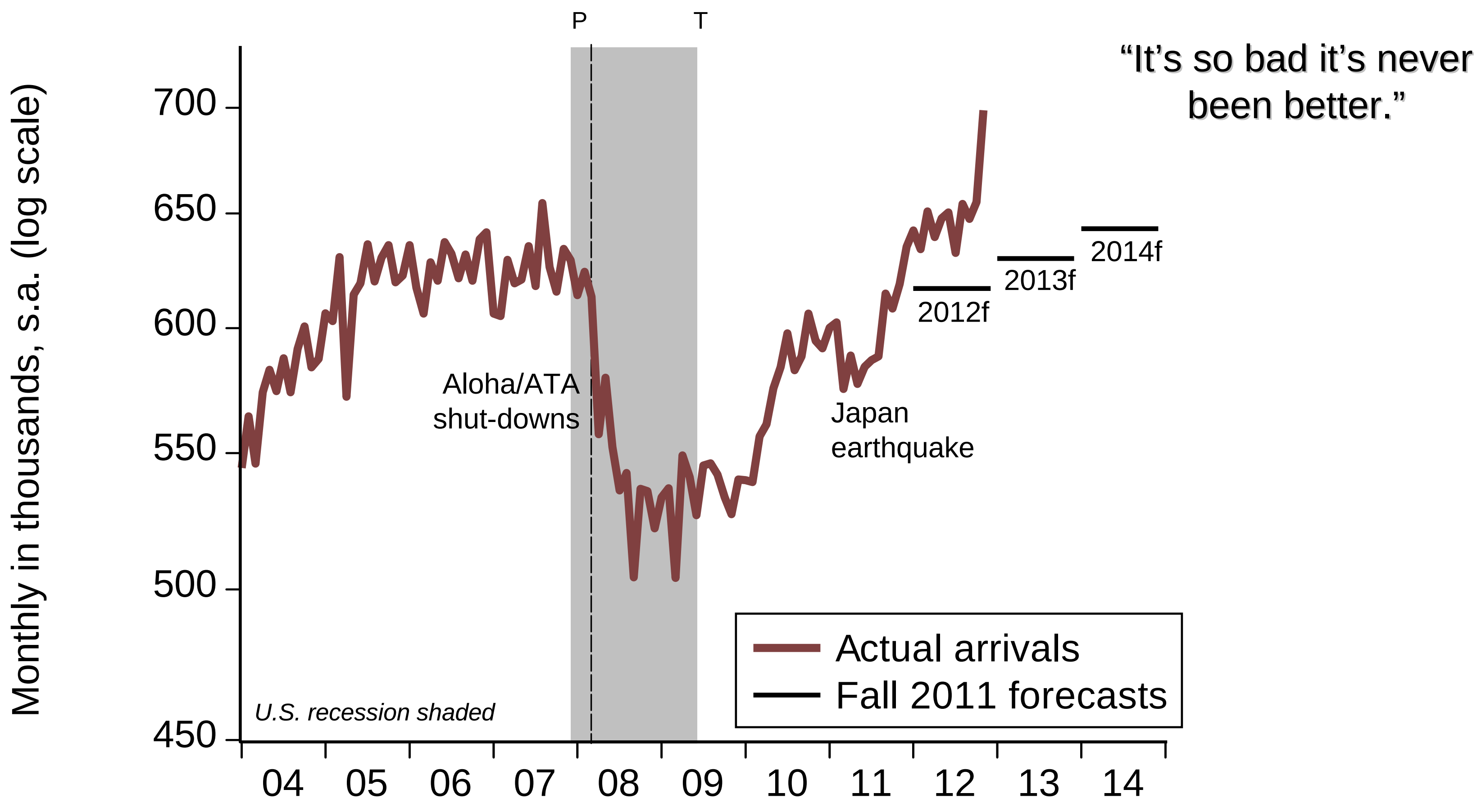
Eugene Tian, James Mak, and PingSun Leung, "The direct and indirect contributions of tourism to regional GDP: Hawaii," *UHERO Working Paper No. 2011-5* (July 28, 2011) (http://www.uhero.hawaii.edu/assets/WP_2011-5.pdf)

DBEDT *State of Hawaii Data Book* (http://hawaii.gov/dbedt/info/economic/databook/2010-individual/07/073410.xls)

James Hosek, Aviva Litovitz, Adam C. Resnick, 2011 "How Much Does Military Spending Add to Hawaii's Economy?" *Rand Corporation Technical Report TR-996* (http://www.rand.org/pubs/technical_reports/TR996.html); note that this report incorrectly *doubles* the military share of Hawaii GDP to inflate its importance using input-output multipliers, which is like doubling everything and dividing by 200% of GDP.

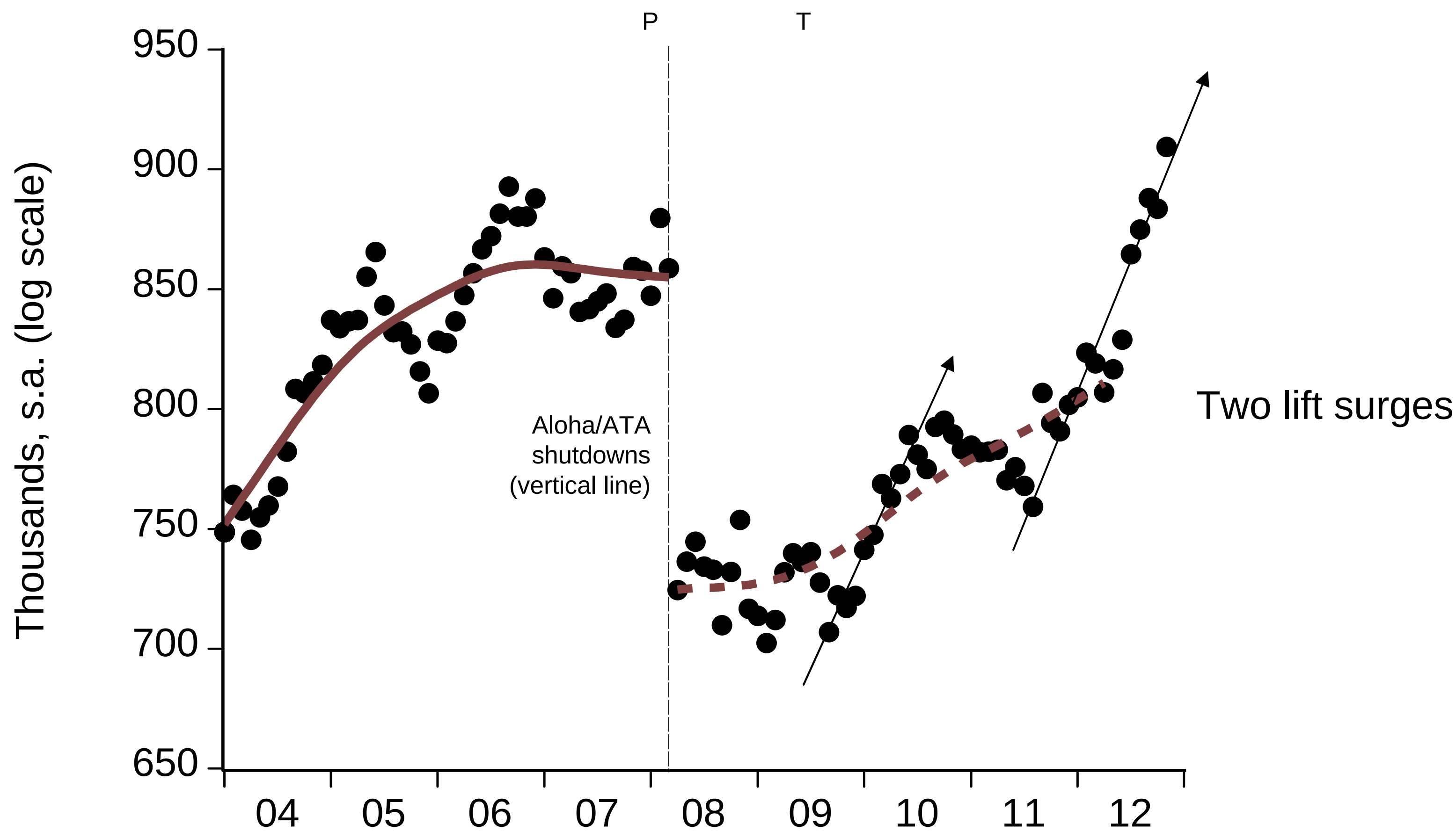
Source for underlying data: Bureau of Economic Analysis, U.S. Department of Commerce, Hawaii DBEDT, Hawaii Tourism Authority; all calculations by TZE

Actual Hawaii visitor arrivals way higher than 2011 forecasts for 2012-14



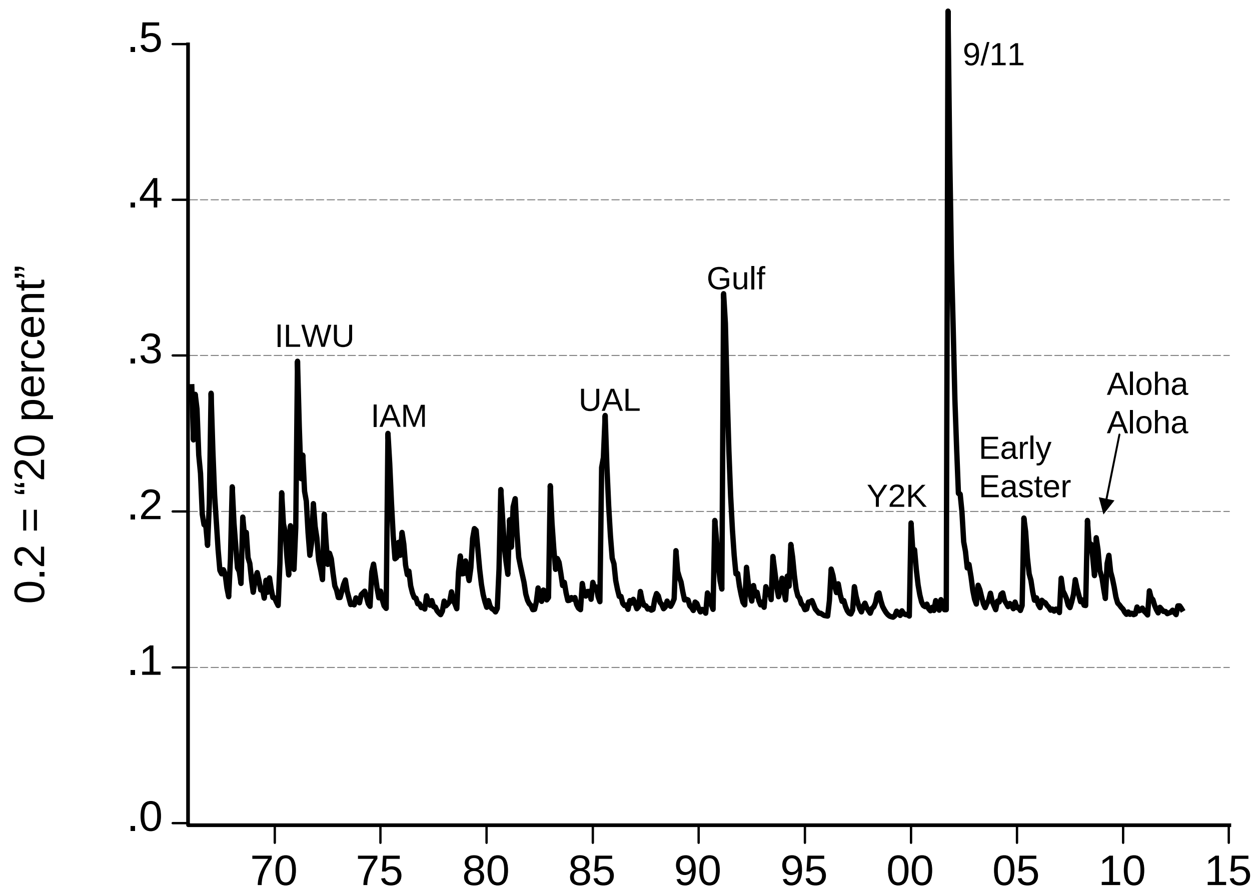
Source: Monthly data through November 2012 from Hawaii Tourism Authority, Hawaii DBEDT including revisions; seasonal adjustment using Census X-12 ARIMA filter by TZE; Nov. 2011 arrivals forecasts from DBEDT, FHB and UHERO

Monthly total seats flown to Hawaii (s.a.); forecasts model demand but neglect *supply*



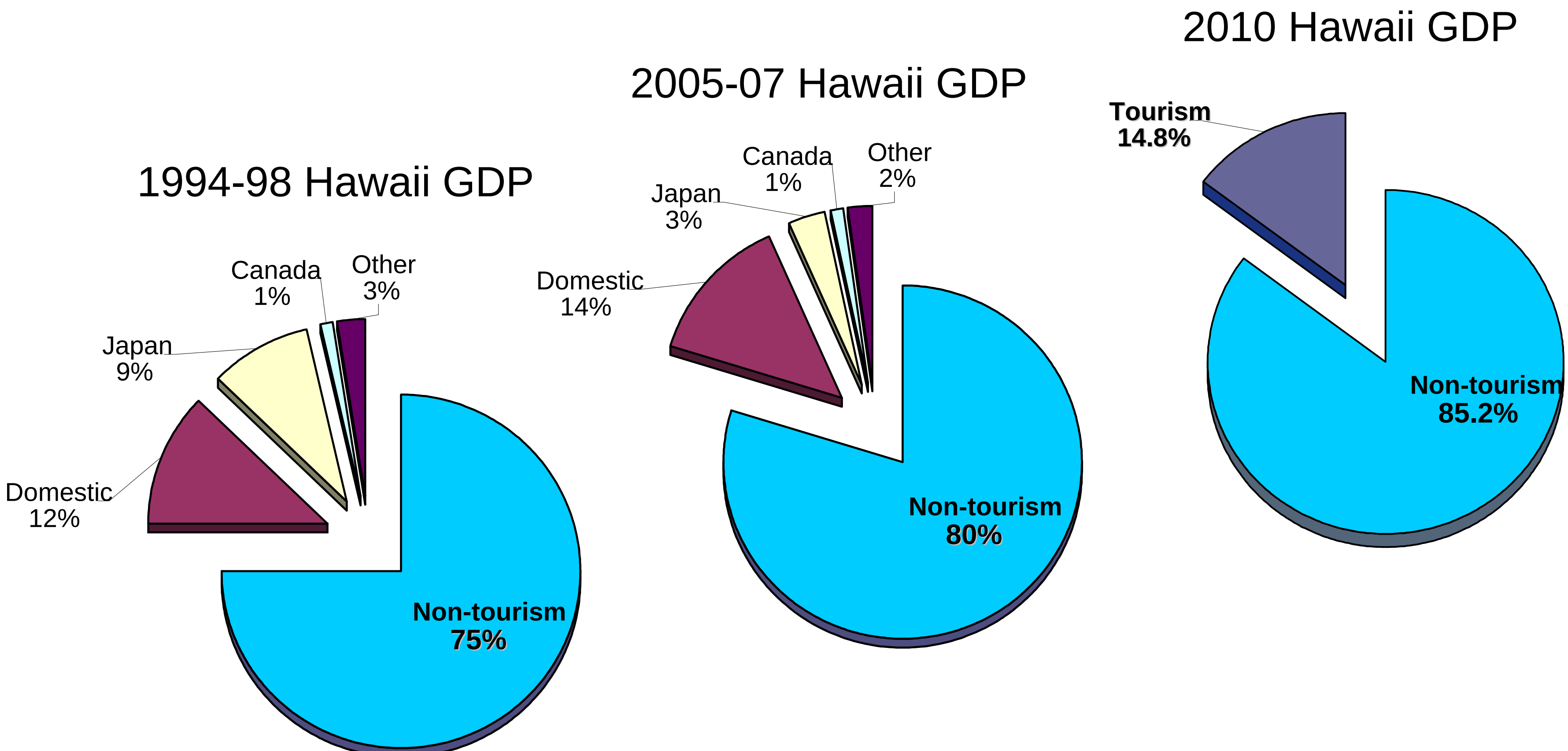
Source: Monthly data through June 2012 from Hawaii Tourism Authority, Hawaii DBEDT; seasonal adjustment and Hodrick-Prescott filter trend calculation by TZE

Recent years notable for *lack* of volatility: conditional volatility of monthly visitor arrivals



Source: Monthly data through November 2012 from Hawaii Tourism Authority, Hawaii DBEDT including revisions; seasonal adjustment using Census X-12 ARIMA filter and TARCH(1,1) volatility calculations by TZE

High volume, but Hawaii tourism has shrunk in absolute (real export receipts) *and* in relative terms



See also:

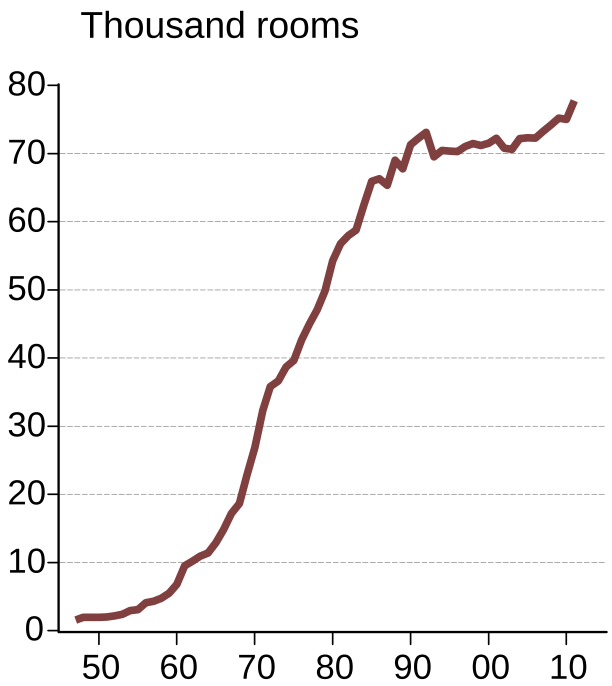
James Mak, 2005. "Tourism demand and output in the U.S. Tourism Satellite Accounts: 1998-2003," *Journal of Travel Research*, **44** (1), pp. 4-5

Eugene Tian, James Mak, and PingSun Leung, "The direct and indirect contributions of tourism to regional GDP: Hawaii," *UHERO Working Paper No. 2011-5* (July 28, 2011) (http://www.uhero.hawaii.edu/assets/WP_2011-5.pdf)

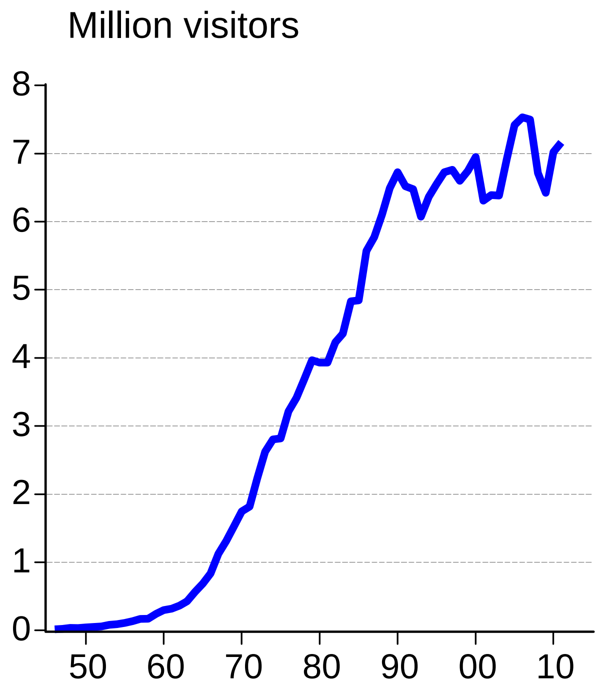
DBEDT World Travel and Tourism Council report (http://hawaii.gov/dbedt/info/visitor-stats/econ-impact/WTTC99.pdf)

Source for underlying data: Hawaii DBEDT, Hawaii Tourism Authority; calculated estimates by TZE except as noted

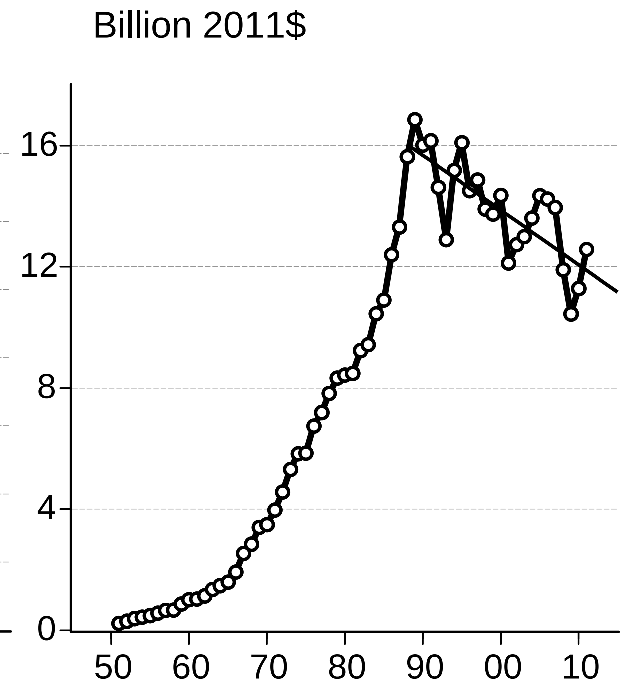
Tourism's problem: not working out according to plan—higher volumes, lower real receipts



Visitor accommodations



Visitor arrivals

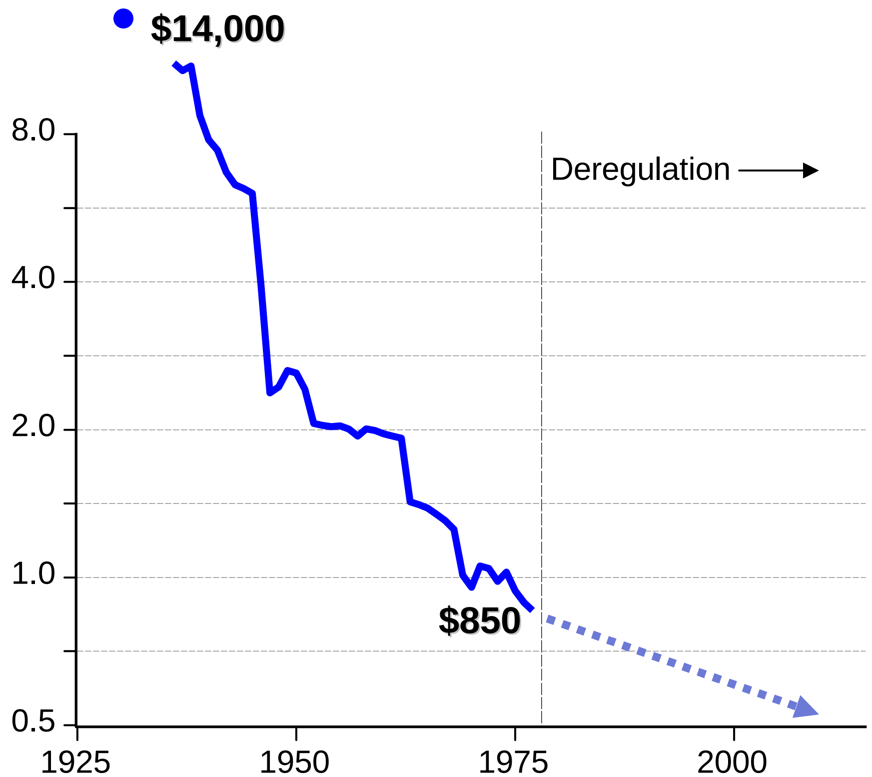


Tourism receipts

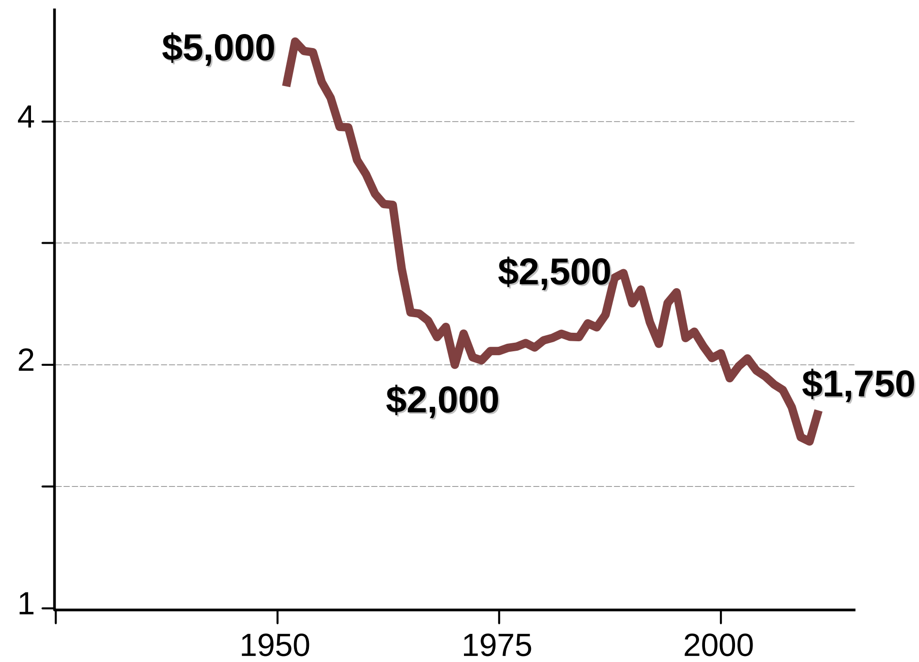
Sources: Hawaii Tourism Authority, Hawaii DBEDT, Bureau of Labor Statistics; deflation calculations by TZE

Productivity growth reduced travel *and* destination cost; favorable composition shifts remain elusive

Both graphs in thousand 2011$ (log scales)



Real West Coast air fares (2011$)
1927-1977

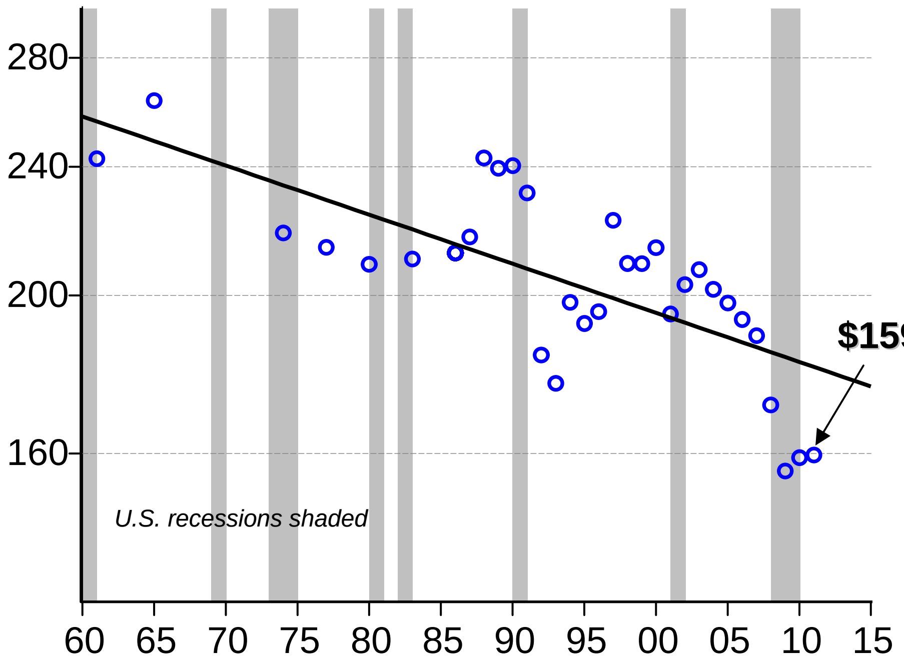


Real per visitor expenditure (2011$)
1951-2011

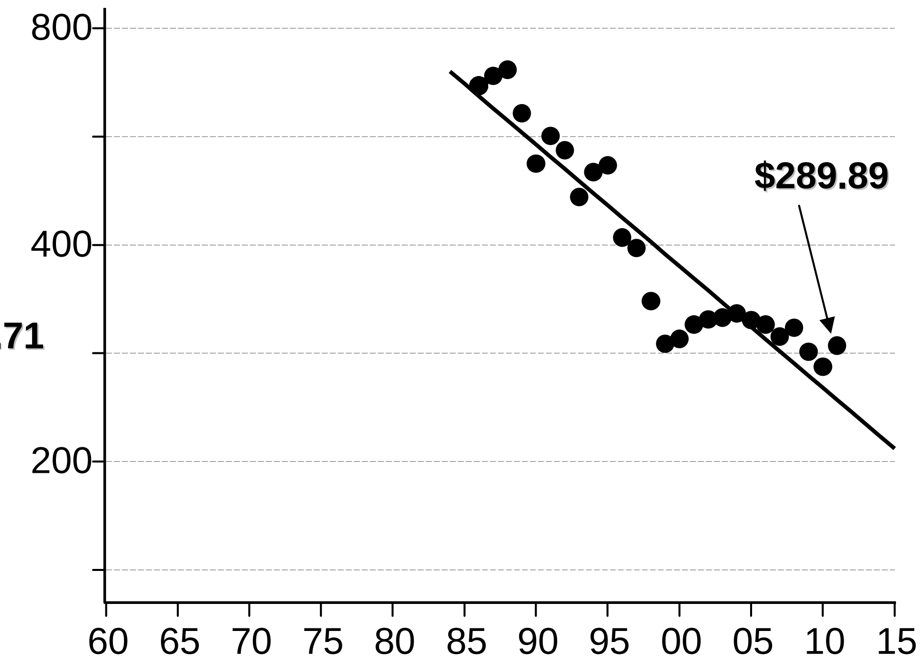
Sources: Andrew Kato and James Mak, "Technical progress in transport and the tourism area life cycle," *UHERO Working Paper No. 2010-13* (September 28, 2010) and HVB, Hawaii DBEDT, Hawaii Tourism Authority, U.S. BLS; deflation by TZE

Real average daily Hawaii visitor expenditure: they figured out how to do it cheaper—haven't you?

2011 dollars, log scales



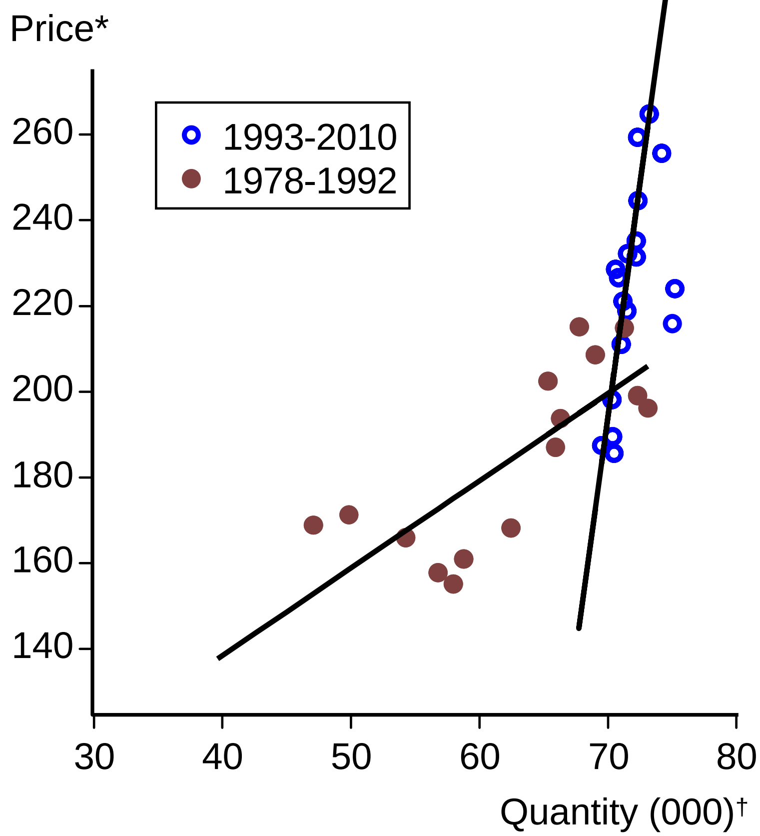
Mainlanders



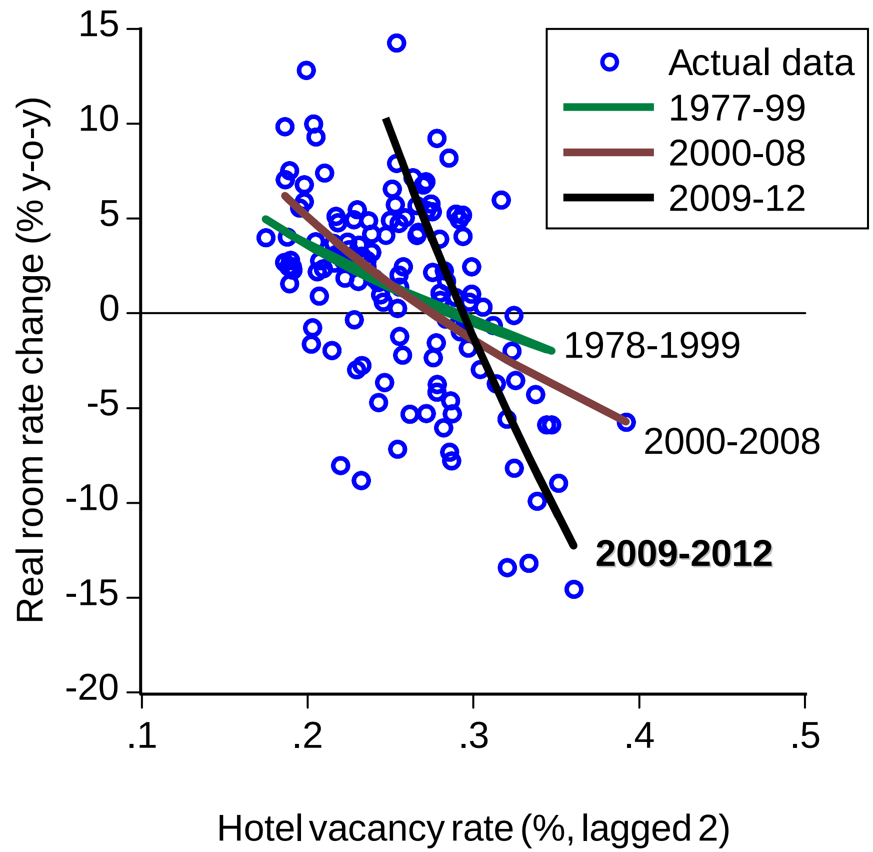
Japanese

Sources: Hawaii DBEDT *State of Hawaii Data Book* Table 7.23 (http://hawaii.gov/dbedt/info/economic/databook/2010-individual/07/072310.xls), Bureau of Labor Statistics; deflation calculations by TZE

Annual Hawaii real room rates and inventory: "room 'supply'"



Hotel room supply

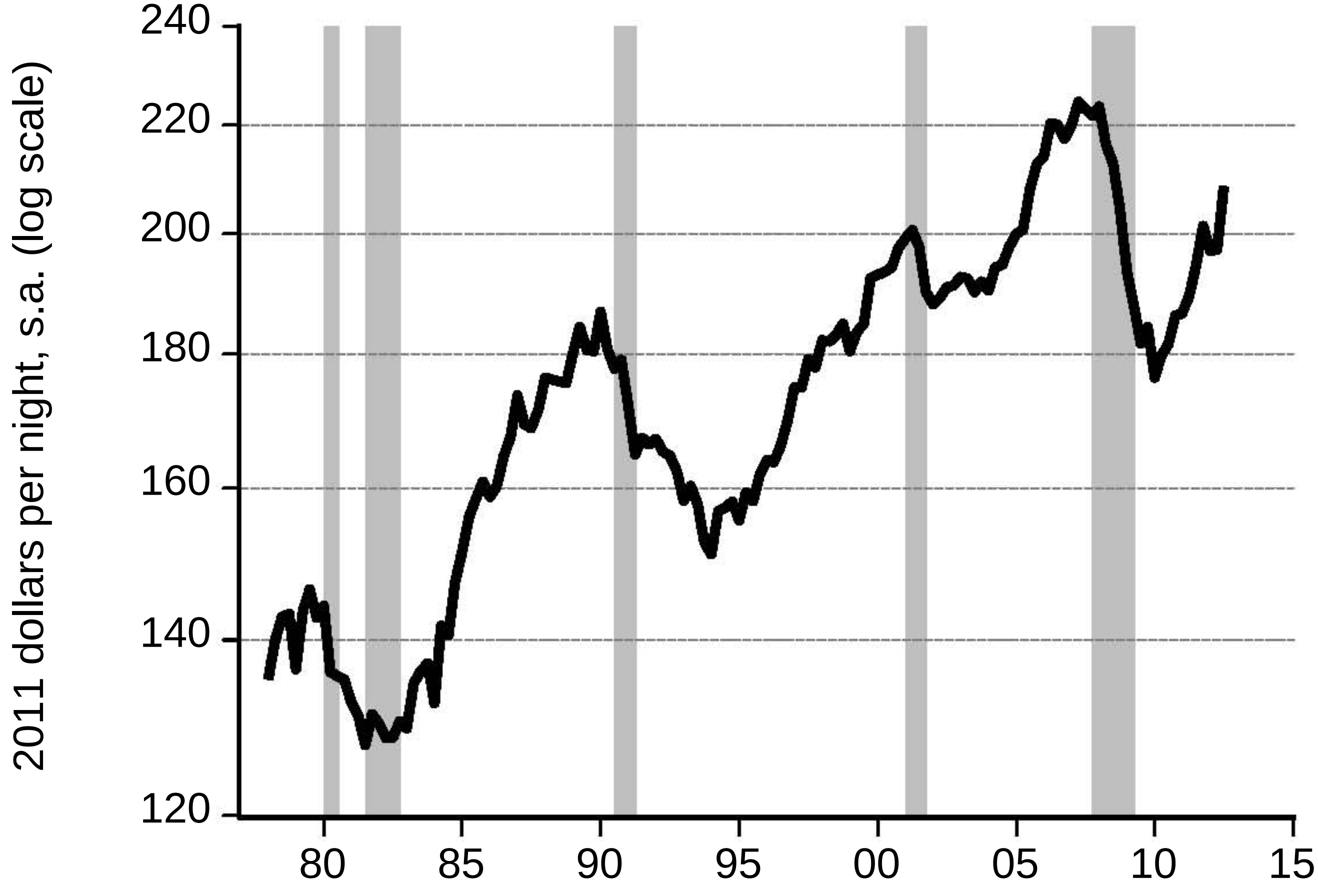


Elasticity

*2010$ per night †Visitor plant inventory (thousand rooms)

Sources: Hospitality Advisors, LLC, UHERO, BLS; deflation using Honolulu CPI-U by TZE

Real average daily hotel room rates rising on trend, while real total visitor expenditure has been falling



Sources: TZE data base draws from sources such as PKF Hawaii, Hospitality Advisors, LLC, UHERO, BLS; deflation using Honolulu CPI-U

Mahalo!

Aloha!

Paul H. Brewbaker, Ph.D.
Principal, Economist
TZ Economics
606 Ululani St.
Kailua, Hawaii   96734-4430
paulbrewbaker@tzeconomics.com