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EXECUTIVE SUMMARY

The unemployment insurance (UI) is a joint federal-state program that provides workers with temporary and partial benefits during involuntary unemployment. Its primary purpose is to stabilize the economy during recessions by maintaining the purchasing power of unemployed workers. The U.S. Department of Labor oversees the overall UI program in the country, while each state administers its own program. Hawaii's UI program is administered by the Department of Labor and Industrial Relations (DLIR). The state collects unemployment taxes from liable employers and distributes benefit payments to eligible claimants.

Hawaii's UI fund balance increased to \$532 million at end of 2006 as compared to a little over \$200 million 10 years ago. This increase in the fund balance resulted from reductions in benefit payments due to low unemployment levels in recent years as well as some technical issues related to how payments to employers are set. In 2006, Hawaii's insured unemployment rate averaged 1.1 percent, the lowest since 1990 and in 2007 it is projected to be 1.2 percent. However, until this year increased fund balances have not resulted in lowered employer's tax contributions to the UI fund. Hawaii UI tax rates continue to be among the highest in the nation. In fact, high UI taxes are often attributed to making Hawaii one of the least business-friendly states in the U.S. This study was undertaken to better understand the UI system and to examine potential policies to reduce the payments by businesses and avoid building fund balances unnecessarily high, while maintaining the integrity of the fund.

Desiring to lower the UI tax burden on Hawaii's businesses, as well as to reduce the UI fund balance and allow businesses to spend the money rather than have it build up, several measures relating to the state UI law were considered both in the 2005 and 2006 legislative sessions. For example, a 2005 UI bill proposed to reduce the UI taxable wage base upon which employers are liable to pay UI taxes to the Federal minimum of \$7,000 per employee for 2006 and 2007. Although the measure failed to pass in 2005, it was introduced again in the 2006 session. The 2006 UI measure included a proposal to cut employee UI taxable wage base to \$7,000 for 2007 and 2008. Besides this temporary reduction in taxable base, the 2006 bill also included three measures that would increase benefits for workers who file for unemployment insurance. In 2007, several other new bills have been introduced to reduce the taxable wage base and make other technical changes to the calculation of payments.

Against this backdrop, using recent trends and future outlook of the state economy, DBEDT economists developed a model to analyze the impacts of the above measures on employers' tax payments and fund balances through 2012. The analysis also looked into other potential measures, including the lowering of the adequate reserve requirement under the current law.

The results showed that, under the current UI law, temporarily reducing employers' contributions through almost any means without decreasing benefit payments may result in some tax-savings to employers in the short-run, but depending on the magnitude of the decrease and employment conditions, it could potentially increase the tax burden in the longer run. Eventually, the fund balance can be diminished to the point that employers' contributions would have to be increased such that they would be higher than under status quo. As a result, total contributions over the period examined could actually be higher than those under the no-change scenario. Rather than a temporary tax holiday involving a sharp reduction in taxable wage base, a more permanent moderate 65–75 percent reduction in taxable wage base would be a much more effective option to lower the tax burden.

The only changes that appear to lower total employers' contributions over the five-year period is lowering the number of months of reserves needed (adequate reserves requirement) and reducing the number of years considered to calculate the highest benefits as a percent of total wages (highest benefit cost rate) experienced in past years. It should be noted, however, that even lowering the adequate reserves from the current 18 months to 12 months would result in tax saving for employers only for a few years. As soon as the reserves requirement is lowered, employers would immediately begin to pay less into the fund until the fund stabilizes at the 12 month adequate reserve level. Once the balance falls below the adequate reserve level, the employers' contributions to the fund would need to increase. It would also make sense, therefore, to consider this option at a time when both fund balances and unemployment levels are relatively high to put money back into the economy and provide relief to employers. Reducing the number of years used to calculate the highest cost period, on the other hand, could make the fund more responsive to improvements in the economic situation over the longer term. However, this could introduce more volatility in payments in poor economic times.

Introduction

According to a recent report, for FY 2007, Hawaii ranked 24th in the nation in terms of its overall business tax climate index.¹ Although the rank in FY 2007 is an improvement in the index from CY 2003 when Hawaii ranked 37th in the nation², it is puzzling that Hawaii did not improve even more dramatically given that Hawaii had one of the lowest unemployment rates in the nation for several years.

Unemployment insurance (UI) is one of the taxes most often cited by the business community as onerous. Indeed, Hawaii's unemployment insurance tax has been generally high compared to most other states. For example, in 2003, the average employer tax rate in Hawaii was 1.17 percent of total wages, the fifth highest among the 53 UI jurisdictions in the U.S.³ Thanks to very low unemployment rates, Hawaii's average employer tax rate was 0.82 percent in 2004 and 0.86 percent in 2005. However, this is still high compared to the national averages of 0.77 percent and 0.82 percent, respectively. In 2005, Hawaii's weekly unemployment insurance benefits averaged \$337, the second highest in the nation after Massachusetts (\$357).⁴

Because of low unemployment levels in Hawaii in recent years, fund balances of the state UI program have increased sharply. Barring unforeseen national or international events, this trend is expected to continue for at least the next few years. Fund balances have more than doubled from just over \$200 million in 1996–1997 to \$532 million in 2006.⁵ Hawaii's UI program is currently one of the most financially secure programs in the nation. Despite the global external shocks and a national recession during 2000–2005, the reserves ratio (i.e., UI reserves as a percentage of total wages) remained stable in Hawaii, ranging from 2.4 percent in 2000 to 3.0 percent in 2005, while this ratio for the U.S. decreased from 1.5 percent to 0.7 percent between 2000 and 2005.

¹ Curtis S. Dubay and Chris Atkins, Background Paper, Tax Foundation, Number 52, October 2006.

² Scott Hodge, Scott Moody and Wendy Warcholik, Background Paper, Tax Foundation, Number 45, October 2004.

³ Since the Federal law defines the District of Columbia, Puerto Rico, and the Virgin Islands as states for the purposes of unemployment insurance, there are 53 UI jurisdictions in the country.

⁴ These figures are based on data obtained from the U.S. Department of Labor (Employment & Training Administration – ETA) Website at <http://www.workforcesecurity.doleta.gov/unemploy/hb394.asp>. When this report was prepared, 2005 was the latest year for which detailed UI data by state were available.

⁵ Hawaii Department of Labor and Industrial Relations, Annual Evaluation of the Hawaii Unemployment Compensation Fund, December 2006.

Recognizing the need for lowering the high UI tax burden on businesses, as well as reducing the UI fund balance to a desired level, several measures were considered both in the 2005 and 2006 legislative sessions. A 2005 UI bill proposed to reduce the UI taxable wage base upon which payments are made to the Federal minimum of \$7,000 per employee for 2006 and 2007, but the bill failed to pass. A 2006 UI bill included a proposal to cut taxes that businesses must pay into the state's UI fund, as well as several measures for increasing benefits for workers who file for unemployment insurance. For businesses, the measure included a temporary "tax holiday" for 2007 and 2008 that would require them to pay UI taxes only on the first \$7,000 of each employee's wages, rather than on the first \$34,000. For workers, the bill included three measures of permanently increasing unemployment benefits to them: (i) increasing the maximum duration they can receive benefits from 26 weeks to 30 weeks; (ii) raising the maximum amount of weekly unemployment benefits that they can get from 70 percent to 80 percent of their weekly wages; and (iii) increasing the size of unemployment benefits of part-time workers from \$50 to \$150 per week. The bill was passed by the legislature, but it was vetoed by the Governor. In 2007, a few new measures were introduced to lower the adequate reserve requirement and reduce the number of years required to estimate the highest cost rate. These legislative measures are among those analyzed in the report.

Purpose of the Study

Against the above background, the purpose of this report is to

- (i) analyze the financial health of the Hawaii UI program based on recent trends in benefit payments and tax collections,
- (ii) project fund balances through 2012 based on the current conditions and future outlook of the state economy, and
- (iii) examine the potential for lowering the UI taxes under the current the system, and determine impacts of some possible policy options.

Background

The Hawaii Employment Security Law (Hawaii Revised Statutes, Chapter 383) establishes the state's unemployment insurance (UI) fund program.⁶ The program was created as a joint Federal-state system during the Great Depression of the 1930s as part of the Social Security Act of 1935 (Public Law 74-271) and the Federal Unemployment Tax Act (FUTA) of 1939 (Public Law 76-379). The U.S. Department of Labor oversees the overall UI program in the country, but each state administers its own program. Hawaii's UI program, which is administered by the Department of Labor and Industrial Relations (DLIR), has been in operation since 1937.⁷ Because the Federal law defines the District of Columbia, Puerto Rico, and the Virgin Islands as states for the purposes of unemployment insurance, there are 53 state UI programs in the country.

The federal-state UI program provides workers with temporary and partial income insurance for up to 26 weeks against wage loss resulting from involuntary unemployment. Its primary purpose is to stabilize the economy during recessions by maintaining the purchasing power of the unemployed workers. The state UI programs are responsible for collecting unemployment taxes from liable employers and distributing benefit payments to qualified claimants.

Unemployment insurance contributions (taxes) are collected from employers and deposited into the state UI fund, maintained in the U.S. Treasury. The interest earned in the balance is also credited to the fund. The fund can only be used to pay unemployment insurance benefits or refund employers' overpayments. In addition to unemployment taxes collected by the state, employers are also required to pay the net Federal Unemployment Tax Act (FUTA) tax of 0.8 percent of the first \$7,000 wages paid annually to each covered worker.⁸ The FUTA tax revenues are used for the purpose of Federal grants to states for the administration of the state

⁶ HRS Chapter 383 is available at the DLIR Website at <http://hawaii.gov/labor/law/hrs/383/383.htm>.

⁷ See Appendices in the 2005 State of Hawaii Unemployment Insurance Fact Book for a detailed history of the Hawaii's UI program.

⁸ Technically, the Federal government imposes a 6.2 percent gross tax rate on the first \$7,000 of wages per year per employee. However, employers receive a Federal tax credit of 5.4 percent (resulting in the effective Federal tax rate of 0.8 percent) if their state law meets certain requirements of the Federal laws. The 0.8 percent net tax rate includes a "permanent" portion of 0.6 percent and a "temporary" portion of 0.2 percent surtax imposed under the Unemployment Compensation Amendments of 1976, designed to replenish the Federal unemployment trust fund that lends money to state program that run short during periods of economic recession. The 6.2 percent Federal tax is scheduled to drop to 6.0 percent beginning with calendar year 2008, and the effective rate to 0.6 percent.

unemployment insurance (UI) systems and other employment-related programs, the Federal share of the Federal-state extended benefits program, and loans to states that have exhausted their reserves to cover benefits.

During economic downturns, we would expect benefit payments to increase sharply, resulting in the contraction of fund reserves. Without sufficient reserves, two potential problems can arise. First, UI taxes to employers would increase sharply to pay for the benefits to the increased number of unemployed workers during the economic downturn when employers could least afford to pay higher taxes. This can exacerbate the economic downturn and hamper recovery. Second, in the worst case scenario, the UI fund could become insolvent, forcing the state to borrow from the Federal government to pay benefits to unemployed workers. Repaying the loan amount and interest would require higher tax collections from the employers in future years.

State of the Economy and Its Outlook

The financial health of the UI fund depends largely on current and future employment conditions in the state. In this section, we examine recent trends in employment and related indicators, as well as provide their future outlook. Based on latest state, national and international economic data and their forecasts, this report assumes the continuation of healthy employment conditions in Hawaii for the next few years.

Hawaii has outperformed the overall U.S. economy in the aftermath of 9/11 in terms of employment growth. For example, during 2001–2006, seasonally adjusted unemployment rates averaged 3.6 percent for Hawaii, compared to 5.3 percent for the U.S. In contrast, 1995–2000 unemployment rates averaged 5.8 percent for Hawaii, compared to 4.8 percent for the U.S. (Figure 1). The insured unemployment also showed a similar pattern (Figure 2).⁹ During the 2001–2006 period, insured unemployment rates averaged 1.7 percent for Hawaii and 2.4 percent for the U.S, compared to 2.5 percent for Hawaii and 2.0 percent for the U.S. in the 1995–2000 period. Most recently, Hawaii’s insured unemployment rate was 1.2 percent in 2005 and 1.1 percent in 2006, compared with 2.3 percent and 1.9 percent for the U.S.

⁹ Note that the regular unemployment rate is computed as the ratio between the number of all unemployed people and total labor force in the economy, while the insured unemployment rate is the ratio of insured unemployed workers and total covered employment.

Figure 1. Total Unemployment Rate (as a Percentage of Total Labor Force)

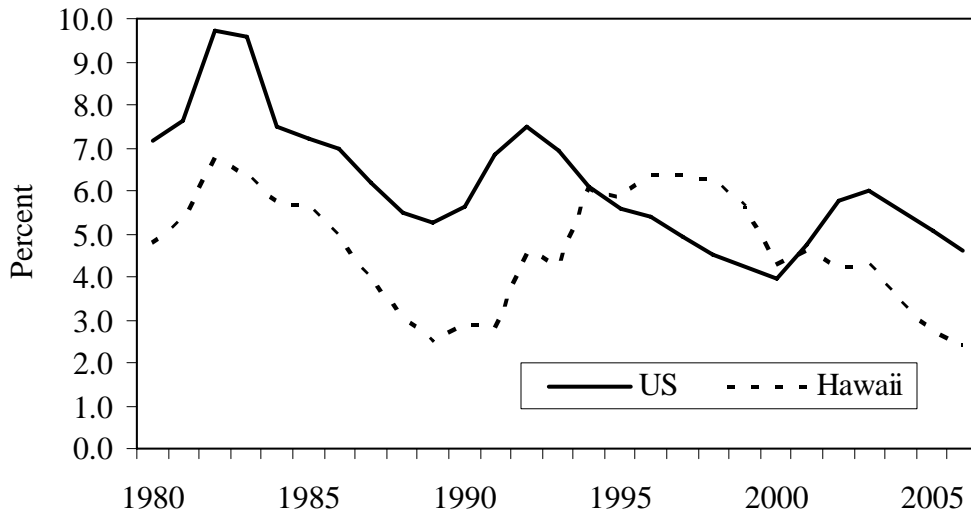
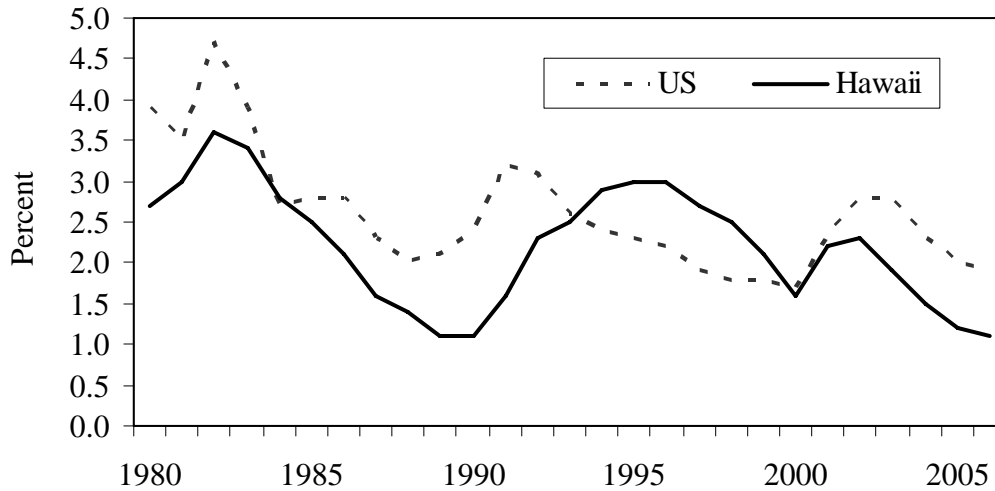


Figure 2. Insured Unemployment Rate (as a Percentage of Total Covered Employment)



The relationship between Hawaii and the U.S. in terms of unemployment was mirrored in total personal income, wage and GDP growth. During 2001-2006, real personal income increased 2.5 percent per annum in Hawaii, compared to 1.8 percent for the U.S. The corresponding income growth rates for the 1995-2000 period were 1.9 percent in Hawaii and 3.9 percent in the U.S. (Figure 3).

During 2001–2006, real wage and salary income grew at an annual average rate of 2.9 percent in Hawaii, more than twice the 1.4 percent rate for the U.S. During 1995–2000, real wage income rose 1.8 percent in Hawaii compared to 4.6 percent for the U.S (Figure 4).

Between 2001 and 2005, the average real wage rate increased 1.7 percent in Hawaii and 0.6 percent in the U.S. The corresponding figures for the 1995–2000 period were 1.4 percent for Hawaii and 2.3 percent for the U.S. (Figure 5).

Figure 3. Real Total Personal Income Growth

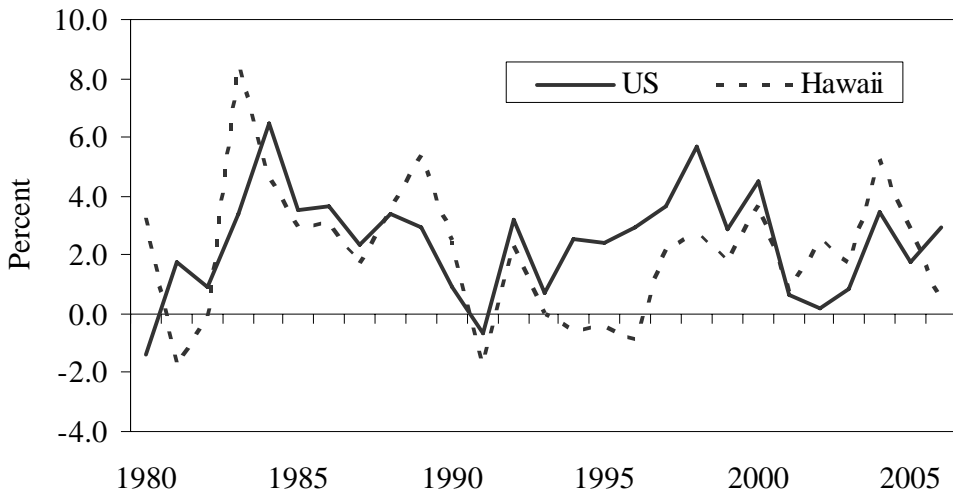


Figure 4. Real Wage and Salary Income Growth

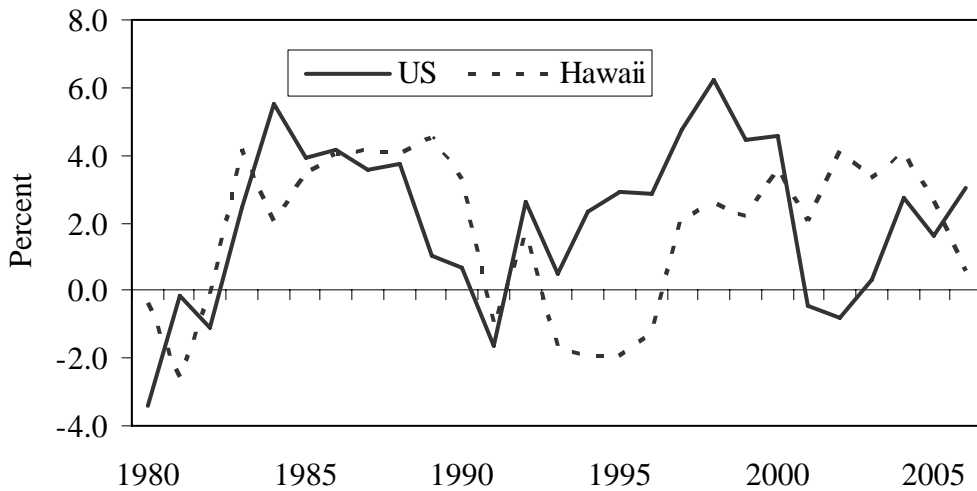


Figure 5. Real Annual Average Wage Growth

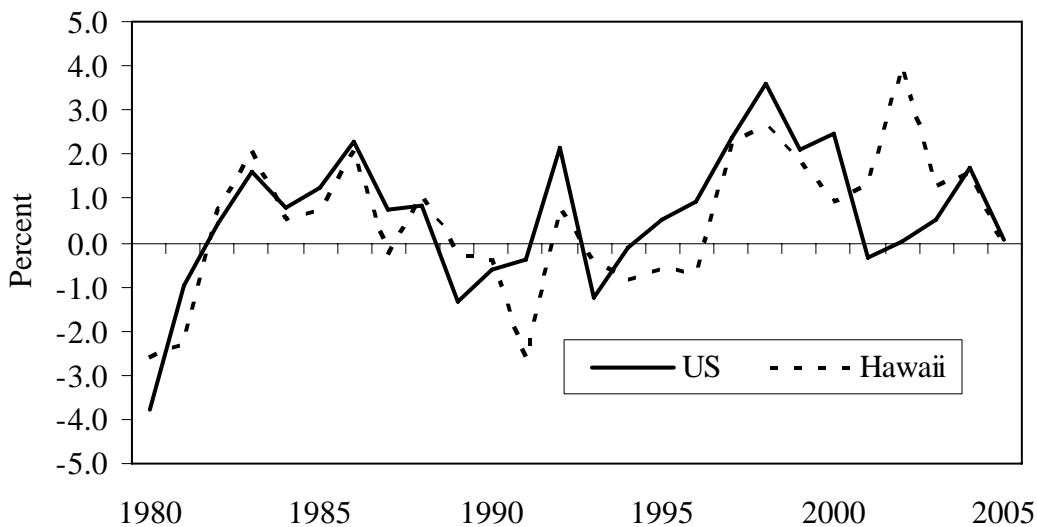
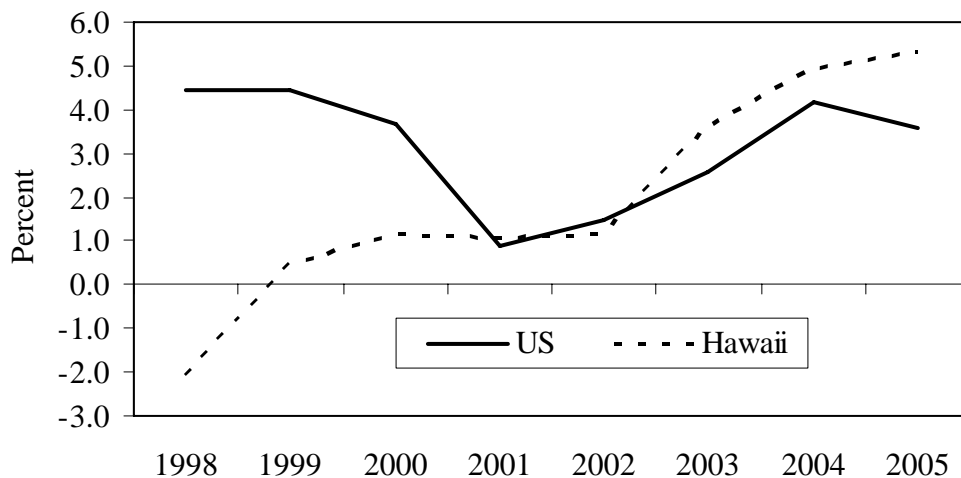


Figure 6. Real Gross Domestic Product (GDP) Growth



Similarly, in 2001–2005, real gross domestic product (GDP) (formerly called gross state product or GSP) grew at an annual rate of 3.7 percent in Hawaii compared to 2.9 percent for the U.S. During 1997–2000, Hawaii real GDP declined at annual rate of 0.2 percent, while for the U.S. it increased 4.2 percent¹⁰ (Figure 6).

¹⁰ Because of a discontinuity in data due to the adoption of a new methodology by BEA in estimating GDP in 1997 and thereafter, the 1997–2000 period was chosen instead of the 1995–2000 period for other indicators.

Total wage and salary jobs in the state grew 2.5 percent in 2006, following 3.1 percent job growth in 2005 and 2.8 percent growth in 2004. Hawaii job growth is expected to moderate to 1.8 percent in 2007, 1.5 percent in 2008, and to stabilize at annual growth of 1.2–1.3 percent thereafter. The Honolulu consumer price index (CPI), a measure of inflation, increased 5.9 percent in 2006, following a 3.8 percent increase in 2005. The Honolulu’s CPI is projected to increase 4.0 percent for 2007. Although the current economic momentum is likely to slow, the outlook for the next few years is also expected to be good. Both economic growth and price increases are expected to moderate in 2008 and beyond, as the economy approaches its long-term moderate growth path. Given these projections, the Hawaii insured unemployment rate (IUR) is expected to average 1.2 percent in 2007 and 1.5 percent in 2008 and then increase gradually to 1.8 percent by 2010 and remain unchanged through 2012.

A Review of Unemployment Insurance Program in Hawaii

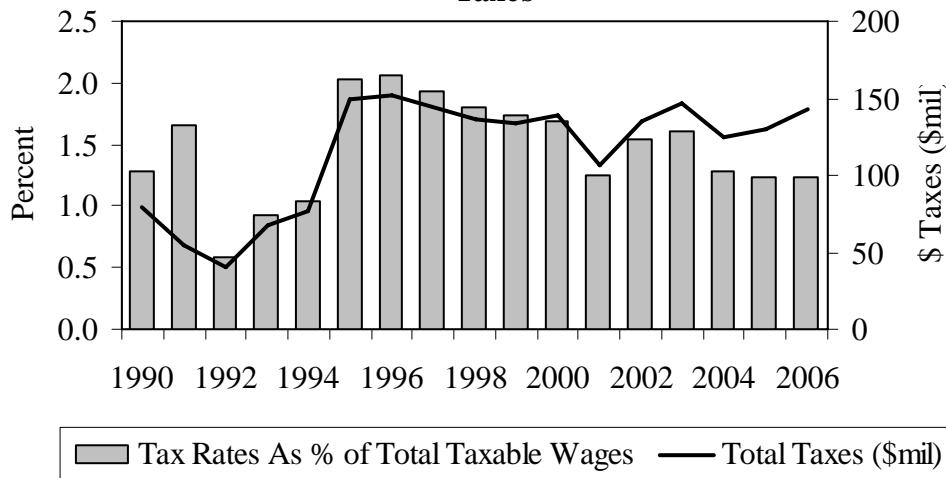
The UI tax structure in Hawaii has a number of progressive features to ensure that the UI system is adequately funded to pay current benefits, as well as to accumulate sufficient reserves to pay benefits in the event of a severe economic recession. Both benefit payments and taxable wages are linked to the level of average wages. Increases in average wages cause the average weekly benefit to increase because, under the current law, the maximum weekly benefit amount is set at 70 percent of the average weekly wage rate.¹¹ Similarly, the taxable wage base per employee is the average wage for covered employment during the four consecutive calendar quarters ending on June 30 of the preceding year. For example, from 1992 to 2006, in current dollar terms, the average weekly wages for covered employees increased 2.8 percent per annum, and average weekly UI benefits increased 3.0 percent, and there was a 2.9 percent annual increase of taxable wage base per employee.

During the calendar year 2006, excluding ex-service members and Federal employees, about 6,350 workers (or equivalently about 280,250 weeks) were estimated to have been compensated for unemployment insurance under Hawaii’s regular UI program, totaling about \$91 million. Weekly benefits under the state UI program averaged \$349 (\$357 including Federal employees and ex-service members) and average benefit duration was estimated to be 13.3 weeks.

¹¹ One of the measures considered in the 2007 legislative session proposed to set the maximum weekly benefit at 80 percent of the average weekly wage.

As mentioned above, employers' contributions are used to finance the Hawaii's UI fund, as is the case in most other states.¹² Employers' contributions to the state UI fund totaled \$142 million in 2006. Total annual contributions have exceeded \$100 million in each year since 1995, averaging about \$137 million. In 2006, total employers' contributions to the UI fund amounted to 1.2 percent of total taxable wages (Figure 7). As will be discussed in the next section this rate was among the lowest in the nation. However, as a proportion of total covered wages, employers' contributions in Hawaii are higher than most states.

Figure 7. Taxes as a Percentage of Taxable Wages and Total Taxes



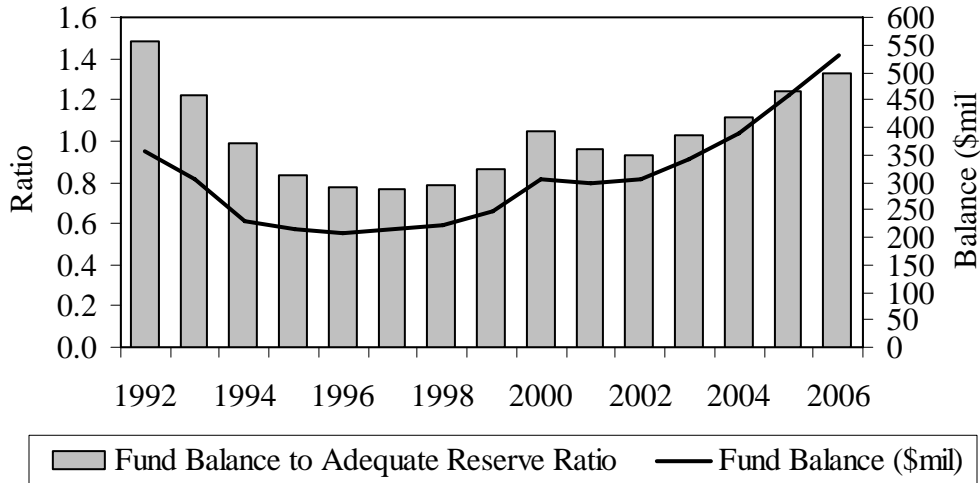
Status of the UI Fund

Hawaii regular UI fund had a balance of \$532 million at the end of 2006, up 156 percent from a balance of \$208 million in 1996, which was the lowest balance since the implementation of the current UI tax schedule in 1992 (Figure 8). Assuming DBEDT's latest employment and inflation forecasts and no changes in the state UI tax structure, the balance is estimated to reach about \$550 million by the end of 2008 and decline slightly to around \$515 million by 2012.

¹² Three states, namely Alaska, New Jersey and Pennsylvania, also collect contributions from employees.

Despite the low unemployment levels in Hawaii in recent years, a high “adequate reserve requirement” that increases in proportion to total wages, has prevented higher fund balances from translating into lower UI tax rates to employers.¹³

Figure 8. Fund Balance to Adequate Reserve Ratio and Fund Balance



Rate of Taxation

Determination of the UI tax rate is a very complex process, dependent largely on two basic ratios: (i) the ratio of the current reserve to the adequate reserve (UI fund balance as of November 30 of calendar year immediately preceding the rate year) and (ii) a ratio based on an individual employer’s experience rating (EER). First, the ratio of the current reserve to the adequate reserve measures the overall financial status of the UI fund. The higher this ratio, the lower will be the overall tax rate in effect. The ratio determines which of the eight contribution rate schedules applies in any given year. Second, within each contribution schedule, the individual EER determines how much each employer will pay each year. The contribution rate for each employer depends on its own reserve ratio.

Depending on the status of the fund, as determined by the ratio of total current reserves to the adequate reserves, one of eight contribution rate schedules (A through H) currently exist in

¹³ The current law requires that at any given point in time the UI fund have adequate reserves to cover the benefit payments for at least 18 months in the event of the most severe economic recession experienced within the last 10 years. The formula used to compute the adequate reserve that the fund is required to maintain is presented in Appendix A.

Hawaii, from a schedule of the lowest contribution rates (Schedule A) to a schedule of the highest contribution rates (Schedule H).¹⁴ For example, Schedule A comes into effect when the current reserves to adequate reserves ratio is more than 1.69, Schedule B for 1.30 to 1.69, Schedule C for 1.0 to 1.29, Schedule D for 0.80 to 0.99, and Schedule E for 0.60 to 0.79. (Appendix B).

Since the implementation of the current contribution rate schedule in 1992, Schedule A has been in effect only once (1992), Schedule B three times (1993, 1994, and 2007), Schedule C five times (2001, 2002, 2004, 2005 and 2006), and Schedule D seven times (all remaining years).¹⁵ The average employer tax rates (as a percentage of taxable wages) varied from a low of 0.6 percent in 1992 to a high of 2.2 percent in 1995. Schedules A and B produce an average employer tax rate of less than 1 percent, Schedule C between 1.1 - 1.3 percent, and Schedules D and E between 1.7 - 2.2 percent.

A number of factors determine the level of UI adequate reserve. Under the current law, the adequate reserve is meant to cover 150 percent of benefit payments that produced the highest benefit cost rate (simply called the “high cost rate”) in the past ten years. In other words, the reserves should be adequate to cover benefit payments for a period of 18 months in case of the highest unemployment level of the last 10 years. The highest benefit cost rate of 1.78 percent was set in 1997, and has been used through 2006. This rate will continue to drop over the next few years as the ten year period moves from the very slow growth in the 1990s to the stronger growth in the next decade.¹⁶ The high cost ratio from 1997 has kept the reserve requirement high and employers’ tax payments also high despite very low unemployment for several years.

Within each of the eight schedules, a set of tax rates corresponding to different employer reserve ratios is known as a contribution rate schedules table. An individual employer’s experience rating (EER) determines its annual UI tax contribution rate. The EER is measured by

¹⁴ This eight-tiered contribution rate schedule has been in effect since 1992. From 1979 through 1991, a fund solvency rate schedule was used. For a detailed description, *see* HRS §383-68 Contribution rate schedules; fund solvency rate schedule; rates based on experience. Appendix A explains computation of employer reserve ratio and determination of tax schedule, while Appendix B shows eight-tiered contributions rate schedules as well as the current to adequate reserve ratio corresponding to each tax schedule.

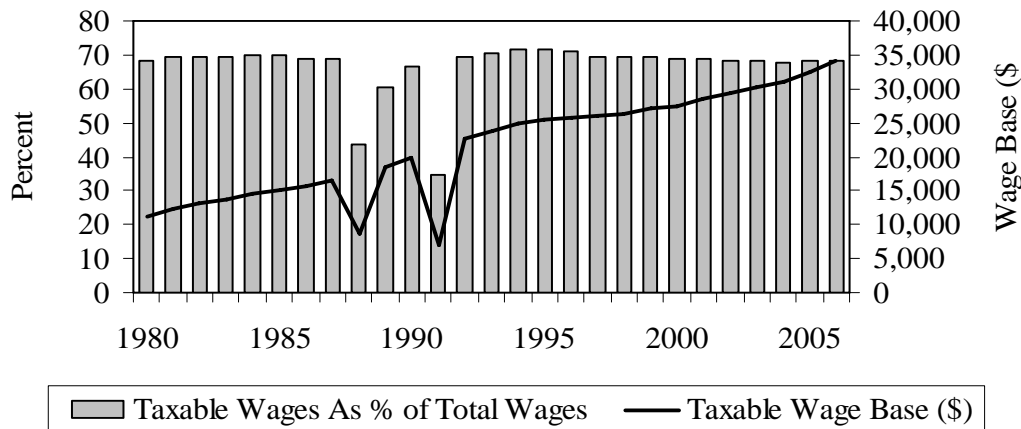
¹⁵ For 2002, Schedule C remained in effect due to special legislation in response to 9/11 attacks, although the current to adequate reserve ratio implied Schedule D.

¹⁶ The high cost rate of 1.78 percent that took effect in 1997 continued all the way through 2006 before it has been replaced by 1.67 percent in 2007. It will be 1.46 percent for 2008, followed by 1.44 percent for 2009-2012.

the employer “reserve ratio,” which is calculated as the amount of contributions paid by the employer less all benefits charged to the employer (employer reserve balance), divided by the average payroll over the last three consecutive calendar years. The higher the employer reserve ratio, the lower will be its tax rate and vice versa. DLIR maintains a separate UI account for each participating employer in the state. Based on the end-of-2005 reserve ratios, employer contribution rates for 2007 (Schedule B) varied from 0.0 percent for those with the reserve ratio of 0.13 and higher to as much as 5.4 percent for those with the reserve ratio of -2.0 and lower. In 2005, 72.7 percent of employers had a positive reserve ratio, 6.0 percent had a negative reserve ratio, and new, reactive and delinquent employers accounted for the rest.

Once the employer’s contribution rate is calculated, DLIR applies it to total annual unemployment insurance taxable wages for each employee. Hawaii UI law caps wages subject to the UI tax at the average annual wage for the state (\$32,300 in 2005, \$34,000 in 2006, and \$35,300 in 2007). In aggregate, this is called the “taxable wage base”. The “dips” in taxable wages in 1988 and 1991 reflect temporary legislative changes in those years to lower the maximum wages subject to the UI tax (Figure 9).¹⁷

Figure 9. Taxable Wages as a Percentage of Total Wages and Taxable Wage Base



¹⁷ The taxable wage base was reduced from \$16,500 in 1987 to \$8,700 in 1988 and it was up again to \$18,600 in 1989. Similarly, it was also reduced to the federal minimum of \$7,000 in 1991 from \$19,900 the year before and increased again to \$22,700 the next year.

Interest

By Federal law, each state must hold its UI fund balances in the U.S. Treasury. These balances earn interest and are credited to the state's fund. Annually, these interest earnings account for 6–8 percent of total fund balances. When a state depletes its fund, it may borrow from the Federal government, but it must pay interest on its borrowings. Since 1970, and except for 1976, Hawaii UI fund balances have never been negative and the state has not faced a situation of having to borrow Federal funds.¹⁸

Benefit Payments

The state is responsible for funding all benefit payments under its regular UI program (i.e., that pays up to 26 weeks of benefits to eligible unemployed workers) and half of the payments under the Federal-state extended benefits program.¹⁹

Annual benefit payments under the regular state UI program totaled \$82 million in 2005 and nearly \$91 million in 2006. Total benefit payments for the regular UI program are estimated to be around \$105 million in 2007. The total benefit payments of all UI programs in Hawaii (i.e., including unemployment compensation for Federal civilian employees (UCFE) and for ex-service members (UCX), both administered by the federal government) were \$98 million in 2005 and \$107 million in 2006. During 2003–2006, total benefits paid under the regular state UI program accounted for about 85 percent of total benefit payments from all UI programs in Hawaii.

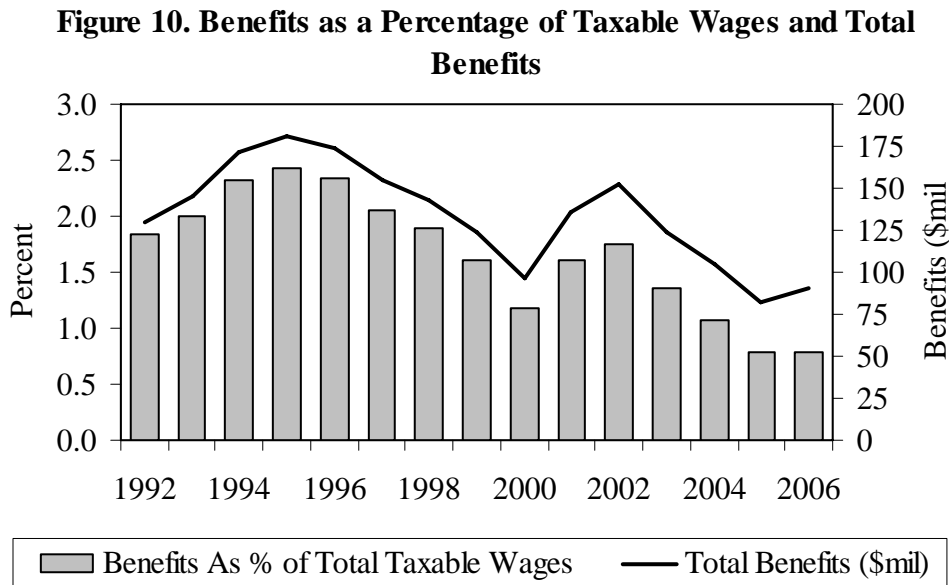
With the exception of 2000, 2005 and 2006, annual benefit payments under the Hawaii regular UI program have totaled more than \$100 million for each year since 1992, averaging

¹⁸ In response to increases in oil prices that resulted in a severe recession of the U.S. economy, Hawaii's unemployment level started to rise in 1974, sending the insured unemployment rate to an all-time peak of 6.3 percent in 1976. Unemployment benefit payouts increased and the fund balance decreased drastically during the 1974–1976 period. The fund was completely depleted in 1976, forcing the state to borrow \$22.5 million in Federal loans to continue the benefit payments.

¹⁹ Since 1970, federal law has provided for the extension of the duration of benefits in periods of high and rising unemployment. When the insured unemployment rate reaches certain specific levels, states must extend the benefit duration by 50 percent or up to a combined overall maximum of 39 weeks.

about \$134 million.²⁰ For the 2000–2005 period, the share of total regular UI benefit payments in total wages in Hawaii varied from 0.5 percent in 2005 to 1.2 percent in 2002, with an average of 0.9 percent for the period. For the U.S., the corresponding value varied from 0.5 percent in 2000 to 1.1 percent in 2002, with an average of 0.8 percent over the 2000–2005 period. Similarly, the share of total regular benefits in total taxable wages in Hawaii ranged from 0.8 percent in 2005 to 1.8 percent in 2002, with an average of 1.3 percent for the 2000–2005 period (see Figure 10). The corresponding value for the U.S. ranged from 1.7 percent in 2000 to 3.6 percent in 2002, with an average of 2.8 percent during 2000–2005.

Benefit payments can be summarized in terms of two “generosity” indicators – the *replacement* rate and the *reciency* rate. The replacement rate is the ratio of average weekly benefits to average weekly wages, while the reciency rate is the ratio of UI benefit recipients to total covered unemployment.²¹



The *replacement* rate shows how close benefits paid are to average wages paid. During 1980–2005, the *replacement* rate for Hawaii ranged from a low of 42.6 percent in 1980 to a high of 52.8 percent in 1995, with an average rate of 47.7 percent for the period. During 2000–2005,

²⁰ Employment conditions were quite favorable in 2000 and the insured unemployment rate averaged 1.7 percent, 0.5 percentage points less than the year before. Total unemployment benefits were \$97 million in 2000 and \$82 million in 2005.

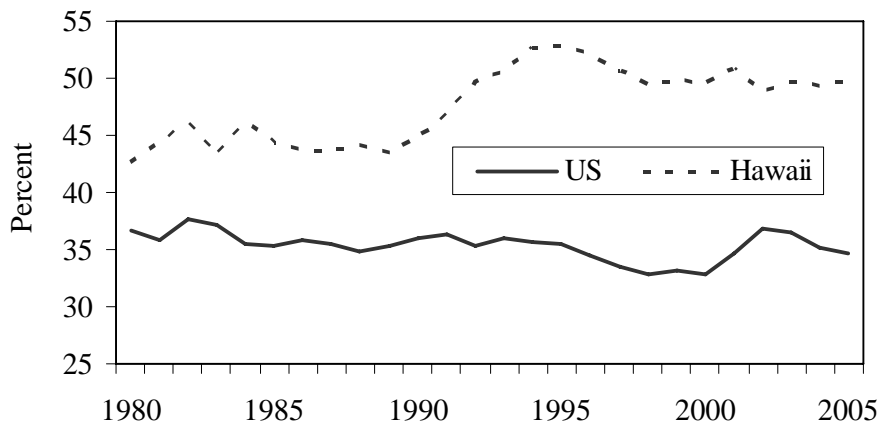
²¹ Alternatively, the reciency rate is also expressed as the ratio of UI beneficiaries to total unemployed.

it averaged about 49.7 percent.²² In other words, on average, UI claimants in Hawaii were compensated nearly half of their wage earnings, about 10–15 percent higher than the U.S. average (see Figure 11). In terms of value, the 2000–2005 average weekly unemployment payment was \$308 for Hawaii, compared to the national average of \$251 a week.

The *reciency* rate measures the percentage of those who get paid as compared to those all unemployed who are insured. A 100 percentage rate means that everyone who was unemployed received benefits. Between 1980 and 2005, the Hawaii *reciency* rate (weeks compensated to total insured unemployed weeks) varied from 80.8 percent in 1983 to 96.8 percent in 1992, producing an average of 89.2 percent for the period. For the 2000–2005 period, it averaged 87.2 percent, suggesting that nearly 13 percent of claimants under the Hawaii state UI program did not qualify for benefits. The 2000–2005 average *reciency* rate was slightly higher for the U.S. at 87.9 percent (Figure 12)

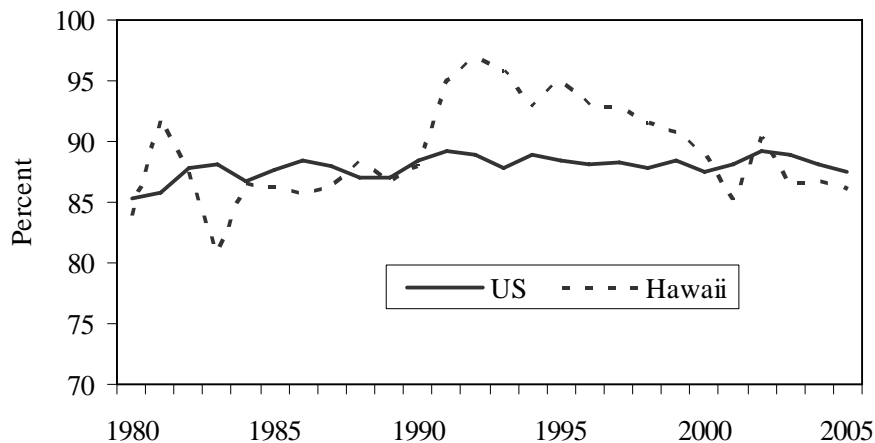
As the ratio of weeks compensated to total weeks unemployed (including those who are not insured), the *reciency* rate for Hawaii ranged from a low of 30.3 percent in 2005 to 48.1 percent in 1991, with the average of 38.5 percent for the 1980–2005 period. The corresponding figure for the U.S. was 31.2 percent. However, for the more recent period (2000–2005), the Hawaii average was much closer to the national average (35.9 vs. 34.6 percent).

Figure 11. Average Weekly Benefits as a Percentage of Average Weekly Wages (*Replacement Rate*)



²² This includes Federal employees and ex-service members. Excluding them (i.e. state UI program only), the replacement rate averaged 48.1 percent for the 2001–2005 period.

Figure 12. Weeks Compensated as a Percentage of Weeks Insured Unemployed (*Reciency Rate*)



Besides the *replacement* and *reciency* rates, the average benefit duration is another measure to summarize benefit payments. For 1980–2005, average benefit duration in Hawaii varied from 11.4 weeks in 1990 to 19.2 weeks in 2002²³, averaging 15 weeks for the period. The average duration for the U.S. was 14.9 weeks for the same period. However, on average, the benefit duration has been more stable for the U.S. than for Hawaii.

Hawaii Compared to the U.S.²⁴

Based on the data presented in the previous section Hawaii stands out quite prominently in the nation with respect to several factors related to the UI system and its financial measures. Hawaii has one of the highest unemployment insurance tax rates and weekly benefit rates in the nation. For 2007 tax year, Hawaii had the highest unemployment insurance taxable wage base of \$35,300 per employee, compared to the national average of \$13,836.²⁵ The share of total UI

²³ The high average duration in 2002 was due to federally funded temporary extended unemployment compensation (TEUC) program that provided an additional 13 weeks of benefits, as part of the economic recovery from a national recession following the attacks of September 11, 2001.

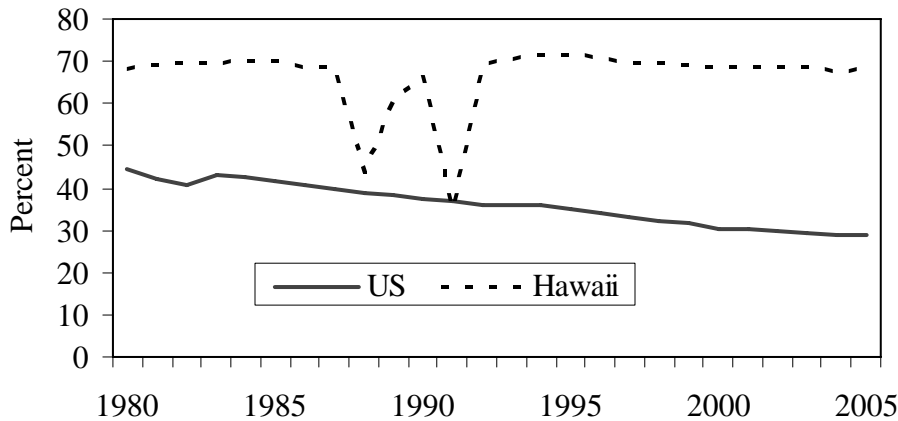
²⁴ Figures used in this discussion are based on the 2005 data (latest year for which these data are available for comparison) data obtained from the U.S. Department of Labor (Employment & Training Administration – ETA) Website (<http://www.workforcesecurity.doleta.gov/unemploy/hb394.asp>). Some of these figures may be slightly different from those published by the Hawaii DLIR.

²⁵ The taxable wage base is the maximum amount of a covered employee's wages during a calendar year upon which State unemployment insurance taxes are assessed in accordance with the State law in effect at the end of the year. or the U.S. the taxable wage base is \$7,000 per employee on which Federal taxes are assessed. In 2005, the federal minimum was also the taxable wage base for collecting the state UI taxes in 12 of the 53 UI programs.

taxable wages in total wages was 68.2 percent in Hawaii, also the highest in the U.S. (Figure 13). Including Federal employees and ex-service members, as a percent of average weekly wages, Hawaii had the highest weekly unemployment benefit in 2005 (49.8 percent for Hawaii vs. 34.6 percent for the U.S.) (see Figure 11 above). Appendix C compares Hawaii and the U.S. in terms of key UI indicators based on the 2005 data from the U.S. Department of Labor Web site.²⁶

In 2005, the average employer tax rate in Hawaii was 0.86 percent of total wages, an improvement from 1.17 percent in 2003, but still higher than the national average of 0.82 percent. In terms of total contributions as percent of total wages, Hawaii's ranking improved from the fifth highest in the nation in 2003 to the 17th place in 2005. Similarly, in 2005, Hawaii ranked the second highest in terms of average weekly unemployment payment of \$337, only after Massachusetts (\$357).

Figure 13. Taxable Wages as a Percentage of Total Wages



Hawaii ranked one of the best in the nation with respect to some other indicators for which a lower value is better. For example, in 2005, Hawaii ranked the forty-eighth in terms of the number of claimants exhausting payments to the total number of first payments, suggesting that the period from being unemployed to getting another job was relatively shorter for workers in Hawaii than the nation as a whole. The ratio of exhaustees to total first payments averaged about 35 percent both in Hawaii and the U.S. in 1992–1999, as compared to about 27 percent in Hawaii and about 38 percent for the U.S. during 2000–2005. Hawaii ranked forty-ninth in terms of insured unemployment rate (i.e., the ratio of insured unemployed to total covered

²⁶ For comparison, also included in Appendix C are the rankings for 2003 and 2004.

employment). Both of these measures are reflective of better employment conditions in Hawaii compared to the overall U.S. Although these measures have little to do with the operation of the state UI system per se, improved employment conditions in recent years have significantly improved its financial health.

Several of the patterns mentioned above for 2005 also held fairly consistently in the past. Since 1980, and except for 1988, 1989 and 1991, the ratio of UI taxable wages to total wages in Hawaii has been more or less constant at 68-70 percent, while this ratio for the U.S. has continuously declined from more than 40 percent in the early 1980s to less than 30 percent in recent years (Figure 13). This means that employer UI tax burden has been high and fairly constant in Hawaii, while it has been low and declining for the U.S. This is also reflective of the fact that Hawaii's UI taxable wage base increases with average annual wage, while the tax base is fixed at the federal minimum of \$7,000 in 12 states in 2005.

Relative to total wages, U.S. had higher UI tax rates than Hawaii during the most of late 1980s and early 1990s, while Hawaii had higher rates during early 1980s and in all years since 1995. In terms of total wages, Hawaii UI tax rates have been 1.5-2 times higher than the U.S. rates since 1995. However, we get a very different picture when the tax rates are defined in terms of total taxable wages, with U.S. rates exceeding Hawaii rates in each period. During 1984-1994, the U.S. employer tax rates relative to taxable wages were 1.5-2.5 times higher than the Hawaii rates (Figures 14 and 15).

Figure 14. Average Employer Tax Rate (as a Percentage of Total Wages)

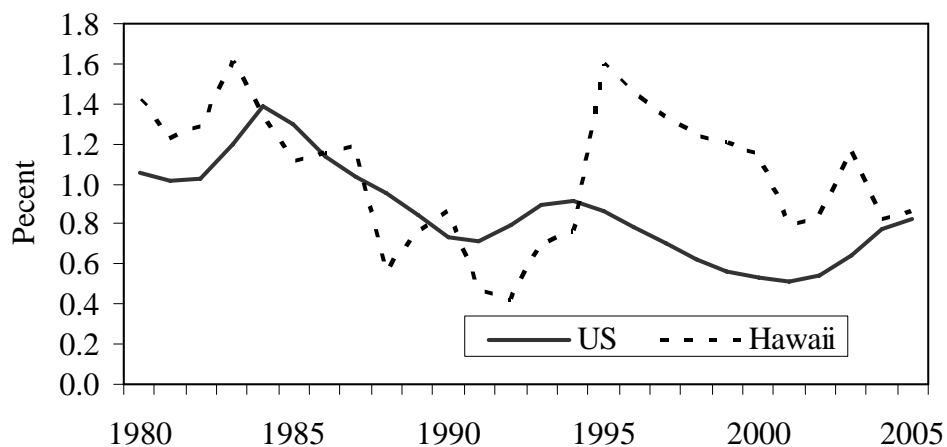


Figure 15. Average Employer Tax Rate (as a Percentage of Taxable Wages)

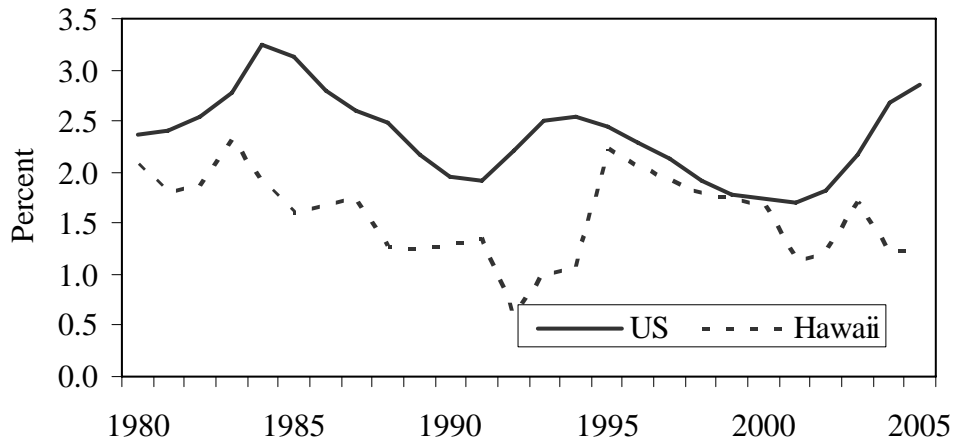
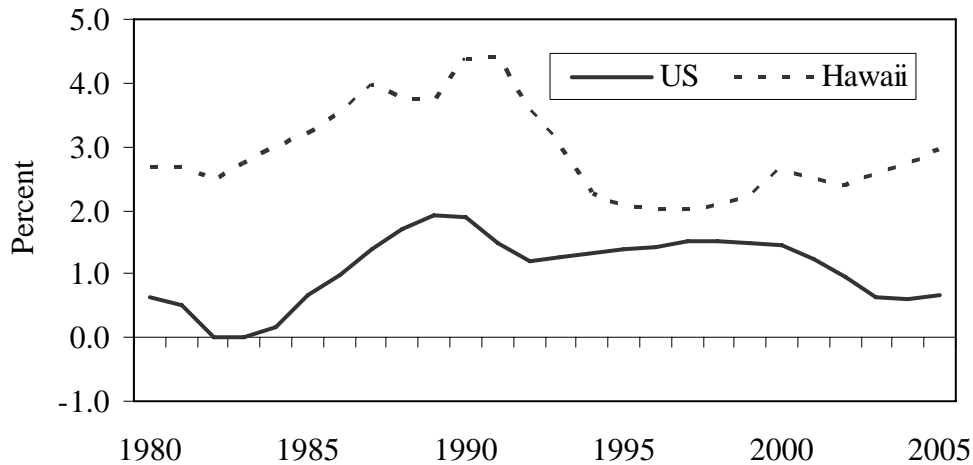


Figure 16. Reserve Ratio (as a Percentage of Total Wages)



The ratio of UI fund reserves to total wages have been higher in Hawaii, compared to the nation in all years since 1980. The gap between Hawaii and U.S. UI fund reserves to total wages ratio was narrowing down during the 1990s when Hawaii's economy was lagging behind the U.S., but it is widening again in recent years, thanks to a better economic performance of Hawaii compared to the U.S. (Figure 16). During bad economic times total UI benefit payments would increase and hence total fund reserves would decrease. It would be opposite during good times.

The total number of weeks compensated relative to total insured weeks unemployed also showed a notable difference between Hawaii and the U.S. Compared to the U.S. average, the

Hawaii ratio of weeks compensated to insured weeks unemployed was lower in most of the 1980s and higher in most of the 1990s (see Figure 12 above), suggesting that perhaps higher proportions of unemployed workers would file unemployment claims during economic downturns as it would get more difficult and take longer to find another job, compared to the period when the economy is doing well. In 2005, Hawaii had the lower ratio than the U.S. (86.0 vs. 87.6 percent).

Analyzing UI Policy Options in Hawaii ²⁷

One obvious policy question is: Are there options available to the State to lower UI taxes without jeopardizing the financial health of the UI fund and if so, which option is the best one? In order to find answers to these and other related policy questions relating to UI taxes, a mathematical model was developed to analyze the Hawaii UI program. The model is capable of predicting future trends for important UI variables under different economic and policy scenarios, including total tax collections, benefit payments, and fund balances.

Recent trends in the various UI variables and latest prospects for Hawaii employment and wage outlook form the basis for parameters and input variables involved in the model. Various scenarios that were analyzed are provided in Appendix D. The data and model parameters are provided in Appendixes E through G. The assumptions on growth prospects for the key economic indicators, including employment, inflation and high cost rates are presented in Appendix H. The model can yield a series of important UI variables for each future year. In this report, impacts are simulated through year 2012 under different policy options, but the model can easily be extended beyond 2012. The key simulated variables include the levels of UI tax collections, benefit payments, and fund balances. Also predicted by the model are the levels of current reserves and adequate reserves, the ratio of which forms the basis of selecting one of the eight UI tax contribution rate schedules for each year.

The model is used to project UI tax collections, benefit payments and total fund balances for 2007 through 2012 under several different scenarios. The first scenario, *Status Quo*, is the

²⁷ There exist a large number of research and policy studies on unemployment insurance. See Unemployment Insurance Occasional Paper (No. 99-3), *Unemployment Insurance Research: An Annotated Bibliography*, U.S. Department of Labor, Employment and Training Administration, 1999. This is also available online at <http://wdr.doleta.gov/owsdrr/99-3/99-3.pdf>. Recently, Wayne Vroman of the Urban Institute has also analyzed unemployment insurance systems in several states in the U.S and most of those reports are available at the Urban Institute Website <http://www.urban.org>

projection of fund variables with no changes in the existing UI law until 2012. Under *Status Quo*, the results are primarily driven by assumptions about employment and wage growth. As discussed in the introduction, employment growth is expected to be fairly robust for next 4-5 years, with the insured unemployment rates (IURs) estimated to be around 1.2 percent in 2007 and gradually rising to 1.8 percent by 2010. However, in order to better assess the responsiveness of different policy options to varying employment conditions, each scenario is also evaluated against both more optimistic and more pessimistic employment prospects than the most likely scenarios. As shown in Appendix G, the projected IURs under different employment prospects are lower than those observed during most of the 1990s. During the 1992-1999 period, Hawaii IURs averaged 2.8 percent. Besides providing useful pieces of information on key indicators of the UI program with no changes in the current law, the results from the *Status Quo* scenario would also serve as a baseline for comparing the outcomes of different policy scenarios.

The second scenario (*Scenario 1*) examines the impact of temporarily lowering the annual UI taxable wage base to the Federal minimum of \$7,000 per employee for 2008 and 2009. Because of a large drop in the fund balance due to sharp declines in contributions to the fund that this would entail, the taxable wage base will revert back to the usual wage base in 2010. The next two scenarios also relate to the impact of a temporary reduction in taxable wage base. In *Scenario 2*, the taxable wage base is capped for 2008 and 2009 at \$13,800, the average taxable wage base for the U.S. for 2007, while in *Scenario 3*, the annual taxable wage base per employee is capped at 65 percent of 2007 Hawaii wage base in 2008 and 2009 and at 75 percent thereafter. These options of lowering taxable wage base are selected mainly because they were the subject of discussion in both 2005 and 2006 legislative sessions.

Scenarios 4-6 relate to the impacts of increasing UI benefits to unemployed workers. *Scenario 4* examines the impact of increasing the weekly UI benefit of part-time employees from \$50 to \$150 starting from 2008. The effect of increasing the maximum weekly UI benefit that employees receive from 70 percent to 80 percent of their average weekly wage starting from 2008 is analyzed in *Scenario 5*. Similarly, *Scenario 6* evaluates the impact of increasing the maximum duration that workers can receive unemployment benefits from 26 weeks to 30 weeks from 2008. These measures were part of UI related legislative proposals in both 2006 and 2007.

The next two scenarios relate to possible options to lower the adequate reserve requirement, and hence to lower the fund balances. *Scenario 7* examines the impact of lowering the adequate reserve requirement to cover the benefit payments up to 12 months of the worst economic recession of the last 10 years, instead of the current 18 months, starting from tax year 2008, while *Scenario 8* measures the impact of reducing the duration used to calculate the highest benefit cost rate from the current 10 years to 6 years²⁸ Both of these measures were the subject of discussion in the 2007 legislative session.

The next several scenarios examine the impact of combining two or more measures considered in *Scenarios 1* to *8* above. Most of these combined measures were considered in both 2006 and 2007 legislative sessions.

Scenario 9 examines the impact of lowering the adequate reserve requirement to cover the benefit payments up to 12 months of the worst economic recession of the last 10 years, instead of 18 months starting from tax year 2008 (*Scenario 7*), plus capping the taxable wage base for 2008 and 2009 at \$13,800, the average taxable wage base for the U.S. in 2007 (*Scenario 2*). *Scenario 10* also examines the effect of lowering the adequate reserve requirement to 12 months from 2008 plus lowering the taxable wage base. Instead of capping it at the U.S. average only for 2008 and 2009 (*Scenario 2*), the wage base is capped at 65 percent of 2007 Hawaii wage base for 2008 and 2009 and at 75 percent thereafter (*Scenario 3*). Both *Scenario 9* and *Scenario 10* would lower the fund balance as well as employers' tax payments. Combining the two measures would also avoid sharp increases in employers' contributions in later years to replenish the depleted reserves due to decreased tax collections when taxable wage base is lowered.

Scenario 11 measures the impact of reducing the UI taxable base to \$13,800 for 2008 and 2009 (*Scenario 2*), plus using all three measures of increasing UI benefits to unemployed workers starting from 2008, i.e., increasing the weekly UI benefit of part-time employees from \$50 to \$150 (*Scenario 4*), increasing the maximum weekly UI benefit from 70 percent to 80

²⁸ Currently, adequate reserve is computed as 1.5 times the highest benefit cost rate occurring during the last 10 years, times total wages for last completed fiscal year ending June 30. Lowering adequate reserves so as to cover the benefit payments to 12 months would mean changing 1.5 in the above formula to 1.0. Similarly, lowering the duration to 6 years would make the high cost rate in the formula more responsive to employment conditions, but it could add volatility in fund balance and tax collections.

percent of their average weekly wages (*Scenario 5*), and increasing the maximum benefit duration from 26 weeks to 30 weeks (*Scenario 6*).

Scenario 12, which is a combination of *Scenario 4* and *Scenario 5*, evaluates the impacts of increasing weekly benefits of part-time UI employees from \$50 to \$150 plus increasing weekly maximum benefits from 70 percent to 80 percent of average weekly salary starting from 2008, while holding UI taxable wage base at 100 percent of average wage and adequate reserves at 18 months. The next three scenarios are extensions of *Scenario 12*.

Besides increasing weekly benefits to part-time UI employees to \$150 and weekly maximum benefits to 80 percent of average weekly salary from 2008, *Scenario 13* also lowers both UI taxable wage base to 65 percent of 2007 taxable wage for 2008 and 2009 and to 75 percent thereafter (*Scenario 3*) and adequate reserves to 12 months from 2008 (*Scenario 7*). *Scenario 14* is similar to *Scenario 13* except for that taxable wage base for 2008 and 2009 is capped at \$13,800 instead of 65 percent of the 2007 status quo taxable wage base and that adequate reserves requirement is lowered to 12 months from 2010 instead of 2008. Finally, *Scenario 15* is identical to *Scenario 14* with respect to taxable wage base and identical *Scenario 13* with respect to the adequate reserve requirement.

It should be noted that, as compared to *Status Quo*, *Scenarios 1–3* and *Scenarios 7–10*, would impact the fund balances only through impacts on tax collections, while *Scenario 4–6* and *Scenarios 11–15* would influence the balances through impacts on both tax collections and benefit payments. Changing unemployment assumptions would first impact the benefit payments and fund balances directly and then through tax collections indirectly.

Results

Key assumptions and analytical procedures involved in the model are described in Appendixes E through H. The key results obtained from *Status Quo* and *Scenarios 1–15* under the most likely (“normal” IUR) employment prospects are discussed in this section. Detailed results on projected annual tax collections, fund balances, benefit payments for *Status Quo* and the various scenarios under most likely (“normal IUR”) employment conditions are depicted in Appendix Table Ia (*Scenarios 1–8*) and Appendix Table Ib (*Scenarios 9–15*). The corresponding results for an optimistic (“low IUR”) employment outlook are shown in Appendix

Tables Ja and Jb and those for pessimistic (“high IUR”) employment expectations are presented in Appendixes Ka and Kb.

Status Quo

If no changes are made to the existing UI law and more likely forecasts for employment and wage growth used in the analysis hold, Hawaii employers would be paying about \$100–115 million in UI taxes during 2007–2010 (Schedule B) and about \$180–190 million during 2011–2012 (Schedule C). As a percentage of total UI taxable wages (total private wages), the average UI tax rate would be 0.8 percent (0.6 percent) during 2007–2010 and 1.2 percent (0.8 percent) during 2011–2012. In *Status Quo*, the fund balances would continue to grow, reaching a peak of about \$555 million by the end of 2007 and would start to decline to about \$480–485 million by 2010 and increase again to the \$515–\$520 million range by the end of 2012.

Scenario 1

Lowering the taxable wage base to \$7,000 for 2008 and 2009 would mean that Hawaii businesses would pay a total of \$105 million in UI taxes over the 2008–2009 period, about \$110 million less than what they would have paid under *Status Quo*. However, in 2010, total business tax payments would be \$174 million, an increase of \$59 million compared to *Status Quo* in that year. During 2011–2012, the tax payments under *Scenario 1* will be the same as for *Status Quo*. So, over the 2008–2012 period, the proposed policy would result in a net tax savings of only \$51 million. The proposed scenario would basically shift a portion of taxes from earlier years to later years. Thus, these results suggest that, under the current UI structure, lowering the taxable wage base for just 2–3 years would not benefit the employers in the longer-term as much as it would appear to benefit them in the shorter-term. In fact, as can be seen from the “high IUR” results in Appendix Ka, if the economy does not perform as expected and unemployment goes up unexpectedly, businesses could even get worse-off in the long-run from a temporary reduction in taxable wage base to \$7,000.

As a percentage of total wages, average tax rate to the employers under *Scenario 1* would be 0.2 percent in 2008, 0.3 percent in 2009, and it would jump to 0.8 percent in 2010 compared to 0.6 percent all those years under *Status Quo*. The tax rate for 2011–2012 would be 0.8 percent,

the same as the *Status Quo* rate. The contribution rate for 2009–2010 would have been Schedule B under *Status Quo*, but it would be Schedule C under *Scenario 1*. The contribution rate for 2008 would be the same as in *Status Quo* at Schedule B. Compared to *Status Quo*, the fund balance would decrease \$64 million in 2008, \$113 million in 2009, and \$60–65 million during 2010–2012. Thus, *Scenario 1* would have a moderate success in providing tax savings to businesses and in lowering fund balances, especially under low unemployment. However, as can be seen from the results, these positive effects would tend to diminish over time.

Scenario 2

Under most plausible employment conditions with insured unemployment rate of 1.5 percent in 2008 and 1.7–1.8 percent thereafter, lowering the taxable base to the 2007 U.S. average taxable base of \$13,800 (i.e., 39 percent of the 2007 taxable wage base for Hawaii) for 2008 and 2009 would have quite similar outcomes as under *Scenario 1*, except that total net tax savings to employers during 2008–2009 would be slightly lower, while levels of fund balances would be somewhat higher than in *Scenario 1*. Compared to *Status Quo*, employers would pay about \$99 million less in taxes under *Scenario 2* during 2008–2009, but they would need to pay \$59 million more in 2010. During 2011–2012, employers' total tax payments will be the same as in *Status Quo*. Thus, *Scenario 2* would provide employers with a net total tax savings of \$40 million for the 2008–2012 period. Interestingly, employers would be better off under *Scenario 2* over the long-run under both lower and higher unemployment levels (*see* Appendixes Ja and Ka).

Scenario 3

Under *Scenario 3* (i.e., reducing UI taxable base to 65 percent of 2007 Hawaii wage base(\$22,945) for 2008 and 2009, and 75 percent (\$26,475), thereafter), as compared to *Status Quo*, employers would save \$57 million in UI taxes in 2008–2009 and \$70 million in 2011–2012. However, the employers' payments would increase \$26 million in 2010. Overall, this scenario would produce a much higher net tax savings of \$102 million during the 2008–2012 period than *Scenario 2* although both would have the same tax schedules during those years. Similar to *Scenarios 1* and 2, the UI fund balances would also be lower under *Scenario 3*

compared to *Status Quo*, but the difference is that the impact is greater in earlier years for *Scenarios 1* and *2* while in later years for *Scenario 3*. The results suggest that, a moderate reduction in taxable wage base (i.e., between 65–75 percent from the current level) permanently would be a more effective option over the longer-run in terms of both providing tax relief to employers and lowering the fund balance to a desired level than a sharp reduction in wage base for a couple of years only.

Scenario 4

Increasing the weekly UI benefit of part-time employees from \$50 to \$150²⁹ starting from 2008, while holding everything else constant, would increase total benefit payments by 2.9 percent over *Status Quo* or \$25 million over the five year period, but it would have no impact on employers' tax payments. The fund balances would, however, see a slight decline due to increased benefits.

Scenario 5

As can be seen from the results, permanently increasing the maximum weekly benefits from the current 70 percent to 80 percent of average weekly wages³⁰ from 2008 would affect fund balances both directly through increased benefit payments to employees and indirectly through increased tax payments of employers. Total benefit payments would increase 7.7 percent compared to *Status Quo*. Over the five year period increased benefit would total \$67 million under the most likely employment forecast (“normal IUR”) forecast, \$76 million under a bleak employment forecast (“high IUR”), and \$52 million under an upbeat employment forecast (“low IUR”). Because of higher benefit payments from the increase in maximum weekly benefit amount from 70 percent to 80 percent and lowered fund reserves as a result, the tax schedule in 2010 would be Schedule C under *Scenario 5* instead of Schedule B under *Status Quo*. This

²⁹ Based on the DLIR estimate, currently 11 percent of employees work part-time employment while they are receiving UI benefits. Accordingly, the analysis assumes that 11 percent of UI benefit recipients will work part time even if their weekly benefit is increased to \$150. However, this percentage may go up as more employees may opt to work part-time while receiving the benefits with the increased benefit.

³⁰ Based on DLIR, currently 40 percent of total UI beneficiaries paid at the maximum rate of 70 percent of their weekly average wages. It is, therefore, assumed that 40 percent of workers will be compensated at the maximum rate even if the rate is increased to 80 percent,

would increase employers' tax payments for that year by \$59 million compared to *Status Quo*. As increased benefits to the employees would be offset by increased payments from the employers, there would be little impact on fund balances.

Scenario 6

Increasing the maximum duration of unemployment benefits from the current 26 weeks to 30 weeks from 2008 would have pretty much the same impact on tax collections and fund balances as increasing the maximum weekly benefit amount to 80 percent of the average weekly wage (*Scenario 5*), except for a slightly higher increase in total benefits. Increasing the duration to 30 weeks would increase the benefit payments by 8.0 percent as compared to *Status Quo* or \$69 million during 2008–2012.

Scenario 7

Reducing the adequate reserve requirement from the 18 months to 12 months from tax year 2008 would change the employers' contribution rates from Schedule B under *Status Quo* to Schedule A for 2008–2010 and from Schedule C to Schedule B for 2011–2012. This would reduce total tax payments of employers by \$192 million over the 2008–2012 period, or nearly 28 percent lower than that in *Status Quo*. The fund balance would continue to decline, reaching \$311 million by 2012, compared to \$517 million under *Status Quo*. However, declines in fund balances would be somewhat slower than in scenarios involving the reductions in taxable wage base, especially under low unemployment. Fund balances would decline to about \$288 million by 2012 if unemployment levels turn out to be higher than expected and \$482 million if lower than expected.

Scenario 8

Reducing the duration to determine the highest cost rate from the current 10 years to 6 years from 2008 would reduce the employers' tax payments starting from 2009. This measure would basically shift *Status Quo* contribution rates from Schedule B to Schedule A for 2009–2010 and from Schedule C to Schedule B for 2011–2012, thereby resulting in \$171 million savings in employers' taxes. This measure would also lower the fund balance substantially to \$337 million

by the end of 2012, a decrease of \$180 million from *Status Quo*. Under high unemployment situation, the fund balance would decrease to \$275 million by 2012.

Scenario 9

Combining the reduction in the adequate reserve requirement just enough to cover a period of 12 months instead of 18 months starting from tax year 2008 (*Scenario 7*) with the temporary reduction in taxable wage base to \$13,800 for 2008 and 2009 (*Scenario 2*) would shift the *Status Quo* employer tax rates to Schedule A from Schedule B for 2008 and 2009 and to Schedule B from Schedule C for 2011. For 2010 and 2012, the tax rates will be Schedule B, the same as in *Status Quo*. As can be seen from Appendix Table Ib, this scenario would provide the employers with the total tax savings of \$184 million during 2008–2012, which is slightly lower than that under *Scenario 7*. Under this scenario, the fund balance would drop to \$307 million by 2012, which is very close to that under *Scenario 7*. One notable difference is a much faster decline in fund balances in this scenario than in *Scenario 7*.

Scenario 10

When the reduction in the adequate reserve requirement to 12 months instead of 18 months (*Scenario 7*) is combined with the reduction in taxable wage base to 65 percent of 2007 Hawaii wage base for 2008 and 2009 and 75 percent thereafter (*Scenario 3*), it would produce exactly the same impact on yearly contribution rate schedules as under *Scenario 9*. That means *Status Quo* employer contribution rates would shift to Schedule A from Schedule B for 2008 and 2009 and to Schedule B from Schedule C for 2011, and no change in 2010 and 2012. As can be seen from the results (Appendix Table Ib), this scenario would provide the employers with the total net tax savings of \$231 million during 2008–2012. Despite the same rate schedules each year, the total tax savings would be much higher than under *Scenario 9*. In fact, total tax savings to the employers would be the highest of all scenarios that have been analyzed in this report. Moreover, with a fund balance of \$262 million by 2012 compared to \$307 million for *Scenario 9* and \$517 million for *Status Quo*, this scenario would also be the one of the most effective options in reducing the fund balance.

Scenario 11

The simultaneous adoption of three benefit increasing measures (i.e., starting from 2008, increase the weekly UI benefit of part-time employees from \$50 to \$150, increase the maximum weekly benefits from 70 percent to 80 of average weekly wages, and increase the maximum duration of unemployment benefits from 26 weeks to 30 weeks) along with the reduction in taxable wage base to \$13,800 in 2008 and 2009 would mean a much larger increase in taxes to the employers during 2010–2012 relative to the amount of tax savings they would realize during 2008–2009, thereby resulting in net increases in taxes for the period.. The contribution rate would shift to Schedule C from Schedule B in 2009 and 2010 and to Schedule D from Schedule C in 2011 and 2012, requiring the businesses to pay a total of \$671 million in UI taxes during 2010–2012, which is \$187 million more than that under *Status Quo*. However, their total savings in taxes from the lowered taxable wage base in 2008 and 2009 would be just \$69 million, with a net result of \$119 million in increased taxes to the employers over the 2008–2012 period. Increased benefit payments to the employees over the five-year period would amount to \$161 million under normal unemployment levels, \$126 million under low unemployment levels and \$184 million under high unemployment levels (Appendix Tables I–K). Under *Scenario 11* with normal unemployment conditions, the UI fund would have a lower balance, totaling \$454 million by the end of 2012, which is \$63 million less than that under *Status Quo*. Fund balances would be considerably lower at \$379 million under high unemployment and higher at \$548 million under low unemployment. Thus, proposed increases in benefit payments are partly funded by increases in tax collections from the employers and partly by decreases in the fund balance.

Scenario 12

Increasing weekly benefits of part-time UI employees from \$50 to \$150 (*Scenario 4*) plus increasing weekly maximum benefits from 70 percent to 80 percent of average weekly wage (*Scenario 5*) starting from 2008, while holding UI taxable wage base at 100 percent of average wage and adequate reserves at 18 months, would increase total benefit payments by 10.6 percent as compared to *Status Quo* or by \$92 million over the 2008–2012 period. The measure would also mean \$59 million in tax increases to the employers and slight declines in fund balances.

The impacts of increasing both part-time and maximum benefits coupled with reduced taxable wage base and lowered adequate reserves requirement are discussed in the next three scenarios.

Scenario 13

Compared to *Status Quo*, increasing part-time benefits to \$150 (*Scenario 4*), plus increasing weekly maximum benefits to 80 percent of average weekly salary (*Scenario 5*) from 2008, plus lowering UI taxable wage base to 65 percent of 2007 taxable wage for 2008 and 2009 and to 75 percent thereafter (*Scenario 3*), and plus lowering adequate reserves to 12 months from 2008 (*Scenario 7*) would increase total benefit payments by \$92 million (same as in *Scenario 12*) and reduce employer's tax payments by \$129 million over the five-year period. The measure would also lower the fund balances significantly to \$267 million by 2012, \$250 million less than in *Status Quo*. Compared to *Status Quo*, the employers would be paying less taxes during 2008–2011 and more taxes in 2012

Scenario 14

Increasing weekly benefits to part-time employees to \$150, plus increasing weekly maximum benefits to 80 percent of average weekly wage from, plus lowering UI taxable wage base to \$13,800 (US average for 2007) for 2008 and 2009 and to 75 percent of 2007 Hawaii taxable wage thereafter, plus lowering adequate reserves to 12 months starting from 2010 would increase total benefits for the 2008–2012 period by \$92 million (same as in the last two scenarios) and reduce employers' total tax payments for the period by \$161 million as compared to *Status Quo*. The measure also seems very effective in lowering the fund balance to \$237 million by 2012, a \$280 million decrease from the *Status Quo* level.

Scenario 15

Increasing weekly part-time benefits to \$150, plus increasing weekly maximum benefits to 80 percent of average weekly wage starting from 2008, lowering UI taxable wage base to \$13,800 (US average for 2007) for 2008 and 2009 and to 75 percent of 2007 Hawaii taxable wage thereafter, and plus lowering adequate reserves to 12 months starting from 2008 would have pretty much the same impacts as *Scenario 14*, except that tax savings are much more

uniformly spread across different years in *Scenario 14*, while impacts on fund balances are much more immediate and larger in this scenario.

Discussion and Conclusions

Comparing status quo and fifteen other scenarios analyzed in this report, in terms of the objectives of lowering the fund balance to a more desired level and reducing UI tax burden to the employers, reducing the adequate reserve requirement combined with a moderate reduction in taxable wage base appears to be the most effective policy option to adopt. While outcomes from other options are found to be highly sensitive to employment assumptions, outcomes from the measures of lowering the adequate reserve requirement seem to very robust, both with measures to increase benefit payments to employees and without.

Under the current law, temporarily lowering taxable wage base alone may increase the tax burden to the employers over the long-run and combining it with any benefit increasing initiative would exacerbate the situation, especially under high unemployment. The results clearly show that increased benefit payments to employees would translate into increased tax burden to the employers. The tax burden would be the highest when multiple benefit increasing measures are enacted in conjunction with a temporary reduction in taxable wage base.

Lowering the adequate reserves requirement, either by itself or combining it with a moderately lower taxable wage base on a permanent basis, would make a better alternative of providing positive tax savings to the employers over the long run as compared to the policy involving a temporary tax holiday. The negative aspect of this change is that it may reduce the ability of the fund to withstand an unexpected economic downturn and it may also limit counter-cyclical effect of the unemployment insurance policy.

It should also be noted that lowering the adequate reserves would result in a temporary saving for employers. As soon as the reserves requirement is lowered, employers would immediately begin to pay less into the fund until the fund stabilizes at the 12 month adequate reserve level. It would make sense, therefore, to consider this option at a time when the unemployment levels are relatively high to put money back into the economy and provide relief to employers.

One consistent outcome from different scenarios is that no matter what policy option is implemented, the tax rate would have to eventually increase in almost all cases, although some options would provide more tax savings to employers than others. Therefore, under the current UI tax law, especially given a very high replacement rate (i.e., average weekly benefit in relation to average weekly wages), which is currently more than 50 percent and the highest in the nation, lowering unemployment taxable wage base, reducing adequate reserve requirement, or even combining the two will not provide lasting relief to employers from high UI taxes, especially when unemployment is high.

As can be seen from a table below, if the replacement rate were lowered to 47.4 percent from the 2003–2006 average 48.8 percent starting in 2007, it would change the 2010 contribution rate to Schedule A from Schedule B under *Scenario 10*. In order to have Schedule A in 2011 under the same scenario, the replacement rate would need to be reduced to 39.8 percent starting from 2007. Similarly, to have Schedule A in 2012, the replacement rate would need to be reduced to 35.5 percent starting from 2007. The replacement rate would need to be reduced even more under high unemployment levels. However, given the high cost of living in Hawaii and low average wages, lowering the replacement rate may not be a palatable choice politically, although it is the highest in the nation.

To conclude, if the policy is to attain three objectives (i.e., increasing benefits to employees, reducing employers’ tax payments, and lowering the UI fund balance to a more desired level) *Scenario 14* seems to be the most effective option to use under all (“normal”, “low” and “high”) unemployment conditions. If the objective is to provide tax relief to employers and to lower the fund balance to a more desired level, *Scenario 10* will be the most effective option to follow. Given the high replacement rate, tax collections would eventually go up irrespective of which option is adopted.

Effect of Replacement Rates on the Contribution Rate Schedule under *Scenario 10*

Replacement rate in 2007 (%)	The Contribution Rate Schedule			
	2009	2010	2011	2012
48.8 ^a	B	B	C	C
47.4	A	A	B	C
39.8	A	A	A	B
35.5	A	A	A	A

^a. The average replacement rate for 2003–2006.

Appendix A. Computation of Employer Contribution Rates

An employer's Hawaii unemployment insurance tax rate is computed once a year based on the employer's reserve ratio and the tax schedule (one of eight possible schedules, A through H) in effect for the year. The tax rates corresponding to each tax schedule and reserve ratio group are shown in Appendix B.

Employers not chargeable with benefits for the 12-month period prior to the rate computation date are ineligible for an experience (reserve ratio) computation and are assigned the tax rate corresponding to a zero reserve ratio; if the ineligible employer has a negative reserve balance, a rate of 5.4% is assigned.

Computation of employer reserve Ratio:

Reserve Ratio = all contributions paid by the employer minus all benefits charged to the employer (also called employer reserve), divided by 1/3 of the sum of the employer's taxable payrolls for the last 3 consecutive calendar years.

Determination of tax schedule:

(a) Compute adequate reserve:

Adequate reserve = 1.5 times the highest benefit cost rate occurring during the last 10 years, times total wages for last completed fiscal year ending June 30.

Benefit cost rate = total benefits paid during a 12 consecutive month period, divided by total wages for the last 4 completed calendar quarters ending at least 5 months before the end of the 12 consecutive month period.

(b) Compute ratio of current reserve to adequate reserve:

Ratio = Current Reserve (Unemployment Compensation Fund balance as of November 30) divided by Adequate Reserve.

(c) Determine tax schedule based on ratio of current to adequate reserve as shown in Appendix B.

Appendix B. Contribution Rate Schedules

Employer's reserve ratio	A	B	C	D	E	F	G	H
	Contribution rates (percentage of UI taxable wages)							
.1500 and over	0.0	0.0	0.0	0.2	0.6	1.2	1.8	2.4
.1400 to .1499	0.0	0.0	0.1	0.4	0.8	1.4	2.0	2.6
.1300 to .1399	0.0	0.0	0.2	0.6	1.0	1.6	2.2	2.8
.1200 to .1299	0.0	0.1	0.4	0.8	1.2	1.8	2.4	3.0
.1100 to .1199	0.0	0.2	0.6	1.0	1.4	2.0	2.6	3.2
.1000 to .1099	0.1	0.3	0.8	1.2	1.6	2.2	2.8	3.4
.0900 to .0999	0.3	0.5	1.0	1.4	1.8	2.4	3.0	3.6
.0800 to .0899	0.5	0.7	1.2	1.6	2.0	2.6	3.2	3.8
.0700 to .0799	0.7	0.9	1.4	1.8	2.2	2.8	3.4	4.0
.0600 to .0699	0.9	1.1	1.6	2.0	2.4	3.0	3.6	4.2
.0500 to .0599	1.1	1.3	1.8	2.2	2.6	3.2	3.8	4.4
.0300 to .0499	1.3	1.5	2.0	2.6	3.0	3.6	4.2	4.8
.0000 to .0299	1.7	1.9	2.4	3.0	3.4	4.0	4.6	5.2
-.0000 to -.0499	2.1	2.3	2.8	3.4	3.8	4.4	5.0	5.4
-.0500 to -.0999	2.5	2.7	3.2	4.0	4.4	5.0	5.4	5.4
-.1000 to -.4999	2.9	3.1	3.6	4.6	5.0	5.4	5.4	5.4
-.5000 to -.9999	3.4	3.6	4.2	5.2	5.4	5.4	5.4	5.4
-1.0000 to -1.4999	4.1	4.2	4.8	5.4	5.4	5.4	5.4	5.4
-1.5000 to -1.9999	4.7	4.8	5.4	5.4	5.4	5.4	5.4	5.4
-2.0000 and less	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4

Tax Schedule Determination

Ratio of current reserve to adequate reserve	Tax schedule
More than 1.69	A
1.30 to 1.69	B
1.00 to 1.29	C
0.80 to 0.99	D
0.60 to 0.79	E
0.40 to 0.59	F
0.20 to 0.39	G
Less than 0.20	H

Appendix C. Key UI Indicators for the U.S. and Hawaii, 2005

	US Minimum	US Maximum	US Average	Hawaii Average	Hawaii Rank (2005)	Hawaii Rank (2004)	Hawaii Rank (2003)
Employment and wage							
Total average weekly wages in covered employment (\$)	414	1,223	776	657	31	31	32
Taxable average weekly wages in covered employment (\$)	147	465	223	448	3	3	3
Taxable wages to total wages ratio (%)	17.3	68.2	28.7	68.2	1	1	2
Taxable wage base (\$)	7,000	32,300	13,268	32,300	1	1	1
Financial measures							
Total contribution to total wages ratio (%)	0.19	1.69	0.82	0.86	17	16	5
Benefits paid to total wages ratio (%)	0.27	1.50	0.69	0.53	37	28	30
Average employer tax rate as a percent of total wages (%)	0.18	1.89	0.82	0.86	17	20	5
Average tax rate as a percent of taxable wages (%)	0.31	5.32	2.86	1.26	49	47	29
Reserve ratio (net reserves to total wages)	0.00	3.36	0.69	2.95	7	9	9
High cost rate (highest ratio of benefits paid to total wages since 1958)	1.06	4.41	2.22	2.12	38	38	38
High cost multiple (reserve ratio/high cost rate)	0.00	1.86	0.30	1.39	3	4	4
Claim and benefits							
Ratio of claimants exhausting payments to no. of first payments (%)	14.4	53.6	35.9	23.1	48	47	48
Average potential duration of claim (weeks)	18.2	27.1	23.7	26.0	10	10	11
Average actual claim duration (weeks)	11.3	19.5	15.3	14.1	30	27	29
Average actual claim duration for exhaustees (weeks)	15.8	26.2	22.9	26.0	6	9	8
Weekly insured unemployed as a percent of covered employment (%)	0.70	4.40	2.10	1.10	49	45	44
Average weekly payment (\$)	108	357	267	337	2	4	5
Weekly payment as a ratio of average weekly total wage (%)	0.2	0.5	34.6	49.8	1	1	1
Weeks compensated as a ratio of weeks insured unemployed (%)	75.7	137.3	87.6	86.0	25	25	32

Source: <http://www.workforcesecurity.doleta.gov/unemploy/hb394.asp>.

Appendix D. Keys to Scenarios

Scenario	Description
Status Quo	No changes in the current UI law
Scenario 1	Lowering UI taxable wage base to \$7,000 for 2008 and 2009
Scenario 2	Lowering UI taxable wage base to \$13,800 (the average taxable wage base for the U.S. in 2007, rounded to the nearest 100) for 2008 and 2009
Scenario 3	Lowering UI taxable wage base to 65 percent of 2007 taxable wage for 2008 (\$22,945) and 2009 and to 75 percent (\$26,475) thereafter
Scenario 4	Increasing weekly benefits to part-time UI employees by \$100 to \$150 from 2008
Scenario 5	Increasing maximum weekly benefits to 80% of average weekly salary from 2008
Scenario 6	Increasing UI benefit duration from 26 weeks to 30 weeks from 2008
Scenario 7	Lowering adequate reserve by removing the factor 1.5 from the adequate reserve formula from tax year 2008
Scenario 8	Highest cost rate based on last 6 years
Scenario 9	Lowering adequate reserve by removing the factor 1.5 from the adequate reserve formula from tax year 2008 plus lowering UI taxable wage base to \$13,800 for 2008 and 2009
Scenario 10	Lowering adequate reserve by removing the factor 1.5 from the adequate reserve formula from tax year 2008 plus lowering UI taxable wage base to 65% of 2007 taxable wage for 2008 and 2009 and to 75% thereafter
Scenario 11	Combining three benefit increasing measures (i.e., permanently increasing weekly benefits to part-time UI employees from \$50 to \$150, the maximum weekly benefit from 70% to 80% of average weekly salary, and UI benefits duration from 26 weeks to 30 weeks) plus temporarily lowering UI taxable wage base to \$13,800 for 2008 and 2009
Scenario 12	Increasing weekly benefits to part-time UI employees from \$50 to \$150 plus increasing weekly maximum benefits to 80% of average weekly salary for 2008-2012, UI taxable wage base at 100% of average wage, holding adequate reserves at 18 months

Appendix D. Keys to Scenarios – Contd.

Scenario	Description
Scenario 13	Increasing weekly benefits to part-time UI employees from \$50 to \$150 plus increasing weekly maximum benefits to 80% of average weekly salary for 2008-2012, lowering UI taxable wage base to 65% of 2007 taxable wage for 2008 and 2009 and to 75% thereafter, holding adequate reserves at 12 months from 2008
Scenario 14	Increasing weekly benefits to part-time UI employees from \$50 to \$150 plus increasing weekly maximum benefits to 80% of average weekly salary for 2008-2012, lowering UI taxable wage base to \$13,800 (US average for 2007) for 2008 and 2009 and to 75% of 2007 Hawaii taxable wage thereafter, lowering adequate reserves to 12 months starting from 2010
Scenario 15	Increasing weekly benefits to part-time UI employees from \$50 to \$150 plus increasing weekly maximum benefits to 80% of average weekly salary for 2008-2012, lowering UI taxable wage base to \$13,800 (US average for 2007) for 2008 and 2009 and to 75% of 2007 Hawaii taxable wage thereafter, lowering adequate reserves to 12 months starting from 2008

Appendix E. Total Covered Employment and Unemployment, 1990–2012 (Status Quo and “Normal” IURs)

Year	Total covered employment ^{1/}	Private covered employment ^{2/}	Federal covered employment ^{3/}	State UI employment base ^{4/}	State UI unemployment ^{5/}	State UI unemployment rate (%) ^{6/}
1990	533,229	416,341	33,898	499,331	6,006	1.2
1991	541,415	415,883	33,704	507,711	8,801	1.7
1992	544,718	415,275	33,262	511,456	12,937	2.5
1993	542,333	409,338	32,028	510,305	13,953	2.7
1994	540,015	406,316	31,749	508,266	15,898	3.1
1995	535,640	402,645	31,369	504,271	16,299	3.2
1996	533,123	401,001	31,101	502,022	15,899	3.2
1997	534,210	400,817	30,682	503,528	14,185	2.8
1998	533,147	398,354	30,398	502,749	13,203	2.6
1999	536,979	401,109	30,254	506,725	11,080	2.2
2000	552,445	414,768	30,398	522,047	8,576	1.6
2001	556,447	416,770	30,101	526,346	11,668	2.2
2002	557,876	414,417	30,687	527,189	12,223	2.3
2003	568,549	422,293	31,748	536,801	10,307	1.9
2004	584,227	435,079	31,497	552,730	8,214	1.5
2005	602,837	452,366	31,297	571,540	6,299	1.2
2006	618,511	464,580	31,300	587,211	6,368	1.1
2007	629,644	473,407	31,300	598,344	7,180	1.2
2008	639,089	480,981	31,300	607,789	9,117	1.5
2009	647,397	487,715	31,300	616,097	10,474	1.7
2010	655,166	494,055	31,300	623,866	11,230	1.8
2011	663,028	500,478	31,300	631,728	11,371	1.8
2012	670,984	506,984	31,300	639,684	11,514	1.8

- 1/. Total includes covered private, Federal, state, local and non-profit employment, and total expected to grow in line with wage and salary job forecast in the 2007 February Issue of the DBEDT QSER.
- 2/. Covered by state UI program for which the employers contribute to the state UI fund.
- 3/. Based on the past trend, Federal employment assumed to be constant at 31,300 from 2006 to 2012.
- 4/. These figures are slightly different from those found in DLIR publications, perhaps due to the difference between quarterly analysis by DLIR and annual one in this report.
- 5/. Number of insured unemployed is computed as total weeks insured unemployed divided by 52 weeks for 1990–2006, and that for 2007–2012 is obtained by multiplying the state UI employment base (column 4) by insured unemployment percent (column 5).
- 6/. For 1990–2006, insured unemployment rate is number of insured unemployed as a percent of the state UI employment base and for 2007–2012 it is the projected based on wage and salary employment forecast.

Appendix F. Wages and Benefits, 1990–2012 (Status Quo and “Normal” IURs)

Year	Annual private wage ^{1/} (\$)	Total private wages ^{2/} (\$ mil)	UI taxable wages ^{3/} (\$ mil)	Weekly Wage ^{4/} (\$)	Average weekly UI benefit ^{5/} (\$)
1990	22,188	9,238	6,227	427	187
1991	23,082	9,600	3,342	444	205
1992	24,455	10,156	7,042	470	233
1993	25,143	10,292	7,252	484	243
1994	25,373	10,309	7,395	488	256
1995	25,631	10,320	7,411	493	260
1996	26,044	10,444	7,420	501	258
1997	26,634	10,676	7,483	512	257
1998	27,362	10,900	7,560	526	256
1999	27,875	11,181	7,749	536	263
2000	28,800	11,945	8,210	554	269
2001	29,511	12,299	8,456	568	279
2002	30,650	12,702	8,702	589	276
2003	31,675	13,376	9,155	609	293
2004	33,239	14,462	9,752	639	306
2005	15,471	10,545	34,201	658	322
2006	16,827	11,499	36,219	697	349
2007	17,832	12,186	37,668	724	353
2008	18,733	12,802	38,948	749	365
2009	19,604	13,397	40,195	773	377
2010	20,454	13,978	41,401	796	388
2011	21,300	14,556	42,560	818	399
2012	22,181	15,158	43,751	841	410

- 1/. For 1990–2005, annual wage is computed as total wages divided by total covered employment in the private sector. For 2006–2012, annual wage rates are assumed to grow at the same rate as Honolulu CPI as published in the 2007 February Issue of DBEDT QSER (see Appendix H).
- 2/. Total private wages for 1990–2005 are from the 2005 Hawaii Unemployment Insurance Fact Book and those for 2006–2012 are based on projected private covered employment and projected annual wage.
- 3/. Total taxable wages for 1990–2005 are directly from 2006 Hawaii Unemployment Insurance Fact Book and those for 2006–2012 are estimated using projected total private wages and average ratio of taxable to total private wages for 2000–2005, which was 68.3 percent.
- 4/. Weekly wage rates are simply obtained by dividing annual wage rates by 52 weeks.
- 5/. Average weekly benefits for 1990–2006 are obtained as total UI benefits paid divided by number of weeks compensated and those for 2007–2012 are based on projected weekly wages and average replacement rate (ratio of average weekly UI benefits to average weekly wages) for the 2003–2006, which was 48.8 percent.

Appendix G. UI Financial Data and Tax Schedules, 1990–2012 (Status Quo and “Normal” IURs)

Year	Total tax collections ^{1/} (\$ mil)	Interest ^{2/} (\$ mil)	Total UI benefits ^{3/} (\$ mil)	Fund balance ^{4/} (\$ mil)	Current reserves ^{5/} (\$mil)	Adequate reserves ^{6/} (\$mil)	Tax schedule ^{7/}
1990	80	31	45	398	334	130	NA
1991	55	27	76	404	402	147	NA
1992	41	42	130	357	411	241	A
1993	67	26	145	304	370	249	B
1994	77	20	172	229	316	231	B
1995	150	16	180	214	242	257	D
1996	152	15	173	208	227	270	D
1997	144	15	154	213	222	277	D
1998	137	15	143	222	226	282	D
1999	134	16	124	247	233	288	D
2000	139	18	97	307	256	294	D
2001	106	21	136	298	313	311	C
2002	135	24	153	304	318	328	C
2003	147	14	124	342	309	331	D
2004	125	26	105	388	353	349	C
2005	130	21	82	457	389	369	C
2006	142	23	91	532	458	401	C
2007	100	27	105	554	533	407	B
2008	105	28	138	548	562	373	B
2009	110	27	164	522	560	385	B
2010	115	26	181	482	536	402	B
2011	181	24	188	499	497	418	C
2012	188	25	196	517	515	436	C

Source: Hawaii Unemployment Insurance Fact Book 2006 (DLIR) for 1990–2006. For 2007–2012, these data are estimated as follows:

- 1/. Taxes were estimated in two steps. First, projected UI taxable wages (4th column Appendix F) for each year were distributed to individual employers grouped by reserve ratio using their respective shares in total taxable wages in 2005. Second, the results obtained in the first step were multiplied by the corresponding employer contribution rates for a relevant tax schedule for that year. Summing these results across all employer groups would give the total amount of taxes collected.
- 2/. Interest earnings are assumed to be 5 percent of fund balances in the previous year.
- 3/. Total benefits were computed as estimated weekly benefit rates (column 6 in Appendix F) *times* total number of insured unemployed weeks (total insured unemployed times 52 weeks) *times* the ratio of total number of weeks compensated to total weeks insured (assumed to be 0.866, the average for 2002–2006) *times* the ratio of employed with the contributing employers to total state UI employment base (assumed to be 0.92 as per DLIR).
- 4/. Fund balance (year t) = Fund balance (year t - 1) + Taxes (year t) + Interest (year t) – Benefits (year t).
- 5/. Current reserve (year t) = Fund balance (year t - 1) + Benefits (year t - 1)/12.
- 6/. Adequate reserve (year t) = 1.5 x Total private wages (year t-1) x high cost rate (year t)/100.
- 7/. Tax schedule (year t) is based on ratio of current to adequate reserve (year t) as shown in Appendix B.

Appendix H. Key Assumptions

Year	State UI employment growth (%) ^{1/}	Insured unemployment rate - IUR (%) ^{2/}			Honolulu CPI change (%) ^{3/}	High cost rate (%) ^{4/}	
		Low	Most likely ("Normal")	High		For 10 years	For 6 Years
2006	2.7	1.1	1.1	1.1	5.9	1.78	1.78
2007	1.9	1.1	1.3	1.6	4.0	1.67	1.67
2008	1.6	1.1	1.5	1.8	3.4	1.46	1.44
2009	1.4	1.1	1.7	2.0	3.2	1.44	1.23
2010	1.3	1.5	1.8	2.0	3.0	1.44	0.95
2011	1.3	1.5	1.8	2.0	2.8	1.44	0.94
2012	1.3	1.5	1.8	2.0	2.8	1.44	0.94

1/. State UI covered employment is assumed to grow at the same rate as wages and salaries employment forecast from the 2007 February Issue of the Quarterly Statistical and Economic Report (QSER) by DBEDT.

2/. Based on employment forecast and historical insured unemployment rates, normal IURs are based on the following econometric model.

Dependent Variable: IUR (%)
 Method: Least Squares
 Date: 12/21/06 Time: 09:54
 Sample (adjusted): 1982 2006
 Included observations: 25 after adjustments
 Convergence achieved after 25 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CONSTANT	2.196	0.339	6.475	0.000
JOBGROWTH (%)	-0.111	0.037	-3.025	0.006
AR(1)	1.317	0.192	6.859	0.000
AR(2)	-0.496	0.201	-2.469	0.022
R-squared	0.884	Mean dependent var		2.160
Adjusted R-squared	0.868	S.D. dependent var		0.735
S.E. of regression	0.268	Akaike info criterion		0.347
Sum squared resid	1.504	Schwarz criterion		0.542
Log likelihood	-0.340	F-statistic		53.407
Durbin-Watson stat	2.117	Prob(F-statistic)		0.000
Inverted AR Roots	.66-.25i	.66+.25i		

3/. Annual wage rate of covered employed assumed to grow at the Honolulu CPI rate from the 2007 February Issue of the Quarterly Statistical and Economic Report (QSER) by DBEDT.

4/. High cost rates are based on the recent trend in quarterly benefit cost rates from DLIR.

Appendix Ia. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 1-8*
 (“Normal” Insured Unemployment Rates)

	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Tax collections (\$mil)									
2006	142	142	142	142	142	142	142	142	142
2007	100	100	100	100	100	100	100	100	100
2008	105	41	57	77	105	105	105	84	105
2009	110	64	59	81	110	110	110	88	88
2010	115	174	174	141	115	174	174	91	91
2011	181	181	181	146	181	181	181	119	119
2012	188	188	188	152	188	188	188	124	124
Tax savings (\$mil) ¹									
2006		0	0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0	0
2008		64	48	28	0	0	0	21	0
2009		46	51	29	0	0	0	22	22
2010		-59	-59	-26	0	-59	-59	23	23
2011		0	0	35	0	0	0	62	62
2012		0	0	36	0	0	0	64	64
Total (2008-2012)		51	40	102	0	-59	-59	192	171
Fund balance (\$mil)									
2006	532	532	532	532	532	532	532	532	532
2007	554	554	554	554	554	554	554	554	554
2008	548	484	500	520	544	538	537	527	548
2009	522	409	420	463	513	498	497	478	500
2010	482	422	435	446	468	502	501	412	436
2011	499	436	449	427	478	506	504	364	389
2012	517	451	464	405	489	509	506	311	337
Total benefits (\$mil)									
2006	91	91	91	91	91	91	91	91	91
2007	105	105	105	105	105	105	105	105	105
2008	138	138	138	138	142	149	149	138	138
2009	164	164	164	164	168	176	177	164	164
2010	181	181	181	181	186	195	195	181	181
2011	188	188	188	188	194	203	203	188	188
2012	196	196	196	196	201	211	211	196	196

Appendix Ia. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 1-8* (“Normal” Insured Unemployment Rates) – Contd.

	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Benefit increases (\$mil) ²									
2006		0	0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0	0
2008		0	0	0	4	11	11	0	0
2009		0	0	0	5	13	13	0	0
2010		0	0	0	5	14	14	0	0
2011		0	0	0	5	15	15	0	0
2012		0	0	0	6	15	16	0	0
Total (2008-2012)		0	0	0	25	67	69	0	0
Tax schedule									
2006	C	C	C	C	C	C	C	C	C
2007	B	B	B	B	B	B	B	B	B
2008	B	B	B	B	B	B	B	A	B
2009	B	C	B	B	B	B	B	A	A
2010	B	C	C	C	B	C	C	A	A
2011	C	C	C	C	C	C	C	B	B
2012	C	C	C	C	C	C	C	B	B

^{1/} Tax savings to businesses are relative to Status Quo.

^{2/} Benefit increases to employees are relative to Status Quo.

Appendix Ib. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 9-15*
 (“Normal” Insured Unemployment Rates)

	Status Quo	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15
Tax collections (\$mil)								
2006	142	142	142	142	142	142	142	142
2007	100	100	100	100	100	100	100	100
2008	105	45	61	57	105	61	57	45
2009	110	47	64	90	110	64	90	47
2010	115	115	93	174	174	93	93	93
2011	181	119	97	244	181	146	146	146
2012	188	188	152	254	188	205	152	205
Tax savings (\$mil) ¹								
2006		0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0
2008		60	44	48	0	44	48	60
2009		63	46	20	0	46	20	63
2010		0	22	-59	-59	22	22	22
2011		62	84	-63	0	35	35	35
2012		0	36	-65	0	-17	36	-17
Total (2008-2012)		184	231	-119	-59	129	161	162
Fund balance (\$mil)								
2006	532	532	532	532	532	532	532	532
2007	554	554	554	554	554	554	554	554
2008	548	488	505	474	534	490	485	474
2009	522	396	431	393	489	398	418	364
2010	482	350	364	373	488	311	332	275
2011	499	299	291	412	485	265	287	227
2012	517	307	262	454	481	267	237	227
Total benefits (\$mil)								
2006	91	91	91	91	91	91	91	91
2007	105	105	105	105	105	105	105	105
2008	138	138	138	164	153	153	153	153
2009	164	164	164	194	181	181	181	181
2010	181	181	181	214	200	200	200	200
2011	188	188	188	223	208	208	208	208
2012	196	196	196	232	217	217	217	217

Appendix Ib. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 9-15* (“Normal” Insured Unemployment Rates) – Contd.

	Status Quo	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15
Benefit increases (\$mil) ²								
2006		0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0
2008		0	0	26	15	15	15	15
2009		0	0	30	17	17	17	17
2010		0	0	34	19	19	19	19
2011		0	0	35	20	20	20	20
2012		0	0	36	21	21	21	21
Total (2008-2012)		0	0	161	92	92	92	92
Tax schedule								
2006	C	C	C	C	C	C	C	C
2007	B	B	B	B	B	B	B	B
2008	B	A	A	B	B	A	B	A
2009	B	A	A	C	B	A	C	A
2010	B	B	B	C	C	B	B	B
2011	C	B	B	D	C	C	C	C
2012	C	C	C	D	C	D	C	D

^{1/} Tax savings to businesses are relative to Status Quo.

^{2/} Benefit increases to employees are relative to Status Quo.

Appendix Ja. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 1-8* (“Low” Insured Unemployment Rates)

	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Tax collections (\$mil)									
2006	142	142	142	142	142	142	142	142	142
2007	100	100	100	100	100	100	100	100	100
2008	105	41	57	77	105	105	105	84	105
2009	110	42	59	81	110	110	110	88	88
2010	115	174	115	93	115	115	115	91	91
2011	119	119	181	97	119	119	119	95	95
2012	124	188	124	152	124	124	124	99	99
Tax savings (\$mil) ¹									
2006		0	0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0	0
2008		64	48	28	0	0	0	21	0
2009		67	51	29	0	0	0	22	22
2010		-59	0	22	0	0	0	23	23
2011		0	-62	23	0	0	0	24	24
2012		-64	0	-28	0	0	0	25	25
Total (2008-2012)		9	38	74	0	0	0	116	95
Fund balance (\$mil)									
2006	532	532	532	532	532	532	532	532	532
2007	562	562	562	562	562	562	562	562	562
2008	594	530	546	566	591	587	586	573	594
2009	628	493	526	569	622	612	611	584	606
2010	624	541	517	540	613	595	594	554	577
2011	617	531	567	507	602	575	574	520	544
2012	610	582	557	522	588	552	550	482	508
Total benefits (\$mil)									
2006	91	91	91	91	91	91	91	91	91
2007	96	96	96	96	96	96	96	96	96
2008	101	101	101	101	104	109	109	101	101
2009	106	106	106	106	109	114	114	106	106
2010	151	151	151	151	155	162	163	151	151
2011	157	157	157	157	161	169	169	157	157
2012	163	163	163	163	168	176	176	163	163

Appendix Ja. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 1-8* (“Low” Insured Unemployment Rates) - Contd.

	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Benefit increases (\$mil) ²									
2006		0	0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0	0
2008		0	0	0	3	8	8	0	0
2009		0	0	0	3	8	8	0	0
2010		0	0	0	4	12	12	0	0
2011		0	0	0	5	12	13	0	0
2012		0	0	0	5	13	13	0	0
Total (2008-2012)		0	0	0	20	52	54	0	0
Tax schedule									
2006	C	C	C	C	C	C	C	C	C
2007	B	B	B	B	B	B	B	B	B
2008	B	B	B	B	B	B	B	A	B
2009	B	B	B	B	B	B	B	A	A
2010	B	C	B	B	B	B	B	A	A
2011	B	B	C	B	B	B	B	A	A
2012	B	C	B	C	B	B	B	A	A

^{1/} Tax savings to businesses are relative to Status Quo.

^{2/} Benefit increases to employees are relative to Status Quo.

Appendix Jb. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 9-15* (“Low” Insured Unemployment Rates)

	Status Quo	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15
Tax collections (\$mil)								
2006	142	142	142	142	142	142	142	142
2007	100	100	100	100	100	100	100	100
2008	105	45	61	57	105	61	57	45
2009	110	47	64	59	110	64	59	47
2010	115	91	74	174	115	74	74	74
2011	119	95	77	181	119	97	97	97
2012	124	124	101	188	124	101	101	152
Tax savings (\$mil) ¹								
2006		0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0
2008		60	44	48	0	44	48	60
2009		63	46	51	0	46	51	63
2010		23	41	-59	0	41	41	41
2011		24	42	-62	0	23	23	23
2012		0	24	-64	0	24	24	-28
Total (2008-2012)		170	196	-85	0	176	186	158
Fund balance (\$mil)								
2006	532	532	532	532	532	532	532	532
2007	562	562	562	562	562	562	562	562
2008	594	534	551	527	584	540	535	524
2009	628	503	537	487	606	514	504	480
2010	624	469	487	506	584	447	437	411
2011	617	431	432	527	559	393	382	355
2012	610	413	391	548	531	333	321	345
Total benefits (\$mil)								
2006	91	91	91	91	91	91	91	91
2007	96	96	96	96	96	96	96	96
2008	101	101	101	120	112	112	112	112
2009	106	106	106	126	117	117	117	117
2010	151	151	151	179	167	167	167	167
2011	157	157	157	186	173	173	173	173
2012	163	163	163	194	180	180	180	180

Appendix Jb. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 9-15* (“Low” Insured Unemployment Rates) - Contd.

	Status Quo	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15
Benefit increases (\$mil) ²								
2006		0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0
2008		0	0	19	11	11	11	11
2009		0	0	20	11	11	11	11
2010		0	0	28	16	16	16	16
2011		0	0	29	17	17	17	17
2012		0	0	30	17	17	17	17
Total (2008-2012)		0	0	126	72	72	72	72
Tax schedule								
2006	C	C	C	C	C	C	C	C
2007	B	B	B	B	B	B	B	B
2008	B	A	A	B	B	A	B	A
2009	B	A	A	B	B	A	B	A
2010	B	A	A	C	B	A	A	A
2011	B	A	A	C	B	B	B	B
2012	B	B	B	C	B	B	B	C

^{1/} Tax savings to businesses are relative to Status Quo.

^{2/} Benefit increases to employees are relative to Status Quo.

Appendix Ka. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 1-8* (“High” Insured Unemployment Rates)

	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Tax collections (\$mil)									
2006	142	142	142	142	142	142	142	142	142
2007	100	100	100	100	100	100	100	100	100
2008	105	41	57	77	105	105	105	84	105
2009	166	64	90	122	166	166	166	88	110
2010	174	234	234	141	174	174	174	115	115
2011	181	244	181	197	181	181	181	181	119
2012	188	254	254	205	188	254	254	188	188
Tax savings (\$mil) ¹									
2006		0	0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0	0
2008		64	48	28	0	0	0	21	0
2009		102	77	44	0	0	0	79	57
2010		-60	-60	33	0	0	0	59	59
2011		-63	0	-16	0	0	0	0	62
2012		-65	-65	-17	0	-65	-65	0	0
Total (2008-2012)		-22	-1	72	0	-65	-65	159	177
Fund balance (\$mil)									
2006	532	532	532	532	532	532	532	532	532
2007	519	519	519	519	519	519	519	519	519
2008	484	420	436	456	479	471	471	463	484
2009	482	312	354	408	472	454	453	381	426
2010	479	361	406	369	462	434	433	314	361
2011	475	414	398	375	451	412	409	302	289
2012	470	471	454	382	438	452	449	288	275
Total benefits (\$mil)									
2006	91	91	91	91	91	91	91	91	91
2007	140	140	140	140	140	140	140	140	140
2008	166	166	166	166	170	178	179	166	166
2009	192	192	192	192	198	207	208	192	192
2010	201	201	201	201	207	216	217	201	201
2011	209	209	209	209	215	225	226	209	209
2012	217	217	217	217	224	234	235	217	217

Appendix Ka. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 1-8* (“High” Insured Unemployment Rates) – Contd.

	Status Quo	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Benefit increases (\$mil) ²									
2006		0	0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0	0
2008		0	0	0	5	13	13	0	0
2009		0	0	0	6	15	15	0	0
2010		0	0	0	6	16	16	0	0
2011		0	0	0	6	16	17	0	0
2012		0	0	0	6	17	17	0	0
Total (2008-2012)		0	0	0	29	76	79	0	0
Tax schedule									
2006	C	C	C	C	C	C	C	C	C
2007	B	B	B	B	B	B	B	B	B
2008	B	B	B	B	B	B	B	A	B
2009	C	C	C	C	C	C	C	A	B
2010	C	D	D	C	C	C	C	B	B
2011	C	D	C	D	C	C	C	C	B
2012	C	D	D	D	C	D	D	C	C

^{1/} Tax savings to businesses are relative to Status Quo.

^{2/} Benefit increases to employees are relative to Status Quo.

Appendix Kb. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 9-15* (“High” Insured Unemployment Rates)

	Status Quo	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15
Tax collections (\$mil)								
2006	142	142	142	142	142	142	142	142
2007	100	100	100	100	100	100	100	100
2008	105	45	61	57	105	61	57	45
2009	166	47	64	90	166	64	90	59
2010	174	174	93	289	174	141	141	141
2011	181	181	197	244	181	197	197	197
2012	188	188	205	254	254	254	205	254
Tax savings (\$mil) ¹								
2006		0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0
2008		60	44	48	0	44	48	60
2009		119	102	77	0	102	77	107
2010		0	81	-115	0	33	33	33
2011		0	-16	-63	0	-16	-16	-16
2012		0	-17	-65	-65	-65	-17	-65
Total (2008-2012)		179	193	-118	-65	97	125	119
Fund balance (\$mil)								
2006	532	532	532	532	532	532	532	532
2007	519	519	519	519	519	519	519	519
2008	484	424	440	405	466	423	418	406
2009	482	300	334	286	443	295	316	273
2010	479	288	243	351	417	229	250	205
2011	475	274	243	365	388	206	228	182
2012	470	259	244	379	420	229	205	204
Total benefits (\$mil)								
2006	91	91	91	91	91	91	91	91
2007	140	140	140	140	140	140	140	140
2008	166	166	166	196	183	183	183	183
2009	192	192	192	228	213	213	213	213
2010	201	201	201	238	222	222	222	222
2011	209	209	209	248	231	231	231	231
2012	217	217	217	258	241	241	241	241

Appendix Kb. Tax Collections, Tax Savings, Fund Balance & Tax Schedule for *Status Quo* and *Scenarios 9-15* (“High” Insured Unemployment Rates) – Contd.

	Status Quo	Scenario 9	Scenario 10	Scenario 11	Scenario 12	Scenario 13	Scenario 14	Scenario 15
Benefit increases (\$mil) ²								
2006		0	0	0	0	0	0	0
2007		0	0	0	0	0	0	0
2008		0	0	31	18	18	18	18
2009		0	0	36	20	20	20	20
2010		0	0	37	21	21	21	21
2011		0	0	39	22	22	22	22
2012		0	0	41	23	23	23	23
Total (2008-2012)		0	0	184	105	105	105	105
Tax schedule								
2006	C	C	C	C	C	C	C	C
2007	B	B	B	B	B	B	B	B
2008	B	A	A	B	B	A	B	A
2009	C	A	A	C	C	A	C	B
2010	C	C	B	E	C	C	C	C
2011	C	C	D	D	C	D	D	D
2012	C	C	D	D	D	E	D	E

^{1/} Tax savings to businesses are relative to Status Quo.

^{2/} Benefit increases to employees are relative to Status Quo.