UNIVERSITY OF HAWAII Honolulu 14, Hawaii.

SOME EFFECTS OF HAWAII'S 1957 TAX LAW

 $\frac{\text{Errata}}{\text{Title Page and Chapter 3 - Tables 3, 4 and 5.}}$

Correct spelling on Title Page of first author's name on second line from:

P. F. PHILLIP to P. F. PHILIPP.

Correct alignment of figures in the four columns of Table 3, p. 18, to read:

		(col.l)	(col.2)	(col.3)	(col.4)
A.	Subject to general excise				
	Feed and feed transportation	\$12,498	\$438	\$12,936	53.3%
	Chicks	1,288	45	1,333	5.5
	Egg cartons	976	7	983	4.1
	Gasoline	269	6	275	1.1
	Other supplies	652	24	676	2.8
	Depreciation (portion)	1,150	40	1,190	4.9
	Professional services	65	2	67	3
	Sub Total	\$16.898	\$ 562	\$ 17,460	72.0
Β.	Not subject to general excise tax ⁺			6,492	26.8

<u>Correct by adding</u> a minus (-) sign to second figure in column 4 of <u>Table 4</u>, p. 20, to read:

	Costs and Returns, <u>New vs. Old Rates</u>
General excise tax hurden	(col.4)
on producer's egg sales	- 50.0%

Correct Table 5, p. 20, by:

(a) <u>omitting</u> the words "of farmer" in the second category under "Item" to read:

General excise tax burden ef farmer on producer's egg sales

(b) <u>correcting</u> typographical error in the last figure in column 3, to read:

	Difference in Costs and Returns, <u>New vs. Old Rates</u>
	(col.3)
Family labor income per hour	02

Taxation-Hawaii (Ter.)

LEGISLATIVE REFERENCE BUREAU TERRITORY OF HAWAII

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Some Effects

AWAII'S 1957

TAX LAW

LEGISLATIVE REFERENCE BUREAU

APR 2 1959

TERRITORY OF HAWAII

UNIVERSITY OF HAWAII

Studies by R. M. Kamins, J. T. Keeler, Y. S. Lebng, C. W. Peters, P. F. Phillip, D. M. Slate and C. T. Tanimura.

Territory of Hawaii

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Foreword

The territorial legislature, having enacted a major tax revision in its special session of June 1957, directed the University of Hawaii to ascertain, where possible, the impact of the tax changes upon the economy and the people of Hawaii. As the legislators realized, the assignment was a difficult one. During the period studied, from June 1957 until the closing months of 1958, the economy was subject to a variety of influences--a prolonged sugar strike, the multiple impacts of the national depression (however lightly felt in Hawaii), continued inflation, a construction boom--to name but a few.

Within the economic cross-currents stirred up by these changes it was difficult to demonstrate by statistical data alone clearcut effects of the 1957 amendments to the tax laws. However, despite the obscurity of the economic record viewed statistically, it was frequently possible to establish by economic deduction the probable results of some of the tax revision. In other cases the cross-currents were too choppy to permit even a deductive analysis.

The authors, members of the Economics Department, Agricultural Experiment Station and Legislative Reference Bureau, regard this joint study as exploratory, rather than definitive. Much work remains to be done before all the major economic effects of changes in Hawaii's tax laws can be stated with precision and confidence. A useful start may have been made, however, particularly in case studies of tax effects on selected types of agricultural production.

Our thanks go to several knowledgeable readers whose criticisms were most helpful. They include Tax Commissioner Earl W. Fase and Alan G. White of his staff; Roy E. Brown, the retiring Director of the Hawaii Tax Foundation; and Charles James of Public Administration Service. Special appreciation is also due to Shelley M. Mark, Associate Professor of Economics, for his fruitful participation in the planning of the study and to Clifford Davis, research administrator of the Territorial Department of Labor and Industrial Relations, for obtaining retail price data used in the analysis of the general excise tax.

Arthur L. Kirkpatrick, Assistant Professor of Economics, contributed heavily to the entire project, from the planning of its components to its final assemblage. Each chapter is the better for his incisive criticism.

The Authors

January 31, 1959

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CHAPTER 1

Concerning the 1957 Tax Revision*

It is sometimes risky to read specific motives into legislative actions, but three purposes seem to have inspired the widespread changes in the tax law enacted by the Hawaii legislature in June of 1957, a law which amended every territorial tax except that imposed on gasoline and other motor fuels. One motive can be described with confidence--the desire to increase general fund revenues by at least \$36 million per biennium. A second probable motive was to redistribute the tax burden, or at any rate the income tax burden, in favor of persons with small incomes. Finally, from its debates and committee reports, it appears that the legislature sought to reduce tax discouragements placed upon local producers, manufacturers and wholesalers, particularly under the general excise tax.

The degree to which the first purpose was satisfied is readily shown. Between 1955-57, the last biennium under the old tax laws, and 1957-59, the first biennium under the new, estimated general fund tax collections of the territorial government rose by \$46 million. A further increase of \$15 million is anticipated for 1959-61. Some portion of these increases would have occurred even if the laws were unchanged, because of risinglevels of employment, income and prices, but the larger portion is the result of tax amendments-primarily increased rates. No elaborate analysis is required to demonstrate the impact of the 1957 amendments on the magnitude of tax revenues.

Shifting Tax Burden

Nor does this study attempt to ascertain precisely how successful the legislature was in redistributing the burden of territorial taxes among various income groups. (Considerable attention was given to this problem, but it was not feasible to proceed with an analysis of tax burdens without a knowledge of expenditure patterns of families at different income levels. The last useful study of this nature in Hawaii was made in 1943 and it was estimated that a satisfactory expenditure survey would cost approximately \$40,000--about ten times the amount appropriated for the research reported in this volume.)

Some general conclusions can be drawn, however, even in the absence of reliable expenditure data. One is that heavier taxation of tobacco, liquor and public utilities, and particularly the increase in the retail rate of the general excise tax (see Chart 1) substantially increased the tax burden on consumption--all on the assumption, for which there seems to be general agreement, that these taxes tend to be shifted to consumers in the form of retail

*By Robert M. Kamins, Professor of Economics.

Chart 1

Major Changes in Tax Laws Effected by Hawaii Legislature in 1957

(Act 1, Laws of Special Session)

TAX	CHANGES EFFECTED
GENERAL EXCISE	 (a) <u>Rates:</u> retailing, from 2 1/2 to 3 1/2%; wholesaling, from 1 to 3/4%; manufacturing and producing, from 1 1/2 to 1% (except sugar and pineapple, which remained at 2 1/2%). (b) Form of tax: tax on retailing placed in separate second.
	tion of law.
CONSUMPTION	Rate: from $21/2$ to $31/2\%$.
COMPENSATING	<u>Rate:</u> from 1 to 3/4%.
PERSONAL INCOME	(a) <u>Rates:</u> increased (max. 9% instead of 6%) and grad- uation accelerated.
	(b) <u>Base</u> : federal income tax deduction disallowed; medi- cal and other deductions under federal law allowed; capital gains taxed; certain business income from outside Territory taxed.
	(c) Exemptions: taxpayer and spouse, from \$1,000 to \$400; dependents, from \$200 to \$400.
	(d) <u>Form</u> : basic concepts and provisions of federal law adopted.
COMPENSATION-	
DIVIDENDS	Repealed.
CORPORATE INCOME	(a) <u>Rates:</u> from flat 10% to 5% on first \$25,000 and 5 1/2% thereabove; capital gains, 2-3/4%.
	(b) <u>Base</u> : federal income tax deduction disallowed; capital gains taxed.
BANK FRANCHISE	(a) <u>Rates:</u> from amounts yielding aggregate of \$175,000 annually to 10% of taxable net income.
	 (b) <u>Base</u>: expanded to include savings and loan associations, etc.
PUBLIC UTILITY	Basic rate: from 5 to 5 $1/2\%$ (except land transport companies).
LIQUOR	Rate: from 12 to 16% of wholesale price.
TOBACCO	Rate: from 15 to 20% of wholesale price.
INSURANCE	<u>Rates:</u> life, from $21/4$ to $21/2\%$; casualty, from $21/2$ to $31/4\%$ (lower for domestic companies).
PROPERTY	Maximum rates: from prescribed annual revenues in each county to \$18 per \$1,000 of assessed value, \$16 in Honolulu (plus \$2 for Urban Redevelop- ment Agency)
INHERITANCE	 (a) <u>Rates</u>: increased for all three groups of heirs. (b) <u>Exemptions</u>: from \$5,000 to \$20,000 for bequests to spouse.

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price increases. To the extent that persons in lower income groups spend relatively larger portions of their incomes for goods and services subject to these taxes than do more affluent persons, the raising of the tobacco, liquor, public utility tax rates, and the retail rate under the general excise tax made the Hawaii tax structure more regressive--that is, a larger tax increase was put upon low income groups, relative to their incomes, than upon middle and upper income groups. It is quite possible that the increase in the property tax had a similar effect.

The income tax amendments of 1957 went in the opposite direction. By repealing the flat 2 per cent tax on compensation and dividends, by increasing the graduation of the income tax, by removing the deductibility of federal income taxes, by taxing capital gains, etc., the 1957 law substantially changed relative income tax burdens at different economic levels. By and large, wage earners and dividend recipients with small incomes, as well as those with medium incomes but with large numbers of dependents, had their income taxes reduced. Most other persons were subjected to heavier income taxes, the amount of additional tax increasing as one goes up the income scale. (See Chapter 9.)

Lacking family expenditure data, the degree to which the higher progression of the revised income tax offset the increased regressivity of heavier consumption taxes can only be surmised. Revenue data supply prima facie evidence: taxes on consumption rose by approximately \$31 million between 1955-57 and 1957-59, while personal income taxes increased by only one third of that amount, thus creating a presumption that the 1957 tax revision made the Hawaii tax structure more regressive, overall, rather than less. However, this is a presumption which is subject to change upon further analysis, which this study does not attempt for the budgetary reason indicated above.* Chart 2 shows the relative contributions of the various territorial taxes to the general fund in 1959-61, assuming no changes in effective rates.

The major focus of this study is rather the third objective of the 1957 tax revision, the apparent desire of the legislature to change the tax laws so as to improve the competitive position of local industries--or at least not worsen that position in the face of tax increases.

Effects of General Excise Tax Amendments

A measure of tax relief was offered many local industries in the reduction made in the general excise tax rates applicable to agricultural production, manufacturing and wholesaling. By lessening these rates, the legislature sought to increase the competitive

^{*}Also lacking for a judgment of the degree of regressivity in the Hawaii tax system is a satisfactory analysis of the incidence of the corporate income tax. A portion of this tax may be borne by stockholders and officers of corporations, another portion shifted forward to consumers in the form of retail price increases, and some portion may be shifted backwards to the employees and suppliers of the corporation in the form, respectively, of decreased wages and supply prices. No one can yet say with confidence, however, how large these several portions—nor, therefore, how progressive in effect the income tax is, if it is in the balance progressive.



position of goods produced in Hawaii against imports from the mainland and abroad.

There is no reason to question that the general excise tax reductions have had the intended result, although, as the next chapter develops, it is difficult to measure this improvement in terms of price changes. However, as the case studies presented in Chapters 3, 4 and 5 demonstrate, the advantage so given to agricultural producers was offset or in some cases even more than offset by the 1 per cent increase in the general excise tax rate on retailing. This result, perhaps not anticipated by the legislature, occurred because the supplies which farmers buy are subject to the tax, now $3 \frac{1}{2}$ per cent, on retailing. An egg producer, for example, buys chicks, feed for his layers and other supplies, and buys them in sufficient quantities that an additional tax of 1 per cent on their purchase may add more to his costs than he saves from the one-half per cent reduction in the tax on his sales. The disadvantageous effect of increasing the tax burden on farm supplies is less pronounced for farmers who purchase relatively fewer materials--such as coffee and papaya growers--but it exists even here.

In the balance, it is doubtful if most agricultural producers received overall tax relief from the 1957 law. However, manufacturers did, since the reduction in the general excise tax rate on their sales--also by one-half per cent--was not, by and large, cancelled out by the increase in the retail rate. The difference in effect from that experienced by farmers lies in the fact that the materials entering into manufacturing generally retain their identity (remain "perceptible to the senses", in the words of the general excise tax law) in the finished product and thus are taxed as intermediary goods taxable only at the wholesale rate, which was also reduced in 1957, and not under the increased retail rate.

A clothing manufacturer, for example, would have experienced the following changes under the new law: the tax on most of his local purchases (for cloth, buttons, zippers, etc.) was lowered from 1 to 3/4 of 1 per cent; the tax on his sales was reduced from 1 1/2to 1 per cent. The only general excise tax change adverse to him was the increase at the retail level from 2 1/2 to 3 1/2 per cent, and here he experienced no competitive disadvantage, since the same tax applies to clothing imported from California and elsewhere outside the territory.

Examination of changes in retail prices of food in Honolulu (Chapter 2) suggests no reason for doubting the conclusion as to tax shifting indicated by economic theorizing, i.e., that the increase in the retail rate of the general excise tended to be passed on to purchasers of goods. It is to be expected that price increases (7 per cent in the Honolulu consumer price index between June 1957 and December 1958) reduced the quantity of goods sold, but data are lacking by which to estimate this limitation on the volume of sales.

Table 1

TAX COLLECTIONS, TERRITORY OF HAWAII, 1955-61

(Excluding property and motor fuel taxes) In Thousands of Dollars

Tax	Biennium 1	1955- <u>57</u>	Biennium 1	<u>957-59</u>	Biennium -	1959-61
1 General Excise		70		%		_%
Consumption &						
Compensating	\$ 73,426	58.1	\$100,983	57.7	\$112.504	58.4
2. Liquor	4,275	3.4	5,860	3.4	6.200	3.2
3. Tobacco	2,513	2.0	3,600	2.1	3,900	2.0
4. Public Utility	5,629	4.5	7,150	4.1	8,450	4.4
5. Insurance	2,324	1.8	3,000	1.7	3,200	i.7
 Bank Franchise 	350	.3	725	.4	1.000	.5
7. Personal Income	29,546 *	23.4	42,580a*	24.3	47,004	24.4
8. Corporate Income	7,650	6.1	10,500	6.0	9.600	5.0
9. Inheritance & Estate	666	•5	600	.3	700	.4
Total	\$126,378	100.0†	\$175,004‡	100.0	\$192.564‡	100.0
Less County share of						1
general excise	-24,922		-28,004		-30,564	
General fund tax	·····					
revenues	\$101,456		\$147,000		\$162,000	

Source: Department of the Tax Commissioner.

* Includes collections of compensation-dividends tax, repealed effective January 1, 1958. † Does not equal total due to rounding. ‡ Including fuel retailers' permits (\$1 each) not shown above.

Finally, it is quite possible that in the short period of time that has elapsed since the general excise rates were revised, the burden of the retail tax increase may have remained on persons selling goods or services whose prices, for one reason or another, change only slowly. For example, the fees of doctors, lawyers, accountants, oculists and marriage counselors, and practitioners of other professions who seldom bill their clients for the tax on their fees, may not yet have been adjusted to the increased tax on the gross income from the sale of such services. Unless the amount of fee is increased, or the tax added to it, the burden of the larger general excise tax remains on the professional man in private practice. It is submitted, however, that in time the tax increase is as likely to be reflected in the level of fees charged--just as would changes in rent, secretarial salaries or other costs borne by such self-employed persons. The following chapters generally assume, except where special factors otherwise indicate, that increases in taxes on goods and services alike tend to be shifted along to ultimate consumers.

Chart 3

FUNDING OF TERRITORIAL & COUNTY TAX REVENUES



SMALL BOAT

\$ 100,000

UTILITY FRANCHICE

\$1,500,000

VEHICLE

WEIGHT

\$8,600,000

General Excise Tax Changes

CHAPTER 2

Changes in the General Excise Tax and in Prices*

Excises are taxes on specific commodities or services, and they are generally collected from sellers--manufacturers, producers, wholesalers and retailers--rather than from buyers. Most excises are hidden in the over-all price, though in retailing they may be shown separately from price. Hawaii's general excise tax, which applies to the receipts of virtually all enterprises for profits (except those, such as public utilities, which are subject to a special tax instead) yields about half of all tax revenues going into the territorial general fund.

Although the general excise provides the largest source of tax revenues for the territorial government, it is also the most critically debated levy in our local tax system. With few exemptions and much pyramiding, this tax (or really complex of interrelated taxes) has brought charges of discrimination from many quarters.

Certain changes in the general excise were effected by the 1957 legislature in an attempt to lessen its possible discriminatory effect on locally produced items that are in competition with imported items. Rate reductions were made at the producing, manufacturing, processing and wholesale levels. The $1 \frac{1}{2}$ per cent tax on producing and manufacturing was reduced to 1 per cent and the tax on wholesaling was lowered from 1 to 3/4 per cent. Some food processors also received tax relief. For example, processors of tuna and of fruit juices had their tax rate reduced from 2 1/2 to 1 per cent while the rate on sugar and pineapple processing remaining at 2 1/2 per cent. On the other hand, retailers and contractors had their tax rates increased from $2 \frac{1}{2}$ to $3 \frac{1}{2}$ per cent. Since the increase of 1 per cent on retailing was to be applied to local and mainland products alike, the 1957 territorial legislature may have assumed that such a tax rise would not put local products at a disadvantage. But this judgment may have been in error, as will be shown in the three chapters which follow.[†]

SHIFTING AND INCIDENCE OF THE GENERAL EXCISE TAX

Those who pay taxes to the government are frequently not the ones who actually bear the burden of the tax. Federal and territorial excise taxes, for example, are paid to the government by producers, manufacturers, wholesalers and retailers. But in most instances these taxes are ultimately shifted either "forward" to consumers

^{*}By Daniel M. Slate, Assistant Professor of Economics.

[†]For a more general discussion of the coneral excise tax see: Robert M. Kamins, *The Tax System of Hawaii* (Honolulu: University of Hawaii Press, 1952) Chapters III, IV, V, and VII: Robert M. Kamins, *Harvaii's Revised Tax System*, College of Business Administration, University of Hawaii, 1957, pp. 9-14.

through higher prices, or "backward" to workers through lower wages, to farmers through lower farm prices, and to resource owners through lower rents or lower resource prices than would have existed in the absence of the tax. The final resting place or "incidence" of an excise tax is usually far away from the man who actually turns the tax money over to the government. It is this final resting place of a tax that determines many of its economic effects.

We may assume that in most instances a taxpayer will try to shift a tax whenever he can. The question then is when and under what conditions <u>can</u> a tax be shifted? The answer--only when the taxpayer is able to obtain a higher price for his product or is able to pay a lower price for his resources. Thus, a price change is necessary in order to shift a tax.

Excise taxes as well as other types of taxes cannot increase demand for the taxed item. On the other hand, excise taxes tend to raise the costs of doing business and therefore tend to reduce the output of the firm. This lower supply tends to push price up. Or, if the firm can reduce its non-tax costs, it can maintain the same output at relatively the same price. In the first example, the excise tax was shifted forward to the consumer through a price increase. In the second example, the excise tax was shifted backward to resource owners by reducing the price of their services.

Are these arguments applicable to tax reductions? Are excise tax reductions eventually shifted to benefit resource owners through lower product or service prices or higher wages, rents and resource prices? Or to put it another way, can general excise tax reductions improve the competitive position of the favored firm or industry? If so, we would expect some price change to indicate that shifting.

To answer this question with respect to recent changes in the Hawaii general excise tax, we undertook a study of the retail food industry, confining our research to the island of Oahu. The remainder of this chapter will discuss: (1) the factors affecting local food prices, and (2) actual price movements and their possible association with the 1957 general excise reductions.

FACTORS AFFECTING FOOD PRICES

On Oahu, the advent of the supermarket has not only changed the nature of food distribution but it also has reduced the influence of the large wholesale food dealers. Although certain exclusive lines of food products still cannot be had except through one of the established wholesale outlets, Oahu supermarkets have been increasingly able to avoid the use of these local wholesalers and have acquired many lines of food directly from mainland sources. This ability of supermarkets to circumvent more traditional distribution channels has been the normal outcome of their increased sales volume and their dominant position in the retail food market. Furthermore, the power of supermarkets to avoid local wholesale markets has also placed additional pressure on local wholesalers to reduce their selling margins, frequently bringing them closer to mainland standards.

The General Price Level

The general level of food prices (as other commodities) depends on: (1) the wholesale price level for local and mainland products, (2) costs of transportation, (3) actual or imputed financial charges, (4) the market structure and merchandising practices, and (5) taxes. From this list of factors, and considering that much of Hawaii's food is imported from the mainland, as well as most fertilizers, weedkillers and other supplies used in local farming, one can surmise that the general price level of food on Oahu will tend to be somewhat higher than the level of food prices on the Pacific coast. It is also apparent that as the level (average) of foodprices may move upward or downward, the prices of individual items may vary in a contrary way, depending on the particular factor affecting mainland and local sources of their supply.

Several generalizations can be made about the movement of prices in Oahu's food industry.

- (1) Costs of moving goods to the territory (transportation costs and interest on inventory) are generally passed on to the consumer by raising wholesale food prices anywhere from 5 to 10 per cent above mainland wholesale levels.*
- (2) Retailers frequently apply percentage markups, rather than certain specified amounts, to the "landed price." This practice leads to a significant amount of pyramiding. Percentage tax rates have much the same effect.
- (3) Locally produced foods that are competitive with imports are, in turn, governed by the level of "landed cost" plus some psychological differential which may or may not favor the price of the local product. For example, local coffee has a psychological price disadvantage and local eggs have an advantage in the minds of consumers: These preferences show up in price differentials of anywhere from 5 cents to 10 cents per pound or per dozen.
- (4) Because of Hawaii's insular position, which necessitates the maintenance of large inventories relative to sales turnover, a time lag exists between price changes on mainland and local food markets. This time lag depends not only on the distance between markets but also on the number of shipments and continuity of supply.
- (5) Since food prices depend on the continuity of a mainland supply, any interruption of transportation service may have price repercussions.
- (6) The increasing rate of federal government expenditures in

^{*}For additional information on pricing policies and price movements in Hawaii see: Shelley M. Mark, Price Controls in Hawaii: A Regional Inter-industry Approach (Unpublished doctoral thesis, University of Washington, 1956) pp. 36-39.

the territory has put extensive upward pressure on Hawaii's price system, as well as increasing consumer incomes. Although personal income has increased, especially on Oahu, prices have also tended to increase, and the long-run impact has been to spread an inflationary pressure over wide areas of the economy regardless of the importance of mainland prices in the determination of local prices. We have also observed what economists generally call a shift to "superior goods" and the development of broader "taste patterns" with the growth in personal income.

Specific Prices

To determine the impact of a specific tax on a specific item would even be more complicated. For example, we would not only need to know the pattern of forces affecting the general wholesale and retail price levels, but we would also need to know the many factors that determine the price of a specific item from day to day. Most important among these are: (1) degree of price competition, (2) structure of markets, (3) legalfactors, such as fair trade laws, resale-maintenance contracts, etc., (4) seasonal, cyclical, and long-run changes in supply and demand, (5) the pattern of tastes, technology, asset-holding and income distribution, (6) the level and rate of change of per capita income, (7) range and variety of goods and services offered to consumers, (8) tax rates -- their incidence and shiftability, and (9) the rate of change of the eight price determinants mentioned above.

GENERAL EXCISE RATE CHANGES AND RETAIL PRICE MOVEMENTS

Retail prices of 20 pairs of comparable mainland and local produced food products sold in Honolulu were examined over a 16 month period (May 1957 through September 1958) to determine whether the 1957 changes in the general excise tax rates affected the relative price position of locally produced food products.

The principal assumptions underlying the original analysis of the changes in retail food prices were that all important factors affecting those prices <u>except tax costs</u> would remain relatively constant over the period of observation, or that changes in these factors could be allowed for in the analysis. Since the general excise rate reductions should mean tax savings for local producers, manufacturers and wholesalers, then such tax reductions might also be reflected in relative price reductions at those levels. Such relative price reductions might also be expected to result in a better competitive price position for local products and manufacturers. If a more favorable price position for local products actually did occur, then there would be justification to conclude that tax reductions might be passed on to consumers in the form of visible price reductions at the retail level, compared with the prices of foodstuffs

Table 2

RELATIVE CHANGES IN RETAIL PRICES OF ISLAND FOODS

2nd Quarter 1957 to 3rd Quarter 1958*

FAVORABLE PRICE MOVEMENT							
Price Disadvantage Became Advantage	Price Ad Increa	vantage sed	Price Disadvantage Decreased				
Macaroni Tomatoes, fresh†	Round Ste Cookies Fruit Juic Jelly	Beef Liver Onions, round					
	UNFAVORABLE PR	UNFAVORABLE PRICE MOVEMENT					
	Price Disadvantage Increased	Price Advantage Decreased	-				
	Chicken, roasting Pork Chops Soda Crackers Tuna, canned Eggs Macadamia Nuts	Chuck Roast Cottage Cheese Coffee Carrots, fresh Honey					

Source: Retail prices in Honolulu stores observed by territorial Department of Labor and Industrial Relations.

•Table shows decrease in price of locally produced food compared with price of same or similar imported food as a "favorable price movement" and increase of price of locally produced food relative to mainland food as an "unfavorable price movement."

[†]Price of 3rd quarter of 1957 compared with 3rd quarter of 1958.

imported from the mainland and elsewhere. On the other hand, if a less favorable or constant relative price position for local products occurred, then we would conclude that the tax reductions were not passed on, or if they were, that they were offset by more important changes in other economic factors that affect the price of a specific food product on the local market.

Empirical Data

A quarterly breakdown of relative changes in retail food prices for 20 comparable mainland and island products for the 16 month period is given in Appendix A. A comparison of these average prices over the year and one-half indicates that those local products which had an absolute price advantage over comparable mainland products tended in most cases to maintain that advantage. But a close look at quarterly changes in these relative prices indicates that there was no general pattern to price movements of local versus mainland products over the same period. Some products, while maintaining an absolute price advantage, showed a relative decline over the period, and vice versa. For example, the relative price advantage of island round steak increased while the relative price advantage of island chuck roast decreased. Island baking products demonstrated the same diversity: the relative price advantage of island cookies increased while the price disadvantage of local soda crackers increased. Other local products, such as macaroni and tomatoes, that had an absolute price disadvantage at the beginning of the study showed a relative price advantage at the end, while still other local commodities maintained both their absolute and relative positions with only minor variations. A more graphic picture of these changes in competitive retail prices for local and mainland products is given in Table 2.

Apparently, as Table 2 indicates, tax changes were not the only changes affecting the price of local foodproducts in the period studied. (For example, note that in the case of meat products tax changes alone do not explain the wide diversity of subsequent price changes.) This is what we should expect to happen in a dynamic economy. Thus, any complete or realistic analysis of the impact of tax changes on the prices of specific food products should also involve the joint observation of all other factors that influence such prices.

What the problem required--and what was not possible to undertake within the resources available for this study--was simultaneous observation of changes in wholesale prices, transportation costs, labor costs, markup policies, and seasonal movements in the supply of various foods. Only on the basis of such extended observation would it be possible to state with confidence the impact on retail prices of the 1957 amendments to general excise tax rates.

CHAPTER 3

The General Excise Tax and Island Egg Production *

This chapter deals with the effects of the territorial general excise tax and the 1957 changes in its rates on the island egg producer. The effects of this tax and of changes in its rates can be expected to be similar for any Hawaiian industry which has the following characteristics:

Most of its inputs and sales are subject to the tax.[†] 1.

Its product faces the competition of an almost identical 2. imported product.

The Island Egg Producing Industry

On January 1, 1958, 252 commercial egg producers operated in the Territory. They differed greatly in size of operation, returns and costs. Their flocks ranged from 50,000 or more to as low as 100 layers. Their 1957 gross returns per farm from eggs in cartons ranged from an average of \$9,600 on the island of Hawaii to an average of \$26,400 on the island of Oahu. (All farm gross returns from producing eggs mentioned in this chapter are gross returns after deducting transportation and marketing costs.)

The island egg industry is going through a period of change with respect to size, number of operators, and buying, selling and operating methods. The number of producers is declining, but output per farm and total territorial output is increasing. In 1946, the 750 commercial egg producers in the Territory averaged 320 layers per farm and a gross return from eggs in cartons of about \$2,500 per year. In 1957, the 252 egg producers averaged 2,100 layers and an annual gross return from cartoned eggs of \$18,300. Total territorial egg production for sale rose from 2.5 million dozens in 1946 to 8.7 million dozens in 1957.[‡]

With increasing size of operations, island egg producers have tended to buy and sell more directly. Formerly, their feed and supplies passed through an importer and a retailer, and possibly also a wholesaler. Now more egg producers buy directly from an importer and occasionally even directly from a mainland seller. Most island-produced eggs are now sold directly to retailers, either by producers themselves or by producers' cooperatives. Formerly island eggs were generally handled by an additional marketing agent--a wholesaler.

^{*}By Perry Philipp, Associate Agricultural Economist, Hawaii Agricultural Experiment Station. †In the case of island eggs, only sales to the Armed Forces and other agencies of the Federal Government are exempt from the general excise tax. ‡These statistics are mostly based on Statistics of Hawaiian Agriculture 1957, University of Hawaii Agricultural Economic Report 56, pp. 54-56, 1948 Statistics of Diversified Agriculture in Hawaii, Hawaii Agricultural Extension Circular 263, p. 19, and 1948 Statistics of Diversified Agriculture in Hawaii, Hawaii Agricultural Extension Circular 217, pp. 12-14.

As egg producers expand their output, they try to reduce costs by mechanizing and streamlining their operations. However, not all producers are able to make these changes in methods of production, purchasing and selling at the same rate or speed. As a result there is a great variation between egg producers in the territory in their ways of doing business and in their costs and returns per dozen eggs.

The Model Farm

Costs and returns of a hypothetical egg producer are used to show the effect of the general excise tax and its rate changes. This representative or model farmer is assumed to have had a 1957 gross return from the sale of cartoned eggs of \$21,234. This gross return is about one-sixth larger than the 1957 gross return of the average island egg producer. (A larger-than-average farm is used as a model to take into account the trend toward larger egg producing farms in the territory. The costs and returns of this model farmer are based on the actual 1957 records of several island egg producers and are believed to represent producers of about average efficiency for that size of farm.)

Farm costs are separated into two groups--those which are subject to the general excise tax and those which are not (Table 3 following). Costs subject to the general excise tax include feed and feed hauling, chicks, cartons, gasoline, other supplies and miscellaneous costs. Also included are depreciation on components of buildings and other capital assets, such as building materials, which were subject to the general excise tax when bought.

Costs not subject to the general excise tax include utilities, insurance, labor, interest and taxes. Also included are those components of buildings and other depreciable capital assets, such as labor and utilities, on which no general excise tax was paid when the investment was made.

All hired labor and the labor of the operator and his family are evaluated at \$40 per 48-hour week, or \$0.83 per hour. An interest charge of 6 per cent on the total farm investment at present valuation, estimated at \$23,600, is included as a cost.

This model farmer is a specialized egg producer. In the calculation of the amount of general excise tax on farm products sold, it is assumed that 5 per cent of all eggs, primarily the checked eggs, are sold at the farm to consumers at \$0.53 per dozen. The remaining 95 per cent are sold through a farmers' co-operative. This cooperative is assumed to sell its eggs at \$0.61 per dozen, the average price to retailers for eggs in cartons on Oahu in 1957. The general excise tax on 95 per cent of the farmer's egg sales is calculated on the basis of this price. The cooperative deducts 8 1/2 cents per dozen eggs for transporting, handling, packing and

selling. All gross returns to the farmer are, therefore, calculated at the price of \$0.53 per dozen eggs.

The farmer himself sells his cull hens, New York dressed, at wholesale at the farm. It is assumed that he does not sell any broilers or fryers.

The Incidence of the General Excise Tax on the Island Egg Producer

The farmer is affected by the general excise tax law in two ways: (1) by the tax levy on the goods and services which he buys, and (2) by the tax levy on the products which he sells.

It is assumed that the sellers of goods and services to the egg producer pass on to him the entire burden of the general excise tax which they have to pay on their sales to him. Most sellers show the total amount of the tax--3 1/2 per cent on retail sales since July 1, 1957 -- as a separate item on their invoices. Occasionally a seller does not itemize the tax at all or shows only a 2 1/2 per cent tax-the tax rate on retail sales in effect before July 1, 1957--as a separate item on his invoice. However, in the last two cases, the sale of privately branded goods is usually involved. Only a detailed audit of the accounts of these sellers would indicate whether they actually absorbed the tax or the tax increase or whether they increased the price of their merchandise by the amount of the tax or by the amount of the tax increase. It is assumed that they, too, pass on the entire 3 1/2 per cent tax levy to the farmer.

Egg producers are assumed to bear only a small portion of the burden of the general excise tax which they have to pay to the territorial tax department on their egg sales. The reason for this assumption will become apparent if we consider the determination of egg prices in the Honolulu market and the rates of the general excise tax on sales by local egg producers and importers, respectively.

Hawaii does not produce all the eggs which it consumes. In 1957, 21 per cent of the total territorial market supplies of eggs were imported from the mainland or from foreign countries.* Island produced eggs are generally preferred by consumers over imported ones when both sell for the same price.

Prices of mainland eggs in Honolulu appear to be primarily determined by the West Coast price of eggs, cost of transportation to Honolulu, and the demand and supply for mainland eggs on the Honolulu market. They may also occasionally be affected by particularly small or large supplies of island eggs.

The price premium of island-produced over mainland imported eggs seems to be largely dependent on the supply and demand of island eggs. Under normal supply conditions for island and mainland eggs, the price of island eggs apparently does not exceed for any appreciable length of time a maximum premium above the price of mainland eggs without reducing sales of island eggs. In other words,

*Statistics of Hawaiian Agriculture 1957, p. 16.

island and mainland eggs are competing directly with each other in the Honolulu market. For 1957, the average differential in the price to retailers between island and mainland imported eggs in cartons in Honolulu was 6.7 cents per dozen for large and 4.3 cents for medium-sized eggs.

General excise taxes on retail sales of island and mainland eggs are the same--3 1/2 per cent since July 1, 1957. There is no reason to doubt that, except for a short period of adjustment, the full tax burden on retail sales of both island and mainland eggs--as on retail sales of any other commodity--tends to be shifted forward by the retailer to the consumer in the form of an increase in egg prices.

The general excise tax rate on wholesale sales of mainland eggs by the importer is now 3/4 of 1 per cent. Taxes are 1 per cent, or 1/4 of 1 per cent higher, on the sales of island eggs at wholesale by the producer or his cooperative. The importer can shift to the buyer his whole tax burden on egg sales at wholesale. The island producer can do the same with 3/4 of his 1 per cent tax burden without affecting the competitive position of island and mainland eggs. However, he cannot shift forward the remaining 1/4 of 1 per cent of his tax which he must pay over and above what is paid by the egg importer. It is this 1/4 of 1 per cent tax which is the "small portion of the burden of the general excise tax" on the sale of their eggs, which island egg producers have to bear.

Effects of the General Excise Tax on Island Egg Producers Under Various Conditions

The effects of the general excise tax on the island egg producer are compared at the old and at the new tax rates. This is done first on the assumption that the farmer buys his supplies directly from the importer or manufacturer. Then it is assumed that the farmer's supplies are handled by an importer or manufacturer and by a retailer. Finally the effects of exempting the island egg industry from all or part of its present general excise tax payments are analyzed.

> Assuming 1957 Egg Prices a. Under Old Tax Rates

The general excise tax rates effective before July 1, 1957--from now on called "old" tax rates--are assumed to be in effect. These old tax rates were 2 1/2 per cent on sales by retailers, 1 per cent on sales by wholesalers, and 11/2 per cent on sales by producers at wholesale. It is further assumed that all the goods, which the model farmer buys and which are subject to the general excise tax, pass through the hands of only one dealer in the territory. For example, the farmer buys his feed directly from the importer.

The model farmer's costs and returns for 1957 under these conditions are shown in Appendix Table B. His total costs, including a charge for his and his family's labor and an interest charge on his total farm investment, amount to \$24,198. His gross returns are \$22,834.

Table 3 COSTS AND RETURNS OF A MODEL EGG PRODUCER IN 1957, ASSUMING PURCHASES HANDLED BY ONE DEALER; UNDER NEW TAX RATES*

Item	Value of producer's purchases (excluding general excise)	General excise taxes on his purchases and sales	Producer's costs and returns	Individual costs as percentage of total costs
1. Costs				
A. Subject to general excise	\$12,498	\$ 438	\$12,936	53.3 %
Feed and feed transportation	1,288	45	1,333	5.5
Chicks	976	7	983	4.1
Egg cartons	269	6	2 75	1.1
Gasoline	652	24	676	2.8
Other supplies	1,150	40	1,190	4.9
Depreciation (portion)	65	2	67	.3
Professional services	\$16,898	\$ 562	\$ 17,460	72.0
Sub Total			\$ 6,492	26.8
B. Not subject to general excise tax †				
C. General excise taxes on sales				
3 1/2% of sales value of 2,011 dozen				
eggs sold at retail at \$0.533 per dozen		38	38	
1% of sales value of 38,204 dozen eggs	r			
sold at wholesale by the cooperative				
at \$0.611 per dozen		233	233	
1% of sales value of chickens sold at				
wholesale by the farmer		16	16	
Sub Total		287	287_	
Total Cost		\$ 849	\$ 24,239	100.0%
2. Gross returns				
2,011 dozen eggs @ \$0.533			1,072	
38,204 dozen eggs @ \$0.526			20,095	
Chickens			1,600	
Total gross returns			\$ 22,767	
3. Net loss			-1,472	
4. Total family labor income			1,467	
5. Family labor income per hour			0.41	

*See text for price assumptions and "new" tax rates. †For details see Appendix Table B.

Gross returns less total costs gives the net profit or the net loss--a measure of the return to the farmer for managing his business. In this case the farmer suffers a net loss of \$1,364, in large part the result of calculating the farmer's gross returns on the basis of 1957 egg prices, which were the lowest since World War II.

If the labor of the farmer and of his family is <u>not</u> included as a cost, the difference between gross returns and costs is called the family labor income. It is a measure of the return to the farm family for its labor and management. The family labor income of the model farmer amounts to \$1,575, or \$0.44 per hour worked by him and by members of his family.

Suppliers paid a 21/2 per cent general excise tax on their sales to the farmer because he, for tax purposes, is considered to be the ultimate consumer of these goods and services. In the case of gasoline sales to the farmer, the 21/2 per cent tax is payable only on the sales value of the gasoline, excluding federal and territorial fuel taxes. There is one exception to the tax rate of 21/2 per cent on the sales of supplies to the egg producer. Sales of egg cartons are only subject to a tax rate of 1 per cent, since the cartons are resold by the farmer together with the eggs.

The farmer's purchases of production goods and services subject to the general excise tax amount to \$17,304, which is about 72 per cent of his total costs. General excise taxes paid by the dealer on the sale of these supplies to the farmer amount to \$406. This is 2.3 per cent of the cost of supplies to the farmer and 1.7 per cent of his total costs.

General excise taxes on the farmer's sales amount to \$402, or 1.6 per cent of his total costs. Taxes on both purchases and sales total \$808, or 3.3 per cent of his total costs.

It has so far been assumed that the farmer owns his land. If it is assumed that he leases his land for 400 a year, this rental is also subject to a 2 1/2 per cent general excise tax payment. If he bears this levy his total tax payment is thus increased by another 10.

b. Under New Tax Rates

Costs and returns of the model farmer at the new tax rates, which became effective on July 1, 1957, are shown in Table 3, and his general excise tax burden, costs and returns under the old and the new tax rates are compared in Table 4. Tax rates on all supplies purchased by the farmer, which are subject to the tax, increase from 2 1/2 per cent at the old rates to 3 1/2 per cent at the new rates. Egg cartons are the only exception since the tax on these declines from the old rate of 1 per cent to the new rate of 3/4 of 1 per cent. Tax payments on items bought by the farmer increase from \$406 to \$562 as a result of the new rates, an increase of \$156, or 38 per cent.

The farmer's tax burden on his egg sales declines by \$59, or

Table 4

COMPARISON OF COSTS AND RETURNS OF MODEL EGG PRODUCER IN 1957 UNDER OLD AND NEW TAX RATES*

Costs and			
Old Tax Rates	New Tax Rates	Difference in Costs and Return New vs. Old Rate	e in d Returns, Old Rates
0 400	th 500	1 . F 0	00 off
\$ 406	5 562	\$ 156	38.0%
117	58	- 59	50.0%
523	620	97	18.0%
24,198	24,239	41	0.2%
22,834	22,767	-67	-0.3%
-1,364	-1,472	-108	8.0%
1,575	1,467	-108	-7.0%
0.44	0.41	03	-7.0†
	Costs and Old Tax Rates \$ 406 <u>117</u> 523 24,198 22,834 -1,364 1,575 0.44	Costs and Returns under: Old New Tax Rates Tax Rates \$ 406 \$ 562 117 58 523 620 24,198 24,239 22,834 22,767 -1,364 -1,472 1,575 1,467 0.44 0.41	Costs and Returns under: Difference Old New Costs and Tax Rates Tax Rates New vs. \$ 406 \$ 562 \$ 156 117 58 -59 523 620 97 $24,198$ $24,239$ 41 $22,834$ $22,767$ -67 $-1,364$ $-1,472$ -108 $1,575$ $1,467$ -108 0.44 0.41 03

Assuming farm price of \$0.53 per dozen eggs

*For details see Table 3 and Appendix Table B. †This is the correct rate of decline when data are not rounded off.

50 per cent, as the result of the lower rates on sales by producers at wholesale.

The net effect of the shift to the new tax rates on the tax burden of the producer--the \$156 tax increase on purchases less the \$59

Table 5

COMPARISON OF COSTS AND RETURNS OF MODEL EGG PRODUCER IN 1957 UNDER OLD AND NEW TAX RATES"

Costs and Returns under: Difference in Item Old Costs and Returns, New Tax Rates Tax Rates New vs. Old Rates General excise tax burden on producer's supplies 562\$ 156 38.0% \$ 406 S General excise tax burden of farmer -68 on producer's egg sales 136 68 -50.0% Total general excise tax burden of farmer 542 630 88 16.0% Total cost 24.26124,284 23 0.1% Total gross returns 26,791 -65 -0.2% 26,856 Net profit 2,595 2,507 -88 -3.0% 5,446 -2.0% 5,534 -88 Total family labor income Family labor income per hour 1.56 1.54 -0.32 -2.0%

Assuming farm price of \$0.63 per dozen eggs

*Except for the higher price of eggs, and the resulting higher excise tax on sales, all assumptions are unchanged from those in Table 3 and Appendix Table B respectively.

tax decrease on sales--is an increase of \$97, or 18 per cent. This shift to the new tax rates, thus results in an increase of 0.2 per cent in his farm costs, an increase of 7 per cent in his net loss, and a decline of 6 per cent in his family labor income. His family labor income per hour declines from \$0.44 to \$0.42.

Assuming Higher Egg Prices

So far in this analysis, the model farmer is shown to have suffered a loss, under the average egg price for 1957, 0.53per dozen. In Table 5 costs and returns of the farmer at the new and old tax rates are compared assuming the price for island eggs at the farm to be 0.63. (Island farmers received a price of 0.63 or more in all post war years previous to 1955. They estimate that their prices during 1958 averaged somewhere between 0.53 and 0.63.)

The higher farm price results in a net profit to the model farmer and in a greatly increased family labor income. Substitution of the new for the old tax rates at this higher egg price has the same consequences as it had at the lower egg price: a larger tax burden and a smaller net profit.

Effects of New and Old Tax Rates When Supplies Go Through Two Dealers

So far it has been assumed that the supplies of the egg producer were handled by only one dealer in the territory, who generally imported them from the mainland and sold them to the farmer at retail. It is now assumed that the goods bought by the producer are handled by two dealers in the territory-a wholesaler-importer and a retailer. No other changes are assumed in the operations of the model farmer.

Costs of the sample farmer are larger when his supplies are handled by both a wholesaler and a retailer than when they are handled by only one dealer. There are three reasons for this difference:

- 1. The sum of the margins charged by a wholesaler and a retailer is almost always larger than the margin charged by one dealer in a direct sale.
- 2. Supplies handled by two dealers instead of one are taxed one more time, namely when they are sold by the wholesaler to the retailer.
- 3. "Pyramiding" of the general excise tax by which is meant the following: The wholesaler lists the general excise tax paid by him as an item on his invoice to the retailer. The retailer figures his mark-up on the wholesaler's price plus the latter's general excise tax payment. The retailer in turn puts his general excise tax payment on his bill to the farmer. The farmer's price thus includes the tax paid by the wholesaler and the tax paid by the retailer, which includes a tax on his mark-up on the wholesaler's tax.

Table 6

	Costs and returns when $^{\uparrow}$			
Item	Purchases were Handled by One Seller	Purchases were Handled by Two Sellers	Difference in Costs and Returns	
General excise tax burden				
on producer's supplies	\$ 562	\$ 723	\$ 161	29%
General excise tax burden				
on producer's egg sales	58	58	0	0
Total general excise tax				
burden of farmer	620	781	161	26
Total cost	24,239	25,445	1,206	5
Total gross returns	22,767	22,767	0	0
Net loss	-1,472	-2,678	-1,206	82
Total family labor income Family labor income per	1,467	261	-1,206	-82
hour	0.41	0.07	34	- 82‡

COMPARISON OF COSTS AND RETURNS OF MODEL EGG PRODUCER IN 1957 UNDER DIFFERING PURCHASING CHANNELS*

*It is assumed that farmers receive 0.53 per dozen eggs at the farm and that the *new* tax rates are in effect. iCalculations, similar to those appearing in Table 3 and Appendix Table B, are obtainable from author of this chapter. iThis is the correct rate of increase when data are not rounded off.

The total costs of the model farmer whose purchases are handled by two dealers are \$1,206 greater than those of the farmer whose purchases are handled by one dealer, as shown in Table 6. The farmer buying through two dealers has an additional general excise tax burden of \$161 over that of the farmer who buys through one dealer. This additional tax burden of \$161 amounts to 26 per cent of the tax burden of the farmer who buys through one dealer and to 13 per cent of the total cost differential of \$1,206 between the two farmers.

The general excise tax must be paid every time a commodity changes ownership. Other things being equal, tax costs can be cut by reducing the number of times a commodity changes ownership. This is probably one reason why more egg producers tend to buy their supplies directly from importers or manufacturers. It may also be a reason why more egg producers sell directly to retailers or sell through their cooperatives, rather than to an independent wholesaler.

The general excise tax does not, however, seem to be the major reason for this trend toward more direct buying and selling. Since July 1, 1957, the tax cost of handling supplies or eggs through an additional wholesaler has declined from 1 per cent to 3/4 of 1 per cent. In spite of this decline in the tax rate, egg producers have accelerated their shift toward direct buying and selling. Effects of Exempting the Egg Industry from General Excise Taxation a. Exemption of All Items Purchased and Sold by Producer.

Let us assume that all supplies bought by the model farmer are exempt from the general excise tax (Table 7) This eliminates the farmer's tax burden on his supplies, which is the major portion of his total general excise tax burden.

Let us also assume that sales of all foods are exempt from the general excise tax. Since eggs are food, the island farmer, the importer of mainland eggs, and the retailer will pay no excise tax on their egg sales.

Table 7

	Costs and	Difference in Costs and Peturns		
Item	Present General Excise†	Exemption from General Excise	if Total Exemption were Granted	
General excise tax burden				
on producer's supplies	\$ 56 2	\$0	\$ - 562	-100.0%
General excise tax burden				
on producer's egg sales	58	0	-58	-100.0%
Total general excise tax		4 <u>4. (19. 19. 19. 19.</u>		
burden of farmer	620	0	-620	-100.0%
Total cost	24,239	23,390	-849	-3.5%
Total gross returns	22,767	22,560	-207	-0.9%
Net loss	-1,472	- 830	642	-44.0%
Total family labor income	1,467	2,109	642	44.0%
Family labor income per				
hour	0.41	0.60	0.19	44.0%‡

EFFECT OF GENERAL EXCISE TAX EXEMPTION ON COSTS AND RETURNS OF MODEL EGG PRODUCER*

*It is assumed that the farmer's supplies are handled by only one dealer in the territory, that he receives 0.68 per dozen eggs at the farm, and that the new tax rates are in effect. Data taken from Table 4.

This is the correct rate of increase when data are not rounded off.

If we assume no other changes in the Hawaiian egg market, competition is likely to reduce the retail price of both mainland and island eggs by the full amount of the general excise tax of $3 \ 1/2$ per cent formerly paid by the retailer. The price reduction on the farmer's wholesale sales of eggs tends to be 3/4 of 1 per cent, although he previously paid 1 per cent tax on these sales. The reason is that he only has to meet the price reduction of his competitor, the island importer of eggs, who previously paid 3/4 of 1 per cent tax on his wholesale sales.

Under these assumptions, the farmer's total excise tax burden of \$620 disappears. His total costs decline from \$24,200 to \$23,400, or by about 3 1/2 per cent. His net loss declines from \$1,472 to \$830, or by 44 per cent. His family labor income per hour rises from \$0.41 to \$0.60. b. Exemption of All Supplies Purchased by Producer

We here assume that the farmer pays the general excise tax on his egg sales, but that his supplier's sales to him are tax exempt. His position improves as follows as a result:

His excise tax burden declines by \$562, or 91 per cent of his total excise tax burden. His net loss declines from \$1,472 to \$910, or by 38 per cent. His labor income increases from \$1,467 to \$2,029, or by 38 per cent. His family labor income per hour increases from \$0.41 to \$0.57.

c. Exemption of Feed Purchases Only

Feed and feed hauling constitute the largest single cost of the model egg producer, amounting to 53 per cent of his total costs. Let us suppose that feed and feed hauling are exempted from the general excise tax and that the resulting saving to feed sellers is completely passed on to the farmer in lower feed prices. This decreases the farmer's excise tax burden by \$438, or by 71 per cent of his total excise tax burden. His net loss declines from \$1,472 to \$1,034, or by 30 per cent. His total family labor income increases from \$1,467 to \$1,905, or also by 30 per cent, and his family labor income per hour rises from \$0.41 to \$0.54.

Item	Tax and Price Per Dozen at New Tax Rates		Tax and Price Per Dozen at Old Tax Rates	
	Island Eggs	Mainland Eggs	Island Eggs	Mainland Eggs
General excise on supplies of				
island egg producer	1.40¢	0.05¢	1.01¢	0.04ϕ
General excise on eggstsold at				
wholesale by island producer	.61		.92	
General excise on eggs sold at				
wholesale by mainland importer		.42		.56
Total general excise on producer				
and importer	2.01	.47	1.93	.60
Excess of tax on island eggs over				
that on mainland eggs	1.54		1.34	
Price to retailer, including tax	61.81¢	56 .12¢	62.12¢	56 .2 6¢
Excess of tax on island eggs over				
tax on mainland eggs as % of				
island egg price to retailers	$2,5^{\sigma_{ m /o}^{\prime}}$		2.2%	

Table 8 COMPARISON OF ACCUMULATED GENERAL EXCISE TAXES ON ISLAND AND MAINLAND EGGS AT WHOLESALE LEVEL'

•The mainland egg price used is the unweighted average 1957 price to retailers of a dozen grade-A large and medium eggs in cartons of 55.7 cents. [†] Figures on tax payments of island **p**roducer per dozen eggs are based on data in Table 3 and Appendix Table B.

Comparative Effects of General Excise Tax on Island and Imported Eggs at Wholesale Level

The general excise tax (levied at several stages of the production and marketing process) on a dozen island and mainland eggs at the wholesale level is compared at both the new and old tax rates in Table 8. At the new tax rates, the total tax amounts to 2.01 cents per dozen island and to 0.47 cents per dozen mainland eggs, compared, respectively, with 1.93 cents and 0.60 cents under the old rates. Thus, the tax burden on island eggs is slightly increased and that on mainland eggs slightly decreased under the new rates.

The difference in the accumulated tax on island and mainland eggs is caused by two factors:

- (1) the larger amount of taxable supplies bought by the island egg producer than by the mainland importer, and
- (2) the heavier tax on the sale at wholesale of island than on mainland eggs--discussed earlier.

Taxes at the new rate brought the tax burden on supplies to 1.40 cents per dozen for the island egg producer and to 0.05 cents for the mainland importer. (Some relatively minor items used in the marketing of eggs, which are subject to the tax, are disregarded here for both island and mainland eggs.)

A dozen eggs sold by the island egg producer at wholesale is taxed at 1 per cent at the new tax rate, compared with $1 \frac{1}{2}$ per cent at the old tax rate. The importer of mainland eggs pays $\frac{3}{4}$ of 1 per cent on wholesale sales at the new tax rates compared with 1 per cent at the old tax rate. The new tax rate compared with 1 per cent at the old tax rate. The new tax rate thus reduces the tax rate differential on sales at wholesale by the producer and by the importer by $\frac{1}{4}$ of 1 per cent. However, it still discriminates by $\frac{1}{4}$ of 1 per cent against island produced eggs. Island egg prices are higher than those on mainland eggs. This higher tax base for island eggs is another reason for the higher tax payments on their sale.

The total accumulated tax payment per dozen is 1.54 cents larger for island than for mainland eggs at the new tax rates, this tax differential amounting to 2.5 per cent of the island egg price to the retailer. The additional tax of 1.34 cents at the old tax rate amounts to 2.2 per cent of the island egg price to the retailer.

The true tax disadvantage of island produced versus mainland imported eggs is not always quite as high as just shown. Sales taxes similar in effect to the general excise tax exist in some states. While egg sales and the major commodities which egg producers buy are usually tax exempt, some items purchased by mainland producers may be subject to these sales taxes.

Let us assume for convenience that the rate of such a sales tax on sales to farmers in a mainland state is the same as the new rate of the general excise tax on retail sales. Let us further assume that feed, egg cartons and chicks are excluded from this tax. In that case

the actual tax advantage of eggs imported from that state to Hawaii as compared with island produced eggs is 1.36 cents per dozen, rather than 1.54 cents.

Item	Tax and Price Per Dozen at New Tax Rates		Tax and Price Per Dozen at Old Tax Rates	
	Island Eggs	Mainland Eggs	Island Eggs	Mainland Eggs
General excise tax up to and in- cluding sale at wholesale* General excise tax on retail sale Total general excise tax paid	2.01¢ 2.36	0.47¢ 2.16	1.93¢ 1.69	0.60¢ 1.53
Excess of tax on island eggs over that on mainland eggs at the	4.37	2.63	3.6 2	2.13
consumer level Consumer's cost of dozen eggs including general excise tax on	1.74		1.49	
retailer t Total tax as percentage of con-	69.73¢	63 . 33¢	69 . 40¢	62 . 85¢
sumer's cost Excess of tax on island eggs over tax on mainland eggs at the consumer level as % of cost of	6.3%	4.2%	5.2%	3.4%
island eggs to consumer	2.5%		2.1%	

Table 9 COMPARISON OF ACCUMULATED GENERAL EXCISE TAXES ON ISLAND AND MAINLAND EGGS AT CONSUMER LEVEL

*From Table 8. †Margin of 9 per cent added to prices to the retailer given in Table 8.

Comparative Effects of General Excise Tax on Island and Imported Eggs at Consumer Level

The amounts of general excise tax (levied at several stages in the production and marketing process) included in the retail price of a dozen island and a dozen mainland imported eggs are shown in Table 9.

For both island and mainland eggs, more taxes are paid at the new than at the old tax rates. On locally produced eggs, the cumulative general excise tax burden was increased by about 3/4 of a cent per dozen; on mainland eggs the tax burden was increased by about 1/2 cent. In sum, therefore, the general excise tax differential on island eggs was increased by the 1957 tax rate amendments.

Summary

The 1957 changes in general excise tax rates increased taxes on items bought by the island egg producer and on his retail sales, but decreased taxes on his wholesale sales. The 26

net effect of the new rates is an increase in the tax burden of the producer.

The new tax rates increase the adverse effect of the tax on the competitive position of island produced in relation to mainland imported eggs. The tax (levied at several stages in the production and marketing process) on a dozen island eggs sold at wholesale is 1.5 cents higher than it is on a dozen mainland eggs. At the consumer level, the accumulated tax on island eggs is 1.7 cents higher per dozen than on mainland eggs.

The buying methods of the egg producer affect the amount of tax which he has to pay. His tax is higher when his purchases are handled by <u>both</u> an importer (or manufacturer) and a retailer than when he buys directly from an importer (or manufacturer). However, the new tax rates increase his taxes more when he buys directly than when he buys supplies which pass through both middleman and a retailer.

The level of egg prices does not materially change the relative effects of the new and old tax rates. The existence of the tax encourages egg producers to buy and sell more directly or to sell more through cooperatives.

If all items purchased and sold by a representative egg producer were to be exempted from the general excise tax, there would result a decline of $3 \ 1/2$ per cent in his costs and an increase in income of 19 cents per hour worked by him and his family. Tax exemption of his total purchases or of his feed purchases only would increase his and his family's labor income by 16 and 13 cents, respectively, per hour worked.

CHAPTER 4

The General Excise Tax and the Local Coffee Industry*

This chapter examines the impact of the general excise tax on the Kona coffee industry.[†] The analysis is concerned primarily with a comparison of the effects of the general excise tax before and after the amendments of 1957. More specifically, it attempts to answer the following questions: (1) How does the general excise tax affect the cost of marketing and producing locally grown coffee?; (2) Who bears the final burden of the general excise taxes imposed on the coffee industry?; (3) How do changes in the general excise tax rates affect income, investment and employment in the coffee industry?; and (4) To what extent has the formation of milling cooperatives reduced general excise tax payments by the industry?

The Hawaii Coffee Industry

Coffee occupies a primary position among the diversified crops (i.e. other than sugar and pineapple) produced in the territory. The value of the coffee crop in 1957, reported at \$5,828,000, ranked first among the diversified crops and represented approximately 43 per cent of the total value of diversified crop production in that year. Coffee acreage in that year accounted for nearly 40 per cent of all land devoted to diversified crop production.

Although the coffee industry in the territory started as early as 1825, the first large scale local plantings took place in the late 1890's in response to increase in world coffee prices. During this period, coffee plantings aggregated as much as 14,000 acres. This expansion was very short lived for in the year 1900 the acreage dropped to 6,400 acres as a result of a slump in coffee prices. In subsequent years, the coffee acreages declined still further. "The losses incurred in the expansion and contraction of the coffee industry established the realization that coffee production was more ideally suited to the family type farm than to large scale plantation agriculture. ..."

Since then, family production units have characterized the coffee industry. The survival of the coffee industry probably would not have been possible under any other system of agriculture. During the depression years of the 1930's when coffee prices were extremely low, the small farmers managed to remain in the industry despite the fact that average income per farm was less than \$500 a year.

[•]By Clinton T. Tanimura, Research Assistant, Legislative Reference Bureau, and Joseph T. Keeler, Assistant Director, Hawaii Agricultural Experiment Station. iLiterally, the term "Kona coffee" should be restricted to describe coffee grown in the district of Kona, on the island of Hawaii. However, since nearly all of the coffee produced in the territory is in Kona. the term is generally used, as here, to describe any coffee grown in the territory. ‡Joseph T. Keeler, "An Economic Picture of Coffee-Past and Present," Hawaii Parm Science, Hawaii Agricultural Experiment Station, University of Hawaii, July 1957, p. 7.

The end of World War II brought with it the second important boom period for coffee. The price of green coffee[•] f.o.b. the Kona mill increased from \$.253 a pound in 1947 to \$.661 a pound in 1957--an increase of 161 per cent. Coffee plantings again responded to the rise in prices but to a much lesser extent than in the boom of the 1890's--increasing by only 90 per cent, from 3,400 to 6,460 acres.

Increasing production costs is a major impediment to the growth of the coffee industry in Hawaii. In 1932, for example, the average cost of producing a pound of parchment coffee was approximately 4 cents; in 1955 the average cost was about 20 cents. These cost figures cover cash outlays only and make no allowance for family labor, depreciation on buildings and equipment, and interest on investment. When these expenses are also included, the average cost of producing a pound of parchment coffee amounts to 40 cents. Since parchment coffee prices have recently (December 1957 to June 1958) ranged from \$.29 to \$.38 a pound, it is apparent that coffee farming is frequently not profitable.

One way in which the farmer can offset high costs of production is to increase yields per acre. Early results of experimentation still under way have shown that present yields can be vastly increased through the introduction of new coffee varieties and soil enrichment. A new pruning system is also being developed which may reduce expensive labor requirements during harvesting.

Declining prices for coffee is largely out of the control of the Kona farmer. The amount of coffee produced in Hawaii is too small to influence world prices. However, since the decline has affected the major producing countries much more seriously than it has Hawaii, there is assurance that these countries will seek to support coffee prices by production and marketing controls.

<u>Farmers.</u> There are approximately 1,100 coffee farmers in the Territory. Although a few farmers cultivate as much as 50 to 100 acres, the vast majority have farms which are extremely small, averaging under 6 acres in size. Most farmers lease rather than own their lands.

Coffee farms, for the most part, are family operated and hired labor is used only during the harvesting period. Typically, a farmer invests some \$2,400 in machinery and buildings, exclusive of the family dwelling. By national standards, the local investment per farm is small. However, when investment is measured on a peracre basis, the local ratio is much higher than for mainland agriculture.

Usually, cherry coffee is converted into parchment coffee right on the farm. Machinery necessary for this function is the

^{*}The terms "green", "cherry" and "parchment" coffee describe coffee in the various stages of refinement. When coffee is harvested from the tree, it is in the form of a bright red oherry and it is commonly referred to as "cherry" coffee. When the fleshy part of the cherry coffee is removed, the seed whichremains is surrounded by a paper-like covering. In this form it is called "parchment" coffee. After the covering is removed from the parchment coffee, it is referred to as "green" coffee.—the form in which coffee is sold to the roaster.

principal cause of the relatively high farm investment. However, in recent years, an increasing number of farmers have chosen not to process coffee, preferring to sell cherry coffee to the millers and avoid the difficult and costly conversion operation.

<u>Millers.</u> There are 12 millers in the territory, all located in Kona. The miller's job is mainly one of converting cherry and parchment coffee into green coffee and grading green coffee into the several classifications. An important addition to his job is selling the coffee to roasters in the territory and on the mainland.

Eight of the 12 are known as "private millers"; they buy cherry and parchment coffee outright from the farmers. The remaining four are milling cooperatives which are operated by an association of farmers. The cooperatives do not take title to the coffee, but process and sell it in the name of the farmer. The farmers in turn pay for the cost of operating the mill in proportion to the amount of coffee they have processed.

<u>Brokers.</u> Each miller, private and cooperative, employs a coffee broker to act as his representative in negotiating sales with mainland coffee roasters. The broker also keeps the miller informed as to the going market prices and advises him on market trends.

<u>Roasters.</u> Some 85 to 90 per cent of Hawaii's coffee production is sold to mainland roasters. With one known exception, mainland roasters use Kona coffee in small quantities to blend with the cheaper grades of Brazilian coffee. Some of the better known mainland coffee brands which use Kona coffee as a blend are "Hills Brothers", "Maxwell House" and "M.J.B." Caswell and Sons, the only mainland roasting firm which sells pure Kona coffee is relatively small and its sales largely restricted to the Pacific Coast.

Local roasters purchase the remaining 10 to 15 per cent of the annual harvest. Coffees packaged locally are usually pure Kona coffee, for which local demand has been limited. As a consequence, local coffee brands can not command the same price as mainland brands, but usually sell for about 10 cents per pound less.

How Does the General Excise Tax Affect the Cost of Marketing and Producing Locally Grown Coffee?

In this analysis, general excise taxes imposed on firms engaged in the marketing of coffee will be examined separately from taxes on firms selling production goods to the farmers. The discussion will be limited to determining the amount of the tax burden as a cost item in marketing and producing coffee. The shifting of the tax is considered in the next section.

Tax on Marketing Under Former Rates. Since the general excise tax is a turnover tax, it imposes a progressively heavier burden as the number of times a commodity is sold, as it flows from production to consumption, increases--assuming, of course, that all sales 30 are within the jurisdiction of territorial laws. Consequently, identification of the various channels through which locally produced coffee is marketed is of critical importance inevaluating the impact of the general excise tax on the industry.

Virtually all of Hawaii's production is marketed through the five marketing channels described below. The relative importance of the various channels is shown by the parenthesized percentages, which indicate the estimated portion of the total volume of coffee marketed in 1956.*

<u>Channel 1:</u> Coffee is sold by the farmer through a cooperative miller to a mainland roaster. An intermediary in this marketing process is the mainland broker who serves as the miller's agent. Only one taxable sale is involved. (37 per cent)

<u>Channel 2:</u> The farmer sells his coffee to a private miller who in turn sells the coffee to a mainland roaster through his broker-agent. Coffee marketed through this channel is sold twice and thus taxed twice. (36 per cent)

<u>Channel 3:</u> The farmer sells his coffee to a private miller through a cooperative miller and the private miller subsequently sells the coffee to a mainland roaster through his broker. Two taxable sales are involved.(17 per cent) <u>Channel 4:</u> The farmer sells through the cooperative mill to a local roaster who processes and packages the coffee and sells it to a local retailer who then sells it to the island consumer. Coffee marketed through this channel is taxed at three levels. (6 per cent)

<u>Channel 5:</u> The farmer sells to a private miller who sells the coffee to a local roaster who in turn sells it to a local retailer. The final sale is between the retailer and the final consumer. Four taxable sales are made in this channel. (4 per cent)

Estimates of general excise taxes imposed on firms engaged in the marketing of coffee in 1956, indicate that in the aggregate these firms paid about \$152,000, or 2.8 per cent of the total value of green coffee marketed in that year. About half of this amount was paid by the farmer group; the millers accounted for 28 per cent; the roasters' share was 8 per cent; and the retailers paid about 14 per cent.

Taxes paid on coffee sold to mainland roasters (Channels 1, 2 and 3) accounted for 71 per cent of all taxes imposed on this sector of the industry. Channel 2 alone accounted for more than half of this amount. Coffee retailed locally accounted for the remaining 29 per cent.

^{*}The percentages presented are, at best, merely informed guesses. There are no collected data relating to the marketing patterns for local coffee.
ESTIMATED GENERAL EXCISE TAXES ON THE MARKETING OF KONA COFFEE UNDER THE 1957 AMENDMENTS

MARKETING	Per Cent	ΤΑΣ	(ON FA	RMER	TAX	ON MII	LLER	TAX	ON R	DASTER	TAX	ON R	ETAILER	Total	Tax Per 100
CHANNELS ^a	of Total Market- ing	Rate (%)	Base (\$000)	Amount Paid (\$)	Rate (%)	Base (\$000)	Amount Paid (\$)	Rate (%)	Base (\$000)	Amount Paid (\$)	Rate (%)	Base (\$000)	Amount Paid (\$)	Taxes Paid (\$)	green (\$)
1. Farmer: Cooperative	07		o ooob	00.000										00.000	
Miller: Mainland Roaster	37	1	2,0280	20,300	-	-	-	-	-	-	-	-	-	20,300	•63
2. Farmer: Private Miller: Mainland Roaster	36	1	1,783 ^c	17,800	1	1,973b	19,700	-	-	-	-	-	-	37,500	1.20
3. Farmer: Cooperative Miller: Private															
Miller: Mainland Broker	17	1	830q	8,300	3/4	932b	7,000	-	-	-	-	-	-	15,300	1.04
4. Farmer: Cooperative															
Retailer: Local Consumer	6	1	329b	3,300	-	-	-	1	454 ^e	4,500	31/	2 522 ^e	18,300	26,100	5.00
5. Farmer: Private															
Retailer: Local Consumer	4	1	198c	2,000	1	219 ^b	2,200	1	₃₀₃ e	3,000	31/	2 348 ^e	12,200	19,400	5.58
Total	100	1	5,168	51,700	3/4-1	3,124	28,900	1	757	7,600 f	31/	2 870	30,500	118,600) 1.36

Sources: Unpublished data on green coffee processing from the Agricultural Experiment Station, University of Hawaii; University of Hawaii, Crop Reporting Service, Agricultural Statistics 1956.

- a. Represents only the major marketing channels utilized.
- b. Estimated on green coffee price of \$.63 a pound.
- c. Estimated on parchment coffee price of \$.45 a pound and that 1 1/4 pounds of parchment coffee yields a pound of green coffee.
- d. Estimated green coffee price of \$.565 a pound.
- e. Estimated on retail price of \$1.00 a pound and retailers' markup of 15 $^{\prime\prime}\!\!\!/$ of cost.
- f. Does not equal total, due to rounding.

Another view to the relative importance of the general excise tax as a cost item can be had by measuring the amount allocable to the tax from each 100 pounds of green coffee sold. For coffee sold in 1956 to mainland roasters, general excise tax payments averaged approximately \$1.38 of the total receipt of \$63 per 100 pounds of green coffee. In contrast, for coffee marketed through local roasters, the average share of the tax was \$5.11 of the total value of \$63.

Tax on Marketing Under New Tax Rates. The effect of the 1957 tax rate changes can best be evaluated by estimating the level of tax payments in 1956, if the new tax rate schedule had been applicable. This is attempted in Table 10. The results can be summarized in the following manner.

(1) The estimated tax liability of the marketing sector of the industry amounted to \$118,600, or about \$34,000 less than that paid under the former tax rates. This amounts to a 22 per cent reduction in total tax payments by the coffee industry.

(2) Aggregate tax payments by firms whose tax rates were reduced by the 1957 law, i.e., the farmers, millers and roasters, were reduced by some \$43,000. (See Table 11.) However, the 1 per cent increase in the retailer's tax (from 21/2 to 31/2 per cent) resulted in an additional tax burden of about \$9,000, or about 40 per cent more than the estimated actual payments in 1956.

(3) The share of total taxes on coffee paid by Channels 1, 2 and 3 was reduced from 70 to 60 per cent. In dollar amount, taxes paid on coffee utilizing these channels were lowered by some \$35,000. Taxes obtained through Channels 4 and 5 increased only slightly (by \$1,000) in absolute terms but as a percentage of total taxes, the share rose from 30 to 40 per cent.

(4) Tax payments per 100 pounds of green coffee sold to mainland roasters averaged about \$.93 and the average taxes per 100 pounds of locally roasted coffee was \$5.23. Taxes levied on coffee sold to mainland buyers were reduced by one-third, while tax payments by firms engaged in selling to the local market increased slightly.

Taxes on Production. The discussion, thus far, has considered the general excise tax payments on the <u>product</u>. The tax also affects costs of the industry's inputs although taxable items used by farmers in the production of Kona coffee make up a relatively small part of the total cost of production. A study of 1956 production costs made by the University of Hawaii reports that Kona farmers expend an average of \$981 an acre to produce coffee.* Of this amount, expenditures on items taxable under the general excise tax amounted to \$261, or approximately 27 per cent of the total cost of production. The remaining amounts were accounted for by the cost of

^{*}Joseph Keeler, John Y. Iwane and Dan K. Matsumoto, An Economic Report on the Production of Kona Coffee, Agricultural Economic Bulletin No. 12, University of Hawaii, 1958.

	Before 198 Amendr	57 Tax ments	After 1957 Amendmer	Increa (-) Decre	ise or ase	
	Estimated Tax Payment	Per Cent	Estimated Tax Payment	Per Cent	Amount	Per Cent
A. By Firms						
Tax on Farmer	\$ 77,300	50.6	\$51,700	43.6	\$ -2 5,600	-33.1
Tax on Miller	42,200	27.6	28,900	24.4	-13,300	-31.5
Tax on Roaster	11,400	7.5	7,600	6.4	- 3,800	-33.3
Subtotal	\$130,900	85.7	\$88,200	74.3*	\$-42,700	-32.6
Tax on Retailer	21,800	14.3	30,500	25.7	8,700	40.0
TOTAL	\$152,700	100.0	\$118,600*	100.0	\$-34,100*	-22.3
B. By Marketing Channels						
Channel 1	\$ 30,400	19.9	\$ 20,300	17.1	\$-10,100	-33.2
Channel 2	56,200	36.8	37,500	31.6	-18,700	-33.3
Channel 3	21,700	14.2	15,300	12.9	- 6,400	-29. 5
Subtotal	\$108,300	70.9	\$ 73 ,1 00	61.6	\$-35,200	- 32.5
Channel 4	\$ 24,800	16.2	\$ 26,100	22.0	\$ 1,300	5.2
Channel 5	19,600	12.8	19,400	16.4	- 200	- 1.0
Subtotal	\$ 44,400	29.0	\$ 45,500	38.4	\$ 1,100	2.5
TOTAL	\$15 2, 700	100.0*	\$118,600	100.0	\$-34,100	-22.3

ESTIMATED GENERAL EXCISE TAXES ON COFFEE MARKETING UNDER OLD AND NEW RATES

Sources: Unpublished data on green coffee processing from the Agricultural Experiment Station; University of Hawaii, Crop Reporting Service, Agricultural Statistics 1956,

* Does not equal the sum of its parts, due to rounding.

family and hired labor, interest payments and allocations to depreciation of buildings and equipment.

The change-over to the amended tax rate schedule, summarized in Table 12, shows an increase in the tax burden on the production sector of the industry byabout \$12,000, or by about 25 per cent. The tax saving resulting from the one-half per cent cut in the processing tax was not significant. Of the various kinds of production supplies utilized, only fertilizer, which accounted for 37 per cent of total taxable production costs in 1956, is manufactured in the territory. The effect of the one-quarter per cent reduction in the wholesaling tax was also minimal--resulting in a decrease of only \$1,300 in tax payments. On the other hand, the one per cent increase in the re-³⁴ tailing tax caused tax payments on supplies and equipment purchased by coffee farmers to rise by \$15,000--again assuming that this tax was entirely shifted to the farmers.

Table 12

ESTIMATED GENERAL EXCISE TAXES ON COFFEE PRODUCTION UNDER OLD AND NEW RATES

	Before 195 <u>Amendme</u> Estimated Tax Payment	7 Tax <u>nts</u> Per <u>Cent</u>	After 1957 <u>Amendme</u> Estimated Tax Payment	Tax ents Per Cent	Increa: (-) Deci Amount	se or rease Per Cent
A. Items of Expenditure						
Land Rental	\$ 5,244	10.6	\$ 7.342	12.0	\$ 2.098	40.0
Supplies	3,680	7.5	4,583	7.5	903	24.5
Repairs	7,646	15.5	9,521	15.6	1.875	24.5
Fertilizer	20,680	41.9	24,187	39.6	3,507	17.0
Gasoline	7,044	14.3	8,770	14.4	1,726	24.5
Freight	2,415	4.9	3,381	5.5	966	40.0
Weedicide	2,665	5.4	3,319	5.4	654	24. 5
TOTAL	\$49,374	100.0*	\$61,103	100.0	\$11,729	23.8
B. Kind of Tax						
Processing Tax	\$ 6,363	12.9	\$ 4.242	6.9	\$-2.121	-33.3
Wholesaling Tax	4,864	9.9	3,612	5.9	-1.252	-25.7
Retail Tax	38,147	77.3	53,249	87.2	15,102	39.6
TOTAL	\$49,374	100.0*	\$61,103	100.0	\$11,729	23.8

Sources: Basic cost data obtained from An Economic Report on the Production of Kona Coffee, Agricultural Economic Bulletin No. 12, University of Hawaii, 1958.

*Does not equal the sum of its parts, due to rounding.

Overall Effect of Tax Changes

The preceding analysis has shown that in the marketing sector, aggregate tax payments under the amended tax rates was reduced by \$32,000, or by about 22 per cent. However, taxes on the producing end of the industry under the new rates were increased by about \$12,000. In the aggregate, therefore, the amended rates resulted in a tax saving to the industry of approximately \$20,000, or little more than 10 per cent of the tax payments under the old rates.

It will be noted that the discussion up to this point has not attempted to indicate who really benefited from the tax reduction in the marketing sector or who really paid for the increased tax burden in the production phase. The tax payments indicated for the farmer, miller, roaster and retailer in the preceding tables merely show the amount of the legal incidence of the tax. Whether the firm which is legally obligated to pay the tax actually bears the burden of the tax, or instead shifts it to the firms with which it deals is the matter of discussion in the next section.

Who Bears the Final Burden of General Excise Taxes on the Coffee Industry? Method of Analysis. The determination of the manner in which the general excise taxes which are imposed on firms engaged in producing and marketing coffee are shifted can be made by evaluating the relative strengths of the principals in each taxable transaction. For example, if the seller is in a more favo cable bargaining position than the buyer, the tax imposed on the seller by law is likely to be passed forward to the buyer. If, however, the buyer is in a more commanding position, the seller would in all likelihood be unable to pass the tax forward. Whether he will absorb the tax in this case depends on his position vis-a-vis the other firms with which he deals. For example, if the seller is in an unfavorable position with the buyer but, on the other hand, is in a favored one in his relation with firms which sell goods and services to him, the seller will probably shift the tax backward to these suppliers.

In the following discussion, each of the major transactions will be examined to determine the competitive strengths of the firms and how the tax is shifted. The first transaction considered is the sale of coffee by the local millers to the mainland roasters.

Private Millers vs. Mainland Roasters. When local millers sell coffee to the mainland roasters (or when farmers sell to the mainland roasters through a cooperative mill), a tax equal to 1 per cent of the gross value of the sale (1 1/2 per cent under the old law) is imposed on the miller. Can the miller shift this tax obligation to the roasters by way of a higher price?

Two considerations make the forward shifting of the tax extremely unlikely. First, the price which the miller receives from the mainland roaster is established within a rather narrow range by prices on the world coffee market. The price of Kona coffee, therefore, is determined by the world's supply and demand conditions. Although Kona coffee is a high grade coffee and many roasters of popular mainland brands are accustomed to use Kona coffee in their blends, the existence of plentiful amounts of substitutable high grade coffee from other producing areas, such as Columbia, Guatamala and El Salvador, keeps Kona coffee prices in line with the world's price. Moreover, since the quantity of Kona coffee marketed represents only a minute part of the total world supply, changes in the quantity of Kona coffee have a minor effect on world coffee prices. Mainland roasters, therefore, will not pay a higher price than that justified by the world price.

Observation of market prices further supports the contention that local millers cannot pass the tax on to mainland roasters via a price adjustment: the price of Kona coffee in recent years has been slightly lower than that justified by the market. Historically,

Kona coffee prices were two to three cents below the Colombian coffee. However, in recent years, the differential has been increased to three to four cents. One explanation for the existence of this adverse price condition is that there is no arrangement for unified marketing of Hawaii coffee, each of the 12 millers in Kona marketing his coffee independently, Since local millers have demonstrated a willingness to undercut their competitors' prices, the mainland roasters have played one miller off against another to obtain lower prices. Persons associated with the local coffee industry believe that if the entire local coffee supply were marketed by one organization, it would be possible to secure a higher price. However, the upper limit to this price increase would be the world's market price for comparable grades of coffee. Mainland roasters using Kona coffee for blending can be expected to continue using Kona coffee as long as the price is in line with the price of other high quality coffees, for a change in blend can be made only at some expense and uncertainty as to consumer reaction.

Private Millers vs. Local Roasters. Millers are also unable to pass their tax obligations to local roasters. This follows from the fact that the price which local roasters pay for their coffee is the same as that paid by mainland roasters, minus Hawaii-to-mainland transportation charges. There have been instances where local roasters have paid slightly higher prices for their coffee, but in these cases the sales contracts provided for a longer period of payment and so included an interest factor.

Private Millers vs. Farmers. If local millers cannot shift any part of their general excise tax burden to mainland or local roasters, can they shift this tax burden back to the farmers who sell coffee to them? How is the tax imposed on the farmers on their sale of coffee to the millers shifted?

An examination of the competitive positions of the private millers and farmers shows that farmers are in an extremely weak bargaining position in their dealings with private millers. Consequently, it can be concluded that farmers generally cannot shift their general excise tax obligations to the millers but may instead bear the miller's tax obligations.

The miller's position is strong since milling is an essential operation which must be done in the territory. There is no roaster demand for cherry or parchment coffee; roasters buy only green coffee. Moreover, it is unlikely that the individual farmer can bypass the millers by undertaking the milling process on his own, unless it would be through the formation of milling cooperatives. The high initial cost of obtaining the necessary equipment, land, and storage facilities and the complex technical knowledge necessary in grading and processing coffee practically prohibits milling by the individual farmer. Although there is competition among private millers to attract as large a number of farmers as possible as their patrons, competition is rarely exhibited in terms of price. At any given time, all millers usually offer the same buying price.

The millers rather attempt to attract and maintain their farmer patrons by other means. One method is through the extension of credit. Farmers are permitted to buy on credit all the fertilizer, weedicide and other farm supplies which they need-on condition that the debt be repaid in coffee. Another method is through the use of lease restrictions. Certain millers lease coffee land to farmers with the provision that the farmers agree to sell the coffee harvested from these lands to the lessors' mills.

Moreover, marketing practices are not conducive to price competition since most farmers do not go from one miller to another in order to obtain the highest price for their coffee. Once an association between a miller and a farmer is made, it is not readily broken. Farmer loyalty to a miller may be based on personal friendship or family association. However, the most important cause is the farmer's belief that being a steady customer brings assurance of fair and perhaps preferred treatment by the miller.

The establishment of milling cooperatives within the last five years has tested the traditional reluctance of private millers to compete through the price medium. Local coffee experts confirm the fact that farmers can obtain, in nearly all cases, a better price by selling their coffee through a cooperative than by selling to a private miller. The appeal of greater profits has given incentive to many farmers to join the cooperatives. The four cooperatives currently existing processed about 60 per cent of the total harvest in 1956.

However, even when faced with the forceful competition posed by the cooperatives, private millers have made only minor adjustments in their offering prices. They appear to be confident that their present share of the market, 40 per cent, is rather assured. This is not an unreasonable supposition, since one could expect that all farmers who are willing and able to shift to the cooperatives have already done so. Those who are still dealing with private millers can be expected to continue this association. Personal loyalty, credit and lease restrictions probably will keep this business relationship intact. Moreover, farmers who need cash immediately after harvest will also prefer to deal with the private millers. When selling through a cooperative, a farmer's cash return is contingent on the sale of his coffee to a roaster. It is possible that several weeks may pass before the farmer receives his return. On the other hand, when coffee is sold to a private miller, the farmer receives cash immediately upon delivery of the coffee to the mill.

In sum, these considerations indicate that the private millers are in a stronger bargaining position than the farmers. It is inferred, therefore, (1) that the price which the miller offers to the farmer will be reduced by the amount of the general excise tax which the miller must pay on his sales to the roasters; and (2) that the farmer is in no position to shift the general excise tax imposed on his gross sales to the miller.

Will a reduction in the private miller's general excise tax rate, such as has been effected by the 1957 tax amendments, be reflected in a higher price offer by the millers? If the millers calculate that a small increase in their price offer would not affect their buying volume, they may retain the tax savings as profit. However, two of the largest private millers maintain that their general excise tax savings under the 1957 law are passed on the farmers. One rationalization which could be advanced is that private millers will attempt to compete in terms of prices, if to do so will not impair their profit margin. It is possible that the passing on of tax savings may have been prompted by non-economic reasons, such as to maintain good public relations and to maximize farmer income at a time when coffee prices are exceptionally low.

Farmers vs. Suppliers of Production Goods. Evidence obtainable shows that the farmers not only are unable to pass their tax obligations to their suppliers but they must also bear the burden of the general excise taxes levied on their suppliers.

Many farmers buy supplies on credit. This places them in an extremely weak position in bargaining for lower supply prices. By the same token, the suppliers are in a position to shift their own tax burdens to these debtors. Private millers are also the principal suppliers of tools, fertilizers and other production goods.

The inability of farmers to bargain successfully with their suppliers is made clear when even the milling cooperatives whose purchases represent the needs of hundreds of farmers have been unable to exact a more favorable purchasing price for locally manufactured fertilizers. Historically, fertilizers manufactured by the Pacific Chemical and Fertilizer Company have been sold through two large private millers, American Factors and Captain Cook, Ltd. Recently, the cooperatives have attempted to avoid the expense of the distributors' markup by ordering directly from the manufacturer. These attempts have failed, the orders being routed by the manufacturer to either of the distributors in Kona.

There is little possibility that farmers can shift the tax back to land owners. Most of the coffee lands are leaseholds and it can be said that the farmers have little alternative but to use them. However, even if given a choice most farmers would prefer to lease lands rather than to buy them, due to high land prices and unstable coffee prices. Representatives of the three largest lessors of coffee land, the Bishop Estate, Captain Cook, Ltd. and American Factors, have indicated that the excise tax on lease rental is added to the basic leasing charge.

The only other possibility left for the farmers is to pass their tax burden back to their hired labor. Again there is little likelihood that the farmers would be successful. Hired labor in Kona is scarce and has been more difficult to obtain with each passing year. On farms which hire more than 20 persons, the laborers are protected by the territorial minimum wage provisions.

Local Roasters vs. Local Retailers. The possibility that the tax imposed on the local roaster on his sale to the local retailer would be shifted backward to the miller is obviated since, as has been pointed out earlier, the price charged to the local roaster by the miller is the same as that charged to mainland roasters. Can the local roaster shift forward the tax imposed on his gross sales to the retailer?

There is reason to believe that the roaster can, at best, shift only a part of his tax costs to the retailer. The demand for locally roasted coffee is quite limited compared with the demand for nationally advertised coffees. As a consequence, local roasters have had to accept a price approximately 10 cents per pound below that of comparable mainland brands. Under such demand conditions, it is obvious that a tax levied only on local roasters must be absorbed out of profits, and the roaster could pass on only to the extent that taxes which are imposed on the distributors of mainland brands are shifted to the retailers. The tax rate levied on local roasters under the 1957 tax amendments is 1 per cent (1 1/2 per cent under the old law). The 3/4 per cent tax (formerly 1 per cent) on wholesalers of imported brands may be assumed to be passed in toto to retailers, for even the direct importation of coffee by retailers would be subject to the compensating tax which equals the tax rate imposed on wholesalers. However, as local roasters are subject to a 1 per cent tax, they would be able to pass on only three-fourths of their tax burden under the present tax rates to the retailers in order to maintain the same relative position with mainland coffee.

Local Retailers vs. Local Consumers. Generally speaking, the retailer who has received the tax passed on to him by the local roaster will in turn pass this tax on to the consumer along with the retail tax which he is legally obligated to pay.

Food items generally have a very low markup and taxes of the magnitude of the general excise tax imposed on this already narrow margin would be too large for the retailer to absorb as a regular practice. Moreover, since coffee for many persons is an essential food item, strong consumer reaction to a small increase in its price is not likely, particularly since the general excise applies to all other commodities, as well.

		(Base	ta)				
	Before 19	57	After 19	957	Incre	ase or	
	Amendmer	nts	Amendm	ents	(-) Decreas		
		Per		Per		Per	
	Taxes Paid	Cent	Taxes Paid	Cent	Taxes Pa	id Cent	
ULTIMATE TAXPAYERS A. Farmers		<u> </u>			•		
Tax on Farmers	\$ 77,300	38.3	\$ 51,700	28.8	\$-25,600	-33.1	
Tax on Millers	42,200	20.9	28,900	16.1	-13,300	-31.5	
Tax on Suppliers	49,400	24.4	61,100	34.0	11,700	23.7	
Subtotal	\$168,900	83.6	\$141,700	78.8*	\$ -2 7, 2 00	-16.1	
B. Roasters							
Tax on Roasters	\$ 3,800	1.9	\$ 1,900	1.1	\$-1,900	-50.0	
C. Consumers							
Tax on Roasters	\$ 7,600	3.8	\$ 5,700	3.2	\$- 1,900	-25.0	
Tax on Retailers	21,800	10.8	30,500	17.0	8,700	39.9	
Subtotal	\$ 29,400	14.6	\$ 36,200	20.1*	\$ 6,800	23.1	
TOTAL	\$202,100	100.0*	\$179,800	100.0	\$-22,300	-11.0	

ESTIMATED TAX BURDEN TO THE ULTIMATE PAYERS OF THE GENERAL EXCISE TAX UNDER TAX RATES EXISTING BEFORE AND AFTER 1957 AMENDMENTS

Sources: Unpublished data on green coffee processing from the Agricultural Experiment Station, University of Hawaii; University of Hawaii, Crop Reporting Service, Agricultural Statistics 1956.

*Does not equal the sum of its parts, due to rounding.

Summary of Shifting Analysis

Conclusions of the foregoing discussion can be summarized in the following manner. First, the major portion of the tax liability of the industry is paid by the farmer group. They not only absorb the general excise tax on their gross sales but also bear the taxes imposed on the suppliers' sales to them, and the tax imposed on the miller's gross income as well. The changes in the tax rates effected by the 1957 legislature, therefore, primarily benefited the farmers. Under the tax rates existing prior to July 1957, farmers bore about 84 per cent of all taxes paid by the industry, or approximately \$168,900. Under the new tax rates, the tax liability of farmers was estimated to be some \$27,000 smaller and their share of total industry tax payments was decreased to 79 per cent. Nevertheless, the greater bulk of the tax burden still falls on the farmers. (See Table 13.) Second, the millers and the suppliers of production goods to the coffee industry are in a more favorable position. These firms can successfully shift their general excise tax obligations. Consequently, the 1957 tax rate changes probably had little effect on them.

Third, the local roasters are likely to shift most of their general excise tax liabilities. Under the old tax law, it is estimated that the roasters could shift all but a third of their general excise tax payments. The new tax rates reduced by about onehalf the amount of the taxes which they must absorb. However, the estimated savings amounted to only \$2,000.

Finally, the consumers constitute the second largest taxpaying group. Under the old tax law, the consumers have accounted for 15 per cent of all general excise taxes paid by the coffee industry, or about \$29,000. Under the amended rates, the consumers' tax burden amounts to approximately \$36,000, and their share of total tax payments has risen to 20 per cent of the total for the industry.

How Do Changes in General Excise Tax Rates Affect Income, Investment and Employment in the Coffee Industry?

Since there has been no significant gain or loss in income through the 1957 tax changes for either millers or roasters, it can be concluded that for these two sectors of the coffee industry there has been created no increased incentives for the entry into the industry of new firms or for established firms to expand production.

Although the rate changes caused farmers as a whole to gain by some \$27,000 of net income (based on 1956 production data), the savings to the individual farmer is insignificant--approximately \$27. Even if the entire amount of the general excise taxes levied on the coffee industry in 1956 (under tax rates then existing) were abolished, the saving to the individual farmer would average only \$169.

The largest single determinant of income, investment and employment in the local coffee industry is the world's price of coffee. This is amply demonstrated upon examination of the cost and return characteristics of a typical Kona farm. For a farm consisting of some six acres of coffee-bearing trees, in 1956 the farmer expended about \$3,492, in cash or out-of-pocket expenses. Of this amount, land rent was \$135, wages to hired labor totaled \$1,700, and the remaining \$1,657 was spent for fertilizer, farm equipment, business taxes, gasoline and other expense items. The annual yield was about 17,000 pounds of parchment coffee. Estimated returns to the farmer under different price conditions are tabulated in Table 14. The figures show that each 5 cent change in parchment prices results in a change in the farmer's adjusted gross income by \$170--more than six times the \$27 savings resultings from the 1957 tax changes. The complete elimination of the general excise 42

Price of	Cost of		
Parchment	Production		
Coffee in	per	Gross	Net
Cents	Farm*	Return	Income
15	\$3,492	\$ 2,557	\$ - 93 5
2 0	3,492	3,410	- 82
2 5	3,492	4,262	770
30	3,492	5,114	1,622
35	3,492	5,967	2,475
40	3,492	6,819	3,327
4 5	3,492	7,672	4,180
50	3,492	8,5 24	5,0 32
55	3,492	9,376	5 ,884
60	3,492	10,229	6,737
65	3,492	11,081	7,589

EFFECT OF COFFEE PRICES ON NET INCOME FROM HYPOTHETICAL HAWAII FARM

*Cash or out-of-pocket costs.

taxes on the farmer, the miller and the suppliers would increase the farmer's income by about the same amount as would a 1 cent increase in price.

Examination of the history of coffee prices during the period 1947 to 1956 and the corresponding changes in acreages and the number of farmers in the industry show that green coffee prices had to double before changes in the number of farmers and in total

Table 15

HAWAII COFFEE: PRICES, ACREAGE, AND NUMBER OF FARMS-1947-'56

Year	Green Price (cents)	Index*	Acres	Index	Number of Farms	Index
194 7	25.3	100	3,400	100	700	100
1948	26.1	103	3,400	100	700	100
1949	26.6	105	3,400	100	703	100
1950	41.7	165	3,400	100	700	100
1951	48.8	193	3,450	101	705	101
1952	50.7	20 0	3,500	103	706	101
1953	53.2	2 10	3,750	110	712	102
1954	67.0	26 5	5,010	147	906	1 2 9
1955	64.5	2 55	5,140	151	876	12 5
1956	63.0	249	5,760	169	994	142

*Index numbers are based on 1947 equalling 100.

acreage were effected. (See Table 15.) It is not likely, therefore, that the modest tax savings resulting from the 1957 tax changes would stimulate the growth of the industry. Other factors which would have a greater effect on the farmer's decision to invest than changes in the general excise tax rates include the availability and cost of hired labor, mechanization and the cost of bringing new lands into production. The impact of the general excise tax on the development of the local coffee industry appears to be negligible.

Even if the total elimination of the general excise taxes affecting coffee farmers would not result in a significant growth in the industry, the tax does constitute a heavy burden on coffee farmers in terms of their ability to pay. When the average annual price of parchment coffee is \$.30 a pound, an average farmer has an adjusted gross income of only \$1,600. The amount of general excise tax burden which he bears will approximate \$178--more than 10 per cent of his adjusted gross income.*

Have Milling Cooperatives Reduced General Excise Tax Payments?

The formation of milling cooperatives has had a noticeable effect in reducing the burden of the general excise tax on the industry. Table 16 shows that had there been no cooperative mills, th general excise tax payments by the industry and by the farmer group would total about \$142,000 under the amended tax rates. This is approximately \$24,000 more than the estimated tax burden calculated for the industry in Table 10.

However, the largest monetary gain to the farmers joining the cooperatives is not in the savings from the general excise tax but in gaining a portion of the profit otherwise realized by the private miller by processing and selling their own coffee. On the assumption that 600 of the 1,000 farmers in 1956 were cooperative members (there is no accurate count of the actual number), the tax savings per farmer averages \$40 (\$24,000 divided by 600). On the other hand, if the milling operation provided a net income of only 1 cent per pound of parchment coffee processed, the farmer's net income would rise by \$180 and if (as certain coffee men suppose) the net income from this operation is actually about 3 cents a pound, the farmer's gain would average \$540.

This latter consideration, i.e., the farmer's obtaining a higher price through the gaining of what would otherwise be part of the miller's profit, more than any other, has probably been responsible for the tremendous growth of the cooperatives. (In 1956, it was estimated by the University of Hawaii's Agricultural Experiment Station that the cooperatives processed about 60 per cent of the total harvest.) If this reason explains why many farmers have joined the cooperatives, it still does not explain why the cooperatives were formed for since the farmers themselves did not provide the initial impetus for cooperative organization.

*Assuming an average price for green coffee of \$.50 a pound.

ESTIMATED EFFECT OF THE GENERAL EXCISE TAX IF NO MILLING COOPERATIVES WERE ORGANIZED

MADETING	P	er Cent	TA	X ON FA	RMER	TA	K ON MI	LLER	ТАХ	ON RO	ASTER	TAX	ON RET	TAILER	Total	Tax Per 100
MARKETING		of			Amount	:		Amount			Amoun	t		Amount	Taxes	Pounds
CHANNELS Total Yield:	lotal lielda	Rate: (%)	Base (\$000)	Paid (\$)	Rate (%)	Base (\$000)	Paid (\$)	Rate (%)	Base (\$000)	Paid (\$)	Rate (%)	Base (\$000)	Paid (\$)	Paid (\$)	GREEN (\$)	
1. Farmer: Private Miller: Mainla Broker	nd	90	1	4,462b	44,600	1	4,932ç	49,320	-	-	-		-	-	93 ,94 0	1.20
2. Farmer: Private Miller: Local Roaster: Local Retailer: Local Consume	: er	10	1	496b	5,000	1	548c	5,480	1	757	7,570	3 1/2	870	30 , 450d	48,450	5.57
	TOTAL	100	1	4,958	49,600	1	5,480	43,800	1	757	7,570	3 1/2	870	30,450	142,390	1.50

- a. Total marketing of green coffee in 1956 was 8,698,000.
- b. Estimated on the basis that the price of parchment coffee was \$.45 a pound and that 11/4 pounds of parchment coffee yields a pound of green coffee.
- c. Estimated on the basis that the price of green coffee was \$.63 a pound.
- d. The retail price for Kona coffee was assumed to be \$1.00 per pound and the retailers' markup was estimated at 15 per cent of cost.

£

Of the four cooperatives now functioning in Kona, only one was formed by the farmers themselves, and this cooperative is the smallest and the most recently organized. The other three cooperative mills were developed by several private millers who were willing to rent out their mills and work as salaried managers of the cooperatives. The exact reason why these millers were willing to change over to the cooperative form (possibly at some loss in income) is difficult to determine, but, whaever the causes may have been, it is not likely that considerations of general excise tax savings were of any significance. However, the formation of the cooperatives did have the result of reducing the farmers' general excise tax burden and has contributed to the expansion of the cooperatives in the milling of Kona coffee.

CHAPTER 5

The General Excise Tax and the Papaya Industry*

The growing and marketing of papayas is one of the major enterprises among the complex of commodities and functions making up the diversified agriculture of Hawaii. In 1957 there were 235 papaya growers in the territory who were operating some 543 acres of bearing orchard throughout the Islands. The gross value of the 15 million pounds of papayas marketed in the territory during 1957 was about \$1 million at the wholesale level. This value represents fresh fruit at point of sale to Hawaii retailers, processed papaya products at the processing plant, and fresh papayas packed for shipment to the mainland. Production of papayas has more than doubled since 1948, with the most rapid rate of gain occurring during the past five years when plantings on the Island of Hawaii began their spectacular expansion. From a reported 28,000 pounds of papayas exported fresh in 1949, these shipments had reached almost 2 1/2 million pounds in 1957. There has been a gain in the volume of papayas processed but this expansion has not been so great as in the marketings of fresh fruit.

Honolulu sales of fresh fruit through retailers account for over 75 per cent of the crop. Historically, this outlet had been supplied largely by Oahu growers, but since late in 1957 the neighbor islands, principally Hawaii, have been providing over half of the Honolulu market supply. For several years the export trade in fresh papayas has been dominated by "Big Island" shippers. The processing of papayas is centered on Oahu, although some of the fruit so utilized originates on other islands.

Applicability of Excise Tax to Papaya Industry

Except in those cases where papayas or papaya products are shipped from Hawaii by dealers or processors for sale or use outside the territory, the territorial excise tax generally applies to transactions at all levels through which these commodities are sold. The major exception noted is in connection with exports of both fresh and processed papayas which enter directly into the flow of interstate or foreign commerce.

Since July 1, 1957, the general excise tax has applied to the papaya industry in the following manner:

Level of Trade	Rate of Tax	Commodities Taxed
Producer	1%	Papayas sold as raw fruit for fresh use (including direct ex- port) or for processing

*By C. W. Peters, Agricultural Economist, Hawaii Agricultural Experiment Station.

Level of Trade	Rate of Tax	Commodities Taxed
	3 1/2%	Supplies and materials purchased by growers and used in producing
Processor	1%	Processed papaya products and most processing supplies manu- factured locally
	$2 \ 1/2\%$	Hawaiian sugar used in process-
	3/4%	Processing supplies manufac- tured outside the Territory
Wholesale or		
Export Shipper	3/4%	Fresh papayas sold for local resale
	$3 \ 1/2\%$	Supplies and materials used in packing fresh papayas for further sale
	3/4%	Processed papaya products sold for local resale
Retailer	3 1/2%	Fresh papayas sold to local con- sumers
	$3 \ 1/2\%$	Processed papaya products sold to local consumers

In addition to the indicated impact of the tax there are other less obvious points at which the general excise tax affects the production and marketing of papayas. For example, the manufacturer of fertilizer in the Territory normally pays a 1 per cent excise on his output but where a wholesaler is also involved before the grower buys his fertilizer at retail, there would be a further 3/4 per cent tax on the transaction. Similar multiple taxation occurs wherever operating supplies move through several dealers before being sold at the point where the retail tax rate becomes applicable. Processors and export shippers generally avoid some of the effect of successive taxes on their supplies because they buy in larger quantities than most growers and are able to deal directly with manufacturers or their sales agents.

Comparative Revenues from Application of the Excise Tax to the 1957 Trade in Papayas

In considering the effect of changes in the general excise tax on the current position and growth potential of the Hawaiian papaya industry, it is necessary to consider the magnitude of the changes and the points at which they occur. By applying to the taxable amounts estimated at the various levels of trade the excise rates effective immediately before and immediately after July 1, 1957, it is possible to gain some understanding of what the new tax rates 48

COMPARISON OF ESTIMATED GENERAL EXCISE TAXES FOR 1957 DERIVED FROM THE PRODUCTION AND SALE OF PAPAYAS, UNDER TAX RATES EFFECTIVE IMMEDIATELY BEFORE AND IMMEDIATELY AFTER JULY 1, 1957

Level of Trade and Commodities Taxed	Tax Base 1957	Tax Rate Prior to July 1, 1957	Amount of Tax	Tax Rate After July 1, 1957	Amount of Tax	Change in Revenue under New Rates
Grower Level					1	
Papayas for fresh use, local	\$ 609,600	1 1/2%	\$ 9,144	1%	\$ 6,096	+ \$ 3,048
Papayas for fresh use, export	122,850 ¹	11/2	1,843	1	1,229	- 614
Papayas for processing	34,000	1 1/2	510	1	340	- 170
Production factors ²	195,500	21/2	4,888	31/2	6,843	+ 1,955 ³
Subtotal	-		16,384		14,507	- 1,877
Processor level						-
Processed papaya products	165,800	1 1/2	2,487	1	1,658	- 829
Processing supplies ⁵						
Sugar	9,500	2 1/2	238	2 1/2	238	Same
Containers, labels, etc.	62,800	1 1/2	942	1	628	- 314
Subtotal			3,657		2,524	- 1,133
Wholesaler (or export shipper) level						
Papayas for fresh use, local	759,150	1	7,592	3/4	5,694	- 1,898
Papayas for fresh use, export:						
Fruit		Not taxable 6		Not taxable		
Packing materials and supplies ⁷	67,500	21/2	1,688	31/2	2,363	† 675
Processed papaya products, local	67,500	1	675	3/4	506	- 169
Subtotal			9,954		8,563	- 1,391
Retailer level					1	
Papayas for fresh use, local	1,188,700	2 1/2	28,467	3 1/2	39,854	+11,387
Processed papaya products, local ⁸	90,000	2 1/2	2,250	3 1/2	3,150	+ 900
Subtotal			30,717		43,004	≁ 12,287
Total Excise Taxes			\$60,712		\$68,598	+ 7,885

¹Value of raw fruit only. Assumed that growers sell raw fruit to local shippers who pay no tax on exported fruit after it is packed for mainland shipment.

²Includes fertilizer, chemicals, field boxes, repair parts, gasoline, etc., but no are not considered herein. export packing materials, ⁷Supplies used in pack

³Does not reflect reduction of perhaps \$500-\$750 resulting from lower rates on wholesaling and manufacturing of fertilizers, chemicals, gasoline, repair parts, etc. ⁴Includes canned papaya nectar, pasteurized and frozen puree, anu canned papaya pieces.

Assuming that all processing supplies, including sugar, are manufactured or fabricated in Hawaii. Actually some of these supplies are shipped in from Main-Jand and subject to excise tax at 3/4 per cent.

⁴In certain circumstances gift packages of papaya are subject to the excise at the Retailing rate. Such shipments are minor part of export trade, however, and are not considered herein.

[']Supplies used in packing fresh papayas moving ultimately through mainland dealers are taxed at retail rate. Similar supplies used in gift packages are subject to manufacturing or to wholesaling rate.

⁸Predominantly canned papaya nectar.

Sources: Production value and unload data obtained from reports of the Hawaii Crop and Livestock Reporting Service and the Agricultural Extension Service. Other data from cost studies by the Hawaii Agricultural Experiment Station and from survey of firms engaged in the papaya trade.

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SOME EFFECTS OF HAWAII'S 1957 TAX LAW

Errata

Correct fourth, sixth and seventh columns of table appearing on Page 49 to read:

(column 4)	(column 6)	(column 7)		
Amount of Tax	Amount of Tax	Change in Revenue under New <u>Rates</u>		
\$ 9,144	\$ 6,096	- \$ 3,048		
1,843	1,229	- 614		
510	340	- 170		
4,888	6,843	+ 1,955 ³		
16,385	14,508	- 1,877		
2,487	1,658	- 829		
238	238	Same		
942	628	- 314		
3,667	2,524	- 1,143		
7,592	5,694	- 1,898		
1,688	2,363	+ 675		
675	506	- 169		
9,955	8,563	- 1,392		
28,467	39,854	+ 11,387		
2,250	3,150	+ 900		
30,717	43,004	+ 12,287		
\$60,724	\$68,599	+ \$ 7,875		

mean to this industry. Table 17 is a comparative tabulation of computed tax returns based on the 1957 production and utilization of papayas grown in the Territory.

On an industrywide basis the general excise tax attaching to the production and marketing of papayas in 1957 totaled some 7,900 more under the current tax rates than would have been the case had the previous rates applied. However, it was only at the retail level where the rate advanced from 2 1/2 to 3 1/2 per cent that there was a substantial aggregate increase because of the 1957 change in excise tax rates.

Although the tax rate applicable to the growing of papayas was reduced, the lower tax on production was about half offset by the effect of the increased retail excise applying to the various production costs incurred by the growers. The net saving to the growers in excise accruing under the new schedule was about \$1,900, which is equivalent to 1/4 per cent of the value of the raw fruit. At the processor level the one-half per cent reduction in the excise on manufacturing resulted in a saving of some \$1,100.

Reduction of the excise on wholesaling by one-fourth per cent decreased the tax on fresh papayas sold locally by \$1,900, and on processed papaya products sold in Hawaii the decrease was \$170. The increase in the retail excise which applies to most packing supplies and materials used by shippers who export fresh papayas to the mainland had the effect of adding \$675 to the cost of such items. The net reduction of excise at the wholesaler and shipper level was \$1,390 on a total sales value base of almost \$900,000.

It is at the retail level that the change in excise rates has had a more distinct effect. Here the tax base itself is greater because of successive markups of price and, furthermore, the increase in the excise rate was a full 1 per cent. The general excise tax applying to retail sales of fresh and processed papayas aggregated 43,000 under the new 3 1/2 per cent rate--some 12,300 more than would have been collected under the old rate of 2 1/2 per cent. All of the increases in tax liability due to the higher retail excise totaled approximately 14,900 for the growers, shippers and retailers. In direct comparison, reductions in excise taxes collected from growers, processors and wholesalers were slightly over 7,000. The net increase in excise taxes applying to the industry was thus about 7,900.

Comments on Impact of Tax Rate Changes

In the aggregate the general excise tax attaching to the production and sale of papayas in 1957 was equivalent to almost onehalf cent per pound of fruit produced and marketed. Under the new rate schedule effective July 1, 1957, the total excise on this basis increased from .404 cents per pound to .456 cents per pound, or by about 13 per cent. At the farm level, however, the total excise per grower declined on the average from \$69.70 to \$61.70, or by about \$8 per unit, on each of the 235 farms producing papayas in 1957. Although any change in expenses or costs incurred by the grower is of some consequence, still it seems apparent that in itself the net saving of \$8 per average enterprise of 2.3 acres resulting from (1) the lowering of the excise tax on growing, and (2) the offsetting effect of the increase of the retail excise on production items. is not a major determining factor to the papaya growers. Total elimination of the excise on the growing of papayas would save the growers \$32.60 on each papaya farm and repeal of the excise on production expenses would reduce costs by another \$29.10 per enterprise. Cost reductions of such magnitude (\$61.70 per farm) are equivalent to almost \$29 per acre of bearing orchard and would obviously be of real significance to papaya producers.

In itself, the reduction of the excise on manufacturing has had only a slight effect on the processing of papaya products. Under the new rate of 1 per cent which applies to finished products and to most processing supplies manufactured locally (except sugar which is unchanged at 2 1/2 per cent), the excise taxes incurred at this level are equivalent to \$0.03 to \$0.04 per case of 24 cans of papaya nectar.

Wholesaling is currently subject to an excise of 3/4 per cent. When related to the average price of fresh papayas sold in Hawaii during 1957 this tax is equal to about 1/20 cent per pound of fruit. As in the case of the excise on manufacturing, it may be said that this amount of tax in itself has only a minor effect on the sale of papayas in local markets. Where fresh papayas are exported to the mainland, however, the increase in the retail excise which applies to most packing supplies used by the commercial shippers has a more serious effect. This tax item advanced from 2 1/2 to 3 1/2per cent and is held by the shippers to constitute a further impediment to expansion of their mainland trade.* In light of the severe competitive situation to which Hawaiian papayas are subject in mainland markets, there is reasonable justification for the contention that any measure adding to the local costs tends to impair the ability of Hawaii's fruit to compete effectively.

A side effect of the general excise tax is the alteration of certain elements in the organizational pattern of the papaya industry. This result stems from the manner in which the tax on growing is applied to export shipmen's of fresh fruit. Where a producer sells his fruit to a shipper, the farmer pays a 1 per cent excise on the raw fruit and the shipper pays no excise on the packed fruit exported to the mainland. But if growing and shipping are done by the same firm, the 1 per cent excise applies to the returns from the packed fruit, resulting in a higher tax per unit of fruit shipped. This application of the excise is undoubtedly stimulating the formation and use of intermediaries as a means of

*Under the new rates the excise on packing materials is equivalent to about 1/10 cent per pound of fruit shipped from Hawaii.

reducing the tax base. In this respect the impact of the excise on papaya shippers is at distinct variance with the general tendency of the Hawaii excise system to stimulate more direct trading, with fewer handlers or dealers between the manufacturer or producer and the ultimate consumer, so as to minimize the number of times a commodity is taxed.

The most substantial change in excise taxes collected on papayas is found at the retail level where the excise is equivalent to over 1/3 cent per pound of fruit sold (assuming 1957 prices). Although it is not yet possible to measure precisely what effect this tax on retailing has upon the use of fresh and processed papayas in Hawaii, it is unlikely that the excise in its present form has been a serious deterrent to the sale of this fruit. The principal reasons for this view are (1) the fact that the 3 1/2 per cent tax applies to retail sales of all food items, which leaves the competitive relationship among the various commodities largely unaltered and (2) the relative inelasticity of demand for papayas as indicated in part by apparent willingness of local consumers to purchase about the same volume of the fruit despite fairly wide price fluctuations.

Shifting of the General Excise Tax on Papayas: Conclusion

No factual evidence currently available shows definitely how changes in the general excise tax affect individuals and firms at the various levels of trade. However, observation of trade practices and knowledge of the local market organization lead to certain conjectures concerning the shifting of the tax.

It is probable that over a period of time substantially all of the excise taxes imposed on the growing and processing of papayas and on the retailing of supplies used in production, processing and packing of this commodity are either absorbed directly by the producer or reflected in the price paid to him for the raw fruit.

The excise on the wholesaling of fresh papayas may be shifted in either direction, depending in large part upon the market position of the fruit. If the market is strong the excise on wholesaling probably tends to move forward to the retail level while the reverse, i.e., ultimate shifting back to the growers, is probable where the supply is relatively heavy and prices weak. There is little likelihood of such a tax being absorbed for any extended period by the wholesale dealers themselves. This conclusion is indicated by the fact that the wholesalers play a large part in price determination and are in an advantageous position to shift the tax. On processed papaya products there is much less opportunity for the wholesaler to shift the excise backward with the result that it undoubtedly tends to move forward to the retail level where it is ultimately transferred to the consumer.

At retail, the excise is generally treated as an outright sales tax and it is thus usually passed on to the consumer. This result is 52 the more to be expected where the retail excise is a general tax affecting all consumer commodities in relatively the same degree.

It may reasonably be inferred that local consumers are ultimately paying about two-thirds of the total general excise taxes levied on the production and marketing of papayas. Substantially all of the balance is absorbed directly by growers or is reflected in prices paid to producers for their fruit. If only the general excise tax collected on papayas at each stage from grower to consumer is considered in relation to the costs and value of the fruit involved, it is apparent that the tax alone does not make up a particularly large item. But when the excise collected at all points at which the tax applies is evaluated, this aggregate tax factor becomes a more significant factor that exerts some influence on this economic well-being of the papaya industry. The increase in the retailing rate applying to production and packing supplies required by growers and export shippers is clearly an added cost of doing business that results ultimately in a somewhat lower return to growers for their fruit.

Liquor Tax (Chapter 124, Revised Laws of Hawaii 1955)

Structure of Tax:

Imposed upon the wholesale value of all alcoholic beverages sold in the territory, except sales to the armed forces or other instrumentalities of the United States and to religious organizations for sacramental purposes.

1957 Amendments:

Tax rate increased from 12 to 16 per cent of wholesale value, effective July 1, 1957. Annual wholesalers license fee raised from \$1.00 to \$2.50, effective January 1, 1958. Annual Revenues - All to Territorial General Fund:

Fiscal	Year	1955-	·56.		•						\$2,101,494	
Fiscal	Year	1956-	57.		•		•		•	•	\$2,174,000	
Fiscal	Year	1957-	·58 .								\$2,750,000	
Fiscal	Year	1958-	59.			•					\$3,110,000	(Estimate)
Compariso	n with	Маіп	land	L	iq	uo	r	Т	ax	es	5:	. ,

Hawaii, 29 states and the District of \vec{C} olumbia currently regulate liquor sales through licenses. Eighteen states have state liquor monopolies and two states disallow the sale of all liquor other than low-point beer.

All of the licensing jurisdictions impose a special tax on the sale of alcoholic beverages. Except in Hawaii, the basic liquor tax form is a gollonage tax, i.e., a tax expressed as a dollar amount per wine gallon of liquor. Some jurisdictions levy an <u>ad valorem</u> tax in addition to the gallonage tax. Most states, like Hawaii, do not exempt liquor sales from their general sales tax.

In most of the license states (but not Hawaii), the tax is paid through the purchase of stamps by the wholesalers. A few states allow discounts on stamp purchases.

LIQUOR TAX RATES PER WINE GALLON - 1957 28 states, Hawaii and the District of Columbia

Distilled Spirits:

\$4.34 - \$2.50 - Florida, Georgia*, Minnesota, Arkansas† and North Dakota
\$2.35 - \$2.00 - South Dakota, Massachusetts, HAWAII*, Kentucky, Indiana*, Ten-
nessee* and Wisconsin
\$1.68 - \$1.30 - Louisiana*, Colorado, California*, Maryland*, New Jersey, New
York, Rhode Island*, Texas, South Carolina* and New Mexico*
\$1.25 - \$.80 - District of Columbia*, Arizona*, Nebraska, Delaware, Illinois*,
Connecticut*, Kansas, Missouri* and Nevada*
Wine:
\$1.40 - \$.58 - Florida, Georgia*, South Carolina*, Tennessee*, North Dakota,
Minnesota and Arkansasi
\$.50 - \$.33 - Kentucky, HAWAII*, Nebraska, Indiana*, Arizona*, Kansas, Dela-
ware and South Dakota
\$.30 - \$.21 - Massachusetts District of Columbia* Illinois* New Mexico*
Nevada* and Colorado
* 20 - \$ 02 - Marriand* Doda Island* Toxas I ouisiana* Wissonsin Nov
ϕ ·20 - ϕ ·02 - Walyining, Finder Island, Texas, Louisiana, Wisconsil, New Taxov, New York Consociout* Misconvit and California*
Boort
• .38 - • .20 - South Carolina, Louistana, Georgia, and HAWAIT
φ .24 - \$.11 - Florida, Arkansas*, Texas, North Dakota, South Dakota and Ten-
nessee*
\$.10 - \$.05 - Kansas, Kentucky, Indiana*, Arizona*, Delaware, Massachusetts,
New Mexico*, Minnesota and District of Columbia*
\$.04 - \$.02 - Illinois*, Nebraska, Connecticut*, New Jersey, New York, Rhode
Island*, Wisconsin, Colorado, Maryland*, Nevada*, California*
and Missouri*
*Plus state sales taxes.
iPlus 3 per cent special sales tax.

Plus 3 per cent special sales tax.

All Other Taxes

CHAPTER 6 Liguor Tax*

In June 1957, a "fifth" of a popular brand of 86 proof blended whiskey produced in the United States retailed in Honolulu for \$4.44.[†] Of this price, \$1,84 represented the federal tax on distilled spirits. Another \$.50 reflected the sum of three territorial taxes: the liquor tax at 12 per cent of the wholesale value; the general excise tax on wholesalers at 1. per cent of gross sales; and the general excise tax on retailers at $2 \frac{1}{2}$ per cent of gross sales. Altogether, therefore, federal and territorial taxes on this particular bottle of whiskey amounted to \$2,34, or about 52 per cent of its full retail price.

The proportion of taxes-to-retail-price for beer and wines was not so heavy as that for distilled spirits. Nevertheless, they were substantial. For a leading brand of California dessert wine, taxes amounted to almost 30 per cent of its retail value, and for a representative mainland beer, taxes accounted for nearly 25 per cent.

In July 1957, as a result of the tax rate changes effected by the 1957 territorial legislature, the tax burden on alcholic beverages became still heavier. The liquor tax was increased to 16 per cent and the general excise tax on retailers was raised to 3 1/2 per cent. A small countervailing measure to these upward revisions in tax rates was the decrease of the general excise tax on wholesalers by 1/4 per cent.

Despite this increase of already relatively high tax rates, there has been little evidence of strong public criticism. This acquiescence to the heavy taxation of alcholic beverages can probably be adequately explained by two rationalizations that were introduced and successfully employed since the early days of liquor taxation. First, there is an almost universal attitude that alcholic beverages are luxuries and consequently that heavy taxes on these commodities are justified. Second, it is commonly argued that the consumption of liquor, particularly when taken to an excess, is physically and morally harmful and a high tax rate must be levied to place an economic limit on consumption.

Purpose of Liquor Tax Increase

Though these rationalizations may explain the lack of public controversy regarding heavy liquor taxes, they do not adequately explain the reason for the tax rate increase which was effected

[•]By Clinton T. Tanimura, Research Assistant, Legislative Reference Bureau. †More correctly, \$4.44 was the minimum retail price set by the wholesaler. It is possible that some retailers may have sold it at a higher price. Usually, however, the minimum price is the effective sales price.

by the 1957 legislature. It was estimated by the territorial tax office that the level of liquor sales at wholesale prices (liquor tax base) in the biennium 1957–1959 would exceed the previous two-year total by approximately \$1 million despite the substantial increase in the tax level. This estimate does not support the view that the object of this legislation was to curtail consumption.

With respect to the luxury argument, there is no basis to assume that the consumption of alcholic beverages is primarily limited to persons in high income brackets. A study of consumer expenditures in the United States during 1956 shows that approximately half of all expenditures for liquor were made by families with annual incomes of less than \$5,000. Families with annual incomes of \$10,000 or more accounted for only 6 per cent of all beer purchases and 17 per cent of total expenditures for wine and distilled spirits.*

The fundamental reason for raising the liquor tax rate seems to be simply the need for more revenues. Consequently, if the enlarged tax should cause a decline in consumption to the extent that tax revenues also fall, the tax increase must be assumed to have failed of its purpose.

Revenue Effects of Increased Taxes on Liquor

On the basis of one year's experience, it can be said that the 1957 rate increase attained the intended revenue goal. Territorial tax revenues derived from taxes on the sale of alcholic beverages in the fiscal year 1958 amounted to \$3,\$12,000, or approximately 27 per cent above collections in the calendar year 1956. The liquor tax yield was some \$659,000 or 31 per cent over the 1956 level, and an additional \$151,000 was obtained through the general excise tax on liquor sales.

Revenue Problem of Liquor Taxation

The increase in tax rates by the 1957 legislature accentuated a fundamental problem of liquor taxation--determining whether the tax rate has reached the point where further increases would so reduce consumption that tax revenues would decline. Several factual observations are pertinent.

First of all, by mainland standards, the territorial tax on alcoholic beverages is already relatively high. The average territorial tax per gallon on all forms of liquor consumed in the fiscal year 1958 was nearly twice as large as the average calculated for the 29 "license states" (those which do not have state liquor monopolies), Alaska and the District of Columbia for the year 1957. The territorial tax burden on beer was roughly four times larger; the tax on wines two and one-third times larger, and the tax on distilled spirits one-third larger, than mainland average. (See Table 18.)

		HAWA	II - 1956	HAWAII - 1958						
UNITED			Per	Cent			Per Cent			
STATES	Amount	Rank	of U	J. S.	Amount	Rank	of U.S.			
AVERAGE *			Aver	age			Average			
CONSUMPTION PE	R PERSON	OVER	THE LE	EGAL AGI	E MINIMUM	(IN GA	LLONS) †			
Distilled Spirits	2.3	1.6	21	70	1.4	29	61			
Wines	1.8	2.2	10	122	1.9	10	106			
Beer	25.1	20.3	21	81	19.4	22	77			
Total	29.1	24.1	21	83	22.7	22	78			
TAX PER GALLON [‡]										
Distilled Spirits	\$1.69	\$1.69	15	100	\$2.26	9	134			
Wines	0.21	0.35	15	167	0.47	9	233			
Beer	0.07	0.19	5	271	0.26	4	371			
Average	\$0.21	\$0.30	10	143	\$0.40	7	191			
TAX BURDEN PER PERSON OVER THE LEGAL AGE MINIMUM [†]										

COMPARISON OF LIQUOR CONSUMPTION AND TAXATION IN HAWAII WITH AVERAGE OF 29 NON-MONOPOLY STATES, ALASKA AND THE DISTRICT OF COLUMBIA

Distilled Spirits	\$3.88	\$2. 75	22	71	\$3.21	29	83
Wines	0.38	0.76	7	2 00	0.89	4	234
Beer	1.71	3.82	5	233	5.02	3	294
Total	\$5.97	\$7.33	9	123	\$9.12	5	1.53

- The period covered is the calendar year 1957 with some exceptions on data which were reported only on a fiscal year basis. Alaska's data are for the fiscal year 1954--the latest year for which detailed figures were avilable.
- $_{\uparrow}$ The legal age minimum for all jurisdictions other than Hawaii was assumed to be 21. The minimum age for Hawaii is 20.
- t The taxes calculated include only those which were imposed specifically on the sale of alcoholic beverages, but excludes license fees. General sales taxes were not included.

Sources: Distilled Spirits Institute, Public Revenues and from Alcoholic Beverages in 1957, Washington, D. C. 1958 and Summary of State Laws and Regulations Relating to Distilled Spirits, Washington, D. C., 1957; Report of the Department of Taxation of the Territory of Alaska, Juneau, 1955, p. 22. Data on Hawaii derived from reports on (1) manufacturers' shipments from California and foreign countries to Hawaiian wholesalers; (2) local production of beer and wines (including sake). Note: State-by-state data from which table was constructed are available from author.

Secondly, the level of consumption in Hawaii was below the average of mainland states. Measured in terms of consumption per person whose age exceeded the legal minimum (estimated on the basis of 20 years of age for the territory and 21 years of age for mainland states), the territorial average was only 23 gallons in fiscal 1958, as compared to the license states average of 29 gallons.

Finally, actual consumption in the territory for the fiscal year 1958 was significantly below the usually conservative estimates of the territorial tax office. At the time of the 1957 legislative session, the tax office estimated that taxable wholesale liquor transactions would total \$35,626,000 in the biennium. or \$18,313,000 annually. The actual volume of such wholesale transactions, however, only aggregated \$15,944,000 during the first year of the biennium --13 per cent below the estimated level.

This substantial difference between the estimated and actual sales level was due to an abnormally high sales volume in June 1957. In that month, purchases by retailers nearly doubled the equivalent amount purchased in June 1956, as retailers increased their inventories before the tax-induced price increases became effective in the following month. Anticipatory purchases were also in evidence as early as April and May of 1957.

Actual consumption in fiscal 1958 was undoubtedly greater than the level of wholesale transactions would indicate. Although there is no really adequate method of arriving at a more accurate estimate of actual consumption, it was thought that the elimination from the total of gross sales for the abnormally low month of July 1957 and the substitution therefor of July 1958 sales would roughly approximate actual retail sales during this period. When this adjustment is made, total taxable sales for the fiscal year 1958 amounted to \$17,412,000. Even so adjusted, the volume of consumption fell short of the anticipated level by about 5 per cent.

Determinants of Consumer Demand

Discussion of the likely effects of increases in the liquor tax rate on industry profits and tax revenues requires consideration of the factors which determine the demand for liquor. In this section factors which seem to affect the demand for liquor generally in the United States are discussed. These factors are then related to the demand for alcoholic beverages in Hawaii.

Social Attitudes

Prevailing public sentiment toward the consumption of liquor is probably the most fundamental determinant of the level of consumption. In communities where there are strongly adverse feelings toward liquor, sometimes expressed in partial or complete prohibition of the sale of alcohol, one would expect the level of consumption to be lower than in areas where public attitudes condone or approve drinking.

The high correlation between the ratio of wet to dry populalation[•] and the level of consumption for the 29 states where liquor is regulated by licenses is shown in the accompanying table. Of the 12 states where the consumption of liquor per adult exceeded

^{*}In general usage an area is said to be "wet" when its laws permit the sale of any alcoholic beverages or "dry" if the laws prohibit such sales. However in this chapter the terms relate only to the prohibition of the sale of distilled spirits.

		Gallonage Consumption	Population in "Wet"	Urban	Males Per 100	Liquor	Àverage Personal		
		Per Adult	Areas	Population	Females	Taxes *	Income		
А.	STATES WITH	I ABOVE-AVE	ERAGE CON	SUMPTION;					
	Arizona	31.2	100.0%	55.5%	10 2. 3	\$0.16	\$1,750		
	California	30.1	100.0	80.7	100.1	0.16	2.523		
	Connecticut	34.2	97.6	77.6	97.0	0.14	2,821		
	Florida	37.5	82.8	65.5	97.3	0.65	1,836		
	Illinois	29.7	87.7	77.6	98.3	0.14	2,447		
	Maryland	38.4	94.0	69.0	99.2	0.13	2,156		
	Massachusett	s 30.7	94.6	84.4	93.8	0.26	2,335		
	Minnesota	29.8	92.9	54.5	101.3	0.26	1,850		
	Nevada	44.7	100.0	57.5	113.3	0.14	2.423		
	New Jersey	37.3	97.1	86.6	97.2	0.14	2,504		
	New York	35.7	99.5	85.5	95.4	0.14	2,578		
	Wisconsin	43.8	95.1	57.9	101.1	0.13	1,920		
в.	AVERAGE:	29.1	83.8%	64.0%	_98.6_	<u>\$0.21</u>	<u>\$2,027</u>		
C.	STATES WITH BELOW-AVERAGE CONSUMPTION:								
	Arkansas	11.8	58.0%	33.0%	99.3	\$0.40	\$1,151		
	Colorado	25.3	95.1	62.7	100.8	0.17	1,006		
	Delaware	19.8	100.0	62.6	97.9	0.25	2,740		
	G eor gia	2.8	38.1	45.3	96.2	2.15	1,431		
	Indiana	25.8	100.0	59 .9	99.1	0.18	2,010		
	Kansas	15.9	56.1	52.1	100.3	0.19	1,787		
	Kentucky	21.3	43.9	36.8	100.4	0.25	1,372		
	Louisiana	28.6	82.0	54.8	96.7	0.43	1,566		
	Missouri	28.6	100.0	61.5	96.4	0.08	1,940		
	Nebraska	26.6	99.4	46.9	101.4	0.12	1,818		
	New Mexico	28.9	94.2	50.2	104.2	0.17	1,686		
	North Dakota	a 23.7	100.0	26.6	108.8	0.32	1,435		
	Rhode Island	14.4	99.0	\$4.2	97.3	0.25	1,990		
	South Caroli	na 13.8	100.0	36.8	96.7	0.50	1,180		
	South Dakota	17.5	100.0	33.2	106.9	0.36	1,531		
	Tennessee	13.7	33.1	44.1	97.3	0.29	1,383		
	Texas	26.8	54.0	62.7	100.4	0.22	1,791		
D.	HAWAII:†	22.7	100.0%	69.0%	121.3	\$0.40	\$1,821		

FACTORS AFFECTING DEMAND FOR LIQUOR IN NON-MONOPOLY STATES AND HAWAII IN 1957

• Average tax per gallon for all types of alcoholic beverages, used here as indicator of relative liquor prices in the several states, assuming, other things being equal, that the higher the tax the higher will be the price.

† For fiscal year 1958.

the average, only one--Florida--had a ratio of wet to total population that was, slightly, below the average.

Using prohibition as an indicator of public sentiment, there is little basis to surmise that public opinion in Hawaii tends to depress the consumption of alcoholic beverages. Liquor sales are permitted throughout the territory; there is no provision for local option to prohibit such sales; and there has been no serious public controversy in more than a decade on the issue of liquor sale and consumption.

Age and Sex Distribution

The distribution of the population by age and sex also affects the level of demand for alcohol. The age distribution is significant because a person is a potential legal consumer only if he has attained a statutory age. (In most states, sales to persons below the age of 21 is forbidden. A few states have lower minimum ages for beer and light wine purchases.) In general, therefore, the greater the proportion of the population of legal age, the larger will be the level of potential consumption.

The ratio of males to females may also have some bearing on the level of liquor consumption. Sociological investigations have found that in the American middle class--the class which represents more than any other the accepted standard of social behavior in the United States--there are relatively stronger restrictions on drinking by women than by men.

The probable impact of these factors of demand on the level of consumption in Hawaii is somewhat mixed. The proportion of population in the territory who are legally of age as consumers is substantially below the mainland average--this despite the fact that the legal minimum in Hawaii is 20 years, as compared to 21 for most of mainland states. Based on 1350 census data, the percentage of total population over 21 years of age in the continental United States was 66. The proportion of Hawaii's population over 20 years in 1950 was only 55 per cent.

However, Hawaii's ratio of 121 males to every 100 females in the same year was significantly higher than that for any state in the Union, the mainland average being only 99. The proportion of males to total population is a particularly important factor in Hawaii as there are strong sentiments against the consumption of liquor by women among certain ethnic groups.

The overall effect of the age and sex distribution in the territory is probably conducive to an average consumption level higher than that of the continental United States. This supposition is made even more likely by taking into account the large numbers of military personnel, tourists and other transients in Hawaii.

Urbanization

Another factor affecting liquor consumption is the degree of urbanization. Sales statistics for the 29 license states indicate this clearly. Of the 12 states which had a higher-than-average per person consumption experience, eight had more persons living in urban areas than the average for the United States. Conversely, of the 17 states with lower-than-average per person consumption, only one had a higher ratio of urban to rural population than the average. (Table 19.)

By this measure, the level of consumption in Hawaii should exceed that of the average. In 1950, urban population in Hawaii amounted to 70 per cent of total civilian population, as compared to 64 per cent for the entire United States. Since the census year, the shift in population from the predominently rural "neighbor" islands to the largely urban island of Oahu has continued so that an even greater proportion of the territory's population is now living in urbanized areas.

Personal Income

One probable cause of the relatively low level of liquor consumption in Hawaii is its comparatively low level of personal income. In 1956, Hawaii's per capita income was roughly 9 per cent below the national average; in 1957 the difference was 10 per cent.

Examination of the level of liquor consumption in the 29 mainland license states for 1957 (Table 19) shows a marked correlation between the levels of personal incomes and liquor consumption. Eight of the 12 states with above-average consumption had aboveaverage per capita incomes and 16 of the 17 states with belowaverage consumption had below-average per capita incomes.

Price Level

Another factor affecting liquor consumption is the price level of alcoholic beverages. For distilled spirits, an estimated price elasticity for the United States ranged from 1.0 to 1.5.* At the top of this range a 1 per cent increase in price would result in a 1.5 per cent decrease in the quantity demanded.

Although it was not possible to compare mainland and territorial prices, it can be assumed that liquor prices in Hawaii are somewhat higher than the national averages. The tax level alone is twice as high as the mainland norm, and the extra cost of transporting liquor to Hawaii must be covered in price. If the assumption is correct, a relatively high price level in Hawaii is another factor depressing the level of liquor consumption.

^{*}Joseph P. McKenna and Francis F. Boddy, "How Bad Are Liquor Taxes?" 1953 Proceedings, National Tax Association, Sacramento, California, p. 33.

Changes in the Demand Determinants and the Corresponding Effects on Consumption in 1958

The discussion up to this point sought to identify the principal factors affecting the level of consumption. Now consideration is given to recent changes in the demand determinants and the probable effects of these on consumption in Hawaii.

Several of the factors of demand apparently did not change significantly during the period under examination-January 1955 to July 1958. These include social attitudes toward liquor consumption, ratio of males to total population, proportion of adults to total population, and the degree of urbanization of the population.

Size of Population

Total civilian population on January 1, 1958 was approximately 6 per cent higher than the estimate for July 1, 1956. Assuming that the proportion of adult to total population had remained at 55 per cent, the number of potential consumers increased by approximately 18,000. This change in the number of consumers was one factor tending to increase the level of consumption in fiscal 1958.

Personal Income

The level of personal income in fiscal 1958 probably exceeded that of the calendar year 1956. Other things being equal, therefore, the rise in personal income in 1958 tended to shift the demand for liquor to a higher level.

The exact amount of the change in the level of personal income is difficult to quantify as such data are reported only on a calendar year basis. An approximation can be attempted, however, by employing the measure of wage payments. The use of wage payments as an indicator of the general level of personal income is justified, as income through wages and salaries in Hawaii has usually accounted for as much as 75 per cent of total personal income.

Territorial tax office data for the calendar years 1956 and 1957 show that reported wage payments increased from \$589 million to \$640 million, or by about 11 per cent. Wage payments for the fiscal year 1958 were reported at \$659 million, or about 12 per cent over the 1956 level. The rise in the level of total personal income in Hawaii as reported by the U.S. Department of Commerce during the years 1956 and 1957 amounted to 7 per cent. Personal income, in the fiscal year 1958 (assuming an unchanged proportionality to wage payments) therefore probably exceeded the 1956 level by somewhat more than 7 per cent.

Price Level

A factor tending to limit the demand for liquor in the recent past was an increasing level of liquor prices. Table 20 estimates the changes in the average prices of alcoholic beverages sold during 62

ESTIMATED AVERAGE PRICES, TAXES AND MARKUPS PER GALLON OF ALCOHOLIC BEVERAGES SOLD IN HAWAII

		Calendar Fiscal Year Year		Change in Price				
		1956	1958	Amount	Per Cent			
Α.	DISTILLED SPIRITS:							
	Retail Price	\$21.52	\$22.68	\$1.16	5.4			
	Retailer's Markup	5.098	5.44 [†]					
	Cost to Retailer	15.90	16.47	.57	3.6			
	General Excise Tax at Wholesale	14	11					
	Liquor Tay	1 60	2 26					
	Wholesale Drice	14 07	1/ 10	02	0.9			
		1 791	1 797	.03	0.2			
	Cost of Coods to Whatkup	1.13*	10.07					
	Cost of Goods to wholesaler,	12.34	12.37					
	• Estimated at 32%, † Est	imated at 3	33%. ‡ Est	tim ate d at	14%.			
в.	WINES							
	Retail Price	\$ 4.74	\$ 5.00	\$.26	5.5			
	General Excise Tax at Retail	.12	.17					
	Retailer's Markun	1.32*	1.39 †					
	Cost to Retailer	3.30	3.44	.14	4.2			
	General Excise Tax at Wholesale	.03	.02					
	Liquor Tax	.35	.47					
	Wholesale Price	2.92	2.95	.03	1.0			
	Wholesaler's Markup	.49‡	.49 [‡]					
	Cost of Goods to Wholesaler	2.43	2.46					
	• Estimated at 40%. † Esti	mated at 40).5%. ‡ E	Estimated	at 20%.			
C.	BEER							
	Detail Drice	\$ 0.00	\$ 9 11	¢ 15	6 6			
	Conoral Evera Tay at Datail	φ 2.25	φ 2.41	φ.10	0.0			
	Deteilerte Marlun	.00	•00 47 *					
		1 70	1.00		6.0			
	Cost to Retailer	1.78	1.89	•11	0.2			
	General Excise Tax at Wholesale	.02	.01					
	Liquor Tax	.19	.26					
	Wholesale Price	1.57	1.62	.05	3.2			
	Wholesaler's Markup	·20 †	.21 †					
	Cost of Goods to Wholesaler	1.37	1.41					
	* Estimated as DEM. + F	stimated a	t 15%					
	- Louinaleu al 20%							

calendar year 1956 and fiscal year 1958. The average price of beer in 1958 was about 6.6 per cent higher than in 1956, while the price of wines and distilled spirits rose by about 5.5 per cent.

The principal causes of the price changes were the increases in the territorial liquor tax and the general excise tax on retailers. However, there were other factors which also served to raise the price level. First, there were two increases in the shipping rates during this 30 month period, aggregating about 12 per cent.

Second, since industry markups and territorial taxes are both expressed as percentages, they had a pyramiding effect on prices so that the total price change was somewhat more than the increase in taxes. For example, when the liquor tax was 12 per cent, the tax on a gallon of distilled spirits priced at the wholesale level at \$14.07 amounted to \$1.69. The increase in the tax rate to 16 per cent would have resulted in a tax of \$2.25. However, since there was an increase in the cost of goods to the wholesaler, the wholesale price rose to \$14.10 and the tax amounted to \$2.26. The increases in the wholesale price and the liquor tax, therefore, meant that the cost of goods to the retailer would be higher. If the retailer maintained his existing dollar markup at \$5.09 under the higher price, his rate of return on his investment on the gallon of liquor would fall from 32 to 31 per cent. More important than the rate of return consideration, if the markup remained at \$5.09, the total gross profits to the retailer attributable to the sale of distilled spirits would fall, as the price rise resulting from the increased taxes would decrease the volume of consumption. Therefore, even for items such as distilled spirits where consumer demand is strongly affected by small price rises, the retailer's percentage markup actually increased by 1 per cent while the percentage markup for beer (an item where demand is relatively insensitive to small price changes) remained unchanged. The retailer's percentage markup on wines was raised by 0.5 per cent. The increase in percentage markup when it occurred was rationalized on the basis that it was necessary to maintain the existing profit level in the face of declining sales volume due to the rise in prices.

Consumption, Tax Revenues and Industry Profits in 1958

The effect of the foregoing changes in the factors affecting demand on the level of consumption, tax revenues and industry profits are summarized in Table 21. Consumption of distilled spirits and wines decreased substantially in gallonage (8 per cent) in 1958 from the 1956 level. However, the dollar value of consumer expenditure for both types of alcoholic beverages declined by only about 3 per cent. Beer sales, on the other hand, reflecting the tenacity of consumer demand in the face of increased prices, rose by about 1 per cent when measured according to gallons consumed, and by slightly more than 7 per cent in dollar expenditure. In the aggregate, therefore, consumption in gallons decreased by about 1 per cent and consumer expenditure increased by slightly more than 2 per cent. (See Table 21.)

The liquor tax yield under the increased rate was approximately 31 per cent higher than in calendar year 1956. Inclusive of general excise taxes on retailing and wholesaling, territorial tax revenues from the sale of alcoholic beverages in fiscal 1958 exceeded the 1956 level by about \$793,000, or 26 per cent.

Combined profits of liquor wholesalers and retailers increased by about one-half of 1 per cent, despite the decline in gallonage consumption. The estimated gross profits of wholesalers declined slightly (about \$23,000), while retailers' profits rose about \$69,000, or 1.2 per cent. The small decrease calculated in wholesalers' profit resulted from an assumption employed--that their percentage markup remained unchanged from the 1956 level. This assumption, made in the absence of factual data as to wholesalers' actual markups, can be verified only on the basis of information on merchandizing practices supplied by the wholesalers themselves. Such information was not available.

Nor could the profits of local manufacturers of alcoholic beverages be determined. However, gallonage production figures for beer and sake, which were either reported by the manufacturers or estimated by the writer, indicate that local production of alcoholic beverages declined from the 1956 mark by about 6 per cent. Unfortunately it was not possible to examine to what extent this decline in local production was attributable to the increased tax burden on liquor sales.

The Limit to Liquor Taxation

Consideration can now turn to the problem of the limit to liquor taxation. As the foregoing discussion attempted to point out, the yield of the liquor tax is affected not only by the tax rate but also by a variety of factors, including social attitudes toward liquor consumption, the number of potential consumers, the level and distribution of personal income and the level of prices.

Table 21, following, is a theoretical construction of the effects of different liquor tax rates on prices, consumption, tax revenues and gross profits to the liquor industry in Hawaii (excluding manufacturers) under certain conditions which were observed or assumed to have prevailed in the fiscal year 1958. The assumptions should be made explicit, as the projected effects have relevance only within these bounds. First, it was assumed that personal income in the fiscal year 1958 was approximately 8 per cent higher than the 1956 level. (The basis for this assumption was established earlier.)

A second assumption related to the manner in which consumption would react to given changes in price for distilled spirits and wines. It was assumed that a 1 per cent increase in price would cause consumption (in gallons) to decrease by 1.5 per cent. (This ratio was obtained from observations of changes in demand to

ESTIMATED CONSUMPTION, TAX REVENUES AND INDUSTRY PROFITS FROM SALE OF ALCOHOLIC BEVERAGES IN HAWAII

	Calendar	Fiscal	Increase or		Calendar	Fiscal	Increase	Dr
	Year	Year	Decrease		Year	Year	Decreas <u>e</u>	
	1956	<u>_1958</u> _	Amount	70	1956	1958	Amount	%
	1-					N DEER		
	(a) DISTILLEL	SPIRITS		(D) BEER		
Total Gallons Consumed	472,366	434,596	-37,770	-8.0	5,892,343	5,931,742	39,399	0.7
Consumer Expenditure	\$10,165,316	\$9,856,637	\$-308,679	-3.0	\$13,493,466	\$14,473,451	\$979,985	7.3
Territorial Tax Revenues:								
Liquor Tax	\$ 798,299	\$ 982,187	\$ 183,888	23.0	\$ 1,119,545	\$ 1,542,253	\$422,708	37.8
General Excise - Wholesale	66,131	47,806	-18,325	-27.7	117,847	59,317	-58,530	-49.7
General Excise - Retail	250,354	334,639	84,285	33.7	353,541	474,539	120,998	34.2
Total	\$ 1,114,784	\$1,364,362	\$ 249,848	22.4	\$ 1,590,933	\$ 2,076,109	\$485,176	30.5
Industry Gross Profits:								
Wholesalers	\$ 817,193	\$ 751,851	\$ -65,342	-8.0	\$ 1,178,469	\$ 1,245,666	\$ 67,197	5.7
Retailers	2,404,343	2,364,202	-40,141	-1.7	2,651,554	2,787,919	136,365	5.1
Total	\$ 3,221,536	\$3,116,053	\$-105,483	-3.3	\$ 3,830,023	\$ 4,033,585	\$203,562	5.3
	(C) WINES			(d) ALL ALCOHOLIC BEVERAGES			
Total Gallons Consumed	626,026	575,096	-50,930	-8.0	6,990,735	6,941,434	-49,301	-0.7
Consumer Expenditure	\$ 2,967,363	\$2,875,480	\$ -91,883	-3.2	\$26,626,145	\$27,205,568	\$579,423	2.2
Territorial Tax Revenues:								
Liquor Tax	\$ 219,109	\$ 2 70, 29 5	\$ 51,186	23.4	\$ 2,136,953	\$ 2,794,735	\$657,782	30.8
General Excise - Wholesale	18,781	11,502	-7,279	-38.8	202,759	118,625	-84,134	-41.5
General Excise - Retail	75,123	97,766	22,643	30.1	679,018	898,252	219,234	32.3
Total	\$ 313,013	\$ 379,563	\$ 66,550	21.3	\$ 3,018,730	\$ 3,811,592	\$792,882	26.3
Industry Gross Profits:					-			
Wholesalers	\$ 306,753	\$ 281,797	\$ -24,956	-8.1	\$ 2,302,415	\$ 2,279,314	\$-23,101	-1.0
Retailers	826,354	799,383	-26,971	-3.3	5,882,251	5,951,504	69,253	1.2
Total	\$ 1,133,107	\$1,081,180	\$ -51,927	-4.6	\$ 8,184,666	\$ 8,230,818	\$ 46,152	0.6
changes in prices in the territory when the 16 per cent liquor tax was placed into effect. In fiscal 1958, the average price of distilled spirits increased by 5.4 and the quantity demanded decreased by 8 per cent. In other words, a 1 per cent increase in price caused the quantity demanded to fall by 1.5 per cent. It is interesting to note that previous investigations on the price elasticity of distilled spirits for the United States yielded ratios ranging from 1.0 to 1.5 per cent.)

The reaction of consumer demand for beer in fiscal 1958 has indicated that even with a 6.6 increase in price the quantity demanded increased by 0.7 per cent. However, this stable demand for beer may really reflect, not an indifference to price increases, but rather the stimulus on demand of increases in personal income. Cousidering the relatively low level of personal income in Hawaii and the relatively high prices of distilled spirits and wines, a small increase in income would probably have its greatest effect on the demand for beer, a low priced alcoholic beverage. Consequently, it was assumed that a 1 per cent increase in income would result in a 0.5 per cent increase in consumption and a 1 per cent increase in price would cause consumption to decrease by 0.5 per cent. (These ratios were used to estimate consumer demand for beer in 1958 in the following manner: the increase in income tended to raise the volume of consumption by 4 per cent but was partially offset by the price increase, which of itself tended to lower consumption by 3 per cent, leaving a net gain in the quantity demanded of 0.7 per cent.)

The third basic assumption which was made related to how industry markups reacted to tax increases. It was assumed that the wholesalers (who are required by law to set minimum retail prices for all liquor sold in the territory) would attempt to maintain the existing levels of profits both for themselves and the retailers. If no change in markups were made, the increase in price resulting from higher taxes would decrease the quantity demanded and consequently decrease profits. One way in which the existing profit levels can be protected is to increase markups with rises in the tax rate. For distilled spirits, it was assumed that both the wholesaler's and retailer's dollar markups increased by 25 per cent for

Table 22

WHOLESALE SALES OF TAX-EXEMPT LIQUOR Territory of Hawaii

	Wholesale	Tax
Period	Value	(If it were taxable)
July 1 - December 31, 1955	\$1,807,590	\$216,911
Jan. 1 - December 31, 1956	2,228,121	2 67,375
July 1, 1957 - June 30, 1958	2,844,577	455,132

Source: Department of the Tax Commissioner

each 8 per cent increase in the liquor tax. Increases in dollar markups for wine and beer were assumed to be 12 and 10 per cent, respectively. It is recognized that the power of wholesalers under territorial law to set minimum retail prices makes it possible for them to affect the number of retailers by changing these minima and thereby the retail markup. Every increase in the retailer's margin would decrease consumption and consequently affect the wholesaler's profits. In this situation, wholesalers' markups may increase in line with increases in the tax rate, but retailers' markups may rise at a much slower pace. The resulting decline in retailing profits would tend to reduce the number of retailers.*

Tax Avoidance and Evasion

The fourth assumption made was that tax evasion is not and will not become a serious problem within the price and tax ranges examined. Although it is quite probable that the manufacturing and sale of illegal liquors would become more prevalent with substantial increases in liquor tax rates and liquor prices, opportunities for bootlegging in Hawaii are severely limited by the difficulties of importing large quantities of the necessary ingredients without alerting law enforcement officers. Nor would the limited size of the market in Hawaii offer a strong temptation to risk the heavy federal penalties involved.

Purchases for civilian use through military outlets can be expected to increase with increases in tax rates. Again, this may be a limited effect as most civilians do not have the necessary connection with military personnel to utilize this medium of tax evasion. One may surmise that at existing price differentials between post exchange prices and civilian prices that most persons who are willing and able to purchase through tax-free outlets are already doing so. (A case of Lucky Lager beer, for example, retails in Honolulu for \$5.25. The current post exchange price is only \$3.25.) However, the relatively large rise in wholesale sales of tax-exempt liquor to the military shown in Table 22 does give ground for suspecting an increasing amount of purchases for non-military users.

Maximizing Tax Yield

Given these four basic assumptions, Table 23 shows that if the only consideration in setting the liquor tax rate is to maximize tax revenues, the existing tax rate of 16 per cent is below that maximizing rate. Liquor tax revenues, it is estimated, would further expand with heavier rates, beginning to decline only after a tax rate of 36 per cent is exceeded.

At this maximizing rate, however, the consumption of liquor would be severely reduced. Purchases of distilled spirits would decrease to only a third and of wines to only half of their 1956 volumes.

^{*}Price agreements with manufacturers will restrict the ability of wholesalers to adjust markups to taxes. In this situation, it is likely that the resulting decline in industry profits due to liquor tax increases would cause both the number of wholesalers and retailers to decline.

Table 23

CONSTRUCTION OF THE EFFECTS OF TAX INCREASES ON LIQUOR PRICES, CONSUMPTION, TAX REVENUES AND INDUSTRY PROFITS IN HAWAII*

A. DISTILLED SPIRITS

When Liquor Tax Rate is:	12%	20%	28%	36%	44%
Prices (per gallon):					
Retail Price	\$21.52	\$24.38	\$27.40	\$30.86	\$34.86
Retail	.53	.83	.93	1.04	1.18
Retailer's Markup	5.09	6.11	7.33	8.80	10.56
Cost to Retailer	15.90	17.45	19.14	21.02	23.12
General Excise Tax -					
Wholesale	.14	.11	.11	.12	.12
Liquor Tax	1.69	2.89	4.16	5.53	7.03
Wholesale Price	14.07	14.45	14.87	15.37	15.97
Wholesaler's Markup	1.73	2.08	2.50	3.00	3.60
Cost of Goods to					
Wholesaler	12.34	12.37	12.37	12.37	12.37
Total Consumption:					
Gallons	472,366	377,893	278,696	164,856	33,066
Consumer Expenditure.	\$10,165,316	\$9,213,031	\$7,636,270	\$5,087,456	\$1,152,681
TerritorialTax Revenues:					
Liquor Tax	\$ 798,299	\$1,092,111	\$1,159,375	\$ 911,654	\$ 232,454
Wholesale	66,131	41,568	30,657	19,783	3,968
Retail	250 354	313 651	259 187	171 450	39 018
Total	\$ 1,114,784	\$1,447,330	\$1,449,219	\$1,102,887	\$ 275,440
Industry Gross Drofits					
Wholesalers	\$ 917 103	\$ 796 017	\$ 696 740	\$ 104 568	\$ 110.029
Retailers	9 404 949	9 30 9 00 VII	9 049 849	1 450 799	949 177
Total	\$ 3 001 596	\$3 004 043	\$9 739 589	\$1 0/15 201	\$ 169.915
10121	Ψ 0,221,000	ψυ,υστ,στυ	ψ2, 100,002	ψ1, στο, ου Ι	ψ

* Based on 1958 conditions. See text for assumptions.

B. WINES

When Liquor Tax Rate is:	12%	20%	28%	36%	44%
Prices (per gallon):	5.				
Retail Price	\$4.74	\$5.26	\$5.78	\$6.33	\$6.95
General Excise Tax -					
Retail	.12	.18	.20	.21	.24
Retailer's Markup	1.32	1.48	1.66	1.86	2.08
Cost to Retailer	3,30	3.60	3.92	4.26	4.63
General Excise Tax -					
Wholesale	.03	.02	.02	.02	.02
Liquor Tax	.35	•60	.85	1.12	1.41
					69

Wholesale Price Wholesaler's Markup	2.92 .49	2.98 .55	3.05 .62	3.12 .69	3.20 .77
Wholesaler	2.43	2.43	2.43	2.43	2.43
Total Consumption:				011 105	100.404
Gallons Consumer Expenditure .	626,026 \$ 2,967,363	522,732 \$2,749,570	420,063 \$2,427,964	\$1,969,485	188,434 \$1,309,616
Territorial Tax Revenues: Liquor Tax General Excise -	• \$ 219,109	\$ 313,639	\$ 357,054	\$ 348,471	\$ 265,692
Wholesale General Excise -	18,781	10,455	8,401	6,223	3,769
Retail	75.123	94.092	84.013	65,338	45.224
Total	\$ 313,013	\$ 418,186	\$ 449,468	\$ 420,032	\$ 314,685
Industry Gross Profits:					
Wholesalers	\$ 306,753	\$ 287,503	\$ 260,439	\$ 214,683	\$ 145,094
Retailers	826,354	773,643	697,305	578,711	391,943
Total	\$ 1,133,107	\$1,061,146	\$ 957,744	\$ 793,394	\$ 537,037
C. BEER					
When Liquor Tax Rate is:	12%	_20%_	28%	36%	44%
Prices (per gallon):					
Retail Price General Excise Tax -	\$2.29	\$2.51	\$2.71	\$2.94	\$3.18
Retail	.06	.09	.09	.10	.11
Retailer's Markup	.4 5	.50	.55	.61	.67
Cost to Retailer General Excise Tax -	1.78	1.92	2.07	2.23	2.40
Wholesale	.02	.01	.01	.01	.01
Liquor Lax	.19	.32	.45	.59	.73
Wholesaler's Markup Cost of Goods to	1.57 .20	1.59 .22	.24	1.63 .26	1.66 .29
Wholesaler	1.37	1.37	1.37	1.37	1.37
Total Consumption:					
Gallons Consumer Expenditure .	5,892,34 3 \$13,493,466	5,845,204 \$14,671,462	5,585,941 \$15,137,900 \$	5,291,324 \$15,556,493	4,979,030 \$15,833,154
Territorial Tax Revenues: Liquor Tax	\$ 1,119,545	\$ 1,870 ,4 65	\$ 2,513,673	\$ 3,121,881	\$ 3,634,692
General Excise - Wholesale	117,847	58 ,4 52	55,859	52,913	49,790
Retail	353 541	526 068	502 735	529 139	547 693
Total	\$ 1,590,933	\$ 2.454.985	\$ 3.072.267	\$ 2.703.926	\$ 4.232,175
		,			

Industry Gross Profits:										
Wholesalers	\$	1,178,469	\$	1,285,945	\$	1,340,626	\$	1,375,744	\$	1,443,919
Retailers		2,651,554		2,922,602		3,072,268		3,227,708		3,335,950
Total	\$	3,830,023	\$	4,208,547	\$	4,412,894	\$	4,603,452	\$	4,779,869
D. SUMMARY										
When Liquor Tax Rate is:	:_	12%	. –	20%		28%	_	36%	_	44%
Total Consumption:										
Gallons	\$	6,990,735		6,745,829		6,284,700		5,767,315		5,200,530
Consumer Expenditure .	\$	26,626,145	\$2	6,634,063	\$2	25,202,134	\$2	22,613,434	\$1	18,295,451
Territorial Tax Revenues:										
Liquor Tax	\$	2,136,953	\$	3,276,215	\$	4,030,102	\$	4,382,006	\$	4,132,838
General Excise -										
Whol es ale		202,759		110,475		94,917		78,919	,	57,527
General Excise -										
Retail		679,018		933,811		845,935		765,920		631,935
Total	\$	3,018,730	\$	4,320,501	\$	4,970,954	\$	5,226,845	\$	4,822,300
Industry Gross Profits:										
Wholesalers	\$	2,302,415	\$	2,359,465	\$	2,297,805	\$	2,084,995	\$	1,708,051
Retailers		5,882,251		6,005,171		5,812,415		5,257,152		4,077,070
Total	\$	8,164,666	\$	8,364,636	\$	8,110,220	\$	7,342,147	\$	5,785,121

Beer consumption, with its relatively inflexible demand, would decline by about 10 per cent.

Gross profits of local wholesalers and retailers would also decline, even if they attempted to maintain profits by increasing their markups. Under a 36 per cent tax, it is estimated that profits from the sale of distilled spirits and wines would represent only about 60 and 70 per cent, respectively, of the 1956 levels. Profits from beer sales, on the other hand, would tend to increase, as tax-induced price rises for alcoholic beverages helped maintain the demand for this least expensive form of liquor.

It should be noted that a 36 per cent tax rate does not maximize tax revenues from any of the three classifications of liquor used in this analysis. The most productive tax rate for distilled spirits is about 20 per cent, that for wine about 28 per cent, and the maximizing rate for beer is somewhere in excess of 44 per cent. A single rate <u>ad valorem</u> tax, therefore, is not the most efficient method of obtaining tax revenues. A more productive method of taxation would impose a larger percentage tax on beer than on wines and distilled spirits.

Another observable characteristic of the present single-rate method of <u>ad valorem</u> taxation is that increases in the tax rate tend to make more profitable the production and sale of beer, but to reduce the profitability of firms dealing indistilled spirits and wines. Every increase in the tax rate would cause an increasing number of consumers to shift their consumption from distilled spirits and wines to beer.

Conversely, the imposition of multiple tax rates varying according to elasticity of demand--highest on beer, lowest on spirits-would shift a portion of the burden of the liquor tax from sellers and buyers of distilled spirits and wines to the sellers and buyers of beer. Since beer consumption is relatively larger (as a percentage of total liquor purchases) among low income families than among upper income brackets, the imposition of a differentially higher tax rate on beer would make the liquor tax more regressive in effect than it now is. A tax on gallonage, instead of value, would have a similar effect.

Summary and Conclusion

The territorial tax burden imposed on alcoholic beverages ranks among the highest of the non-monopoly (license) states. Working with other factors, the high tax has tended to reduce consumption to a level well below the national average. In the fiscal year 1958, the first full year under the new tax law, consumption of distilled spirits and wines declined by about 8 per cent from the 1956 level. Beer consumption, however, increased by 1 per cent.

However, the existing liquor tax rate of 16 per cent of wholesale value appears to be below the level where tax revenues would be maximized. At liquor tax rates in excess of 16 per cent revenue would continue to rise, but consumption would be increasingly restricted. For example, at a tax rate of 20 per cent, the consumption of distilled spirits would amount to 80 per cent of the 1956 level; under a 28 per cent tax it would amount to about 60 per cent; and at 36 per cent it would amount to about 35 per cent.

Profits in 1958 from the sale of alcoholic beverages probably did not change significantly from those realized in 1956, as local firms were by and large able to offset their loss in sales volume by increasing their percentage markups. The increase in the tax rate did prevent the liquor industry in Hawaii from realizing the larger profits which would otherwise have resulted from increases in personal income and population.

Tobacco Tax (Chapter 125, Revised Laws of Hawaii 1955)

- Structure of tax: Imposed upon the wholesale value of all tobacco products sold or used in the territory, except those sold to the armed forces or other instrumentalities of the United States. Tax is collected from wholesalers, who must obtain annual licenses at fee of \$2.50. (29 licenses were issued in 1958.) Tax must be separately stated by wholesalers in making sales to retailers and others.
- <u>1957 amendment:</u> Tax rate increased from 15 per cent (in 1957 approximately 2.7 cents per package of cigarettes) to <u>20 per cent</u> (approximately 3.6 to 3.8 cents per pack at 1958 prices), effective July **1**, 1957.

Annual revenues - all to territorial general fund:

 Fiscal year 1955-56
 \$1,264,000

 Fiscal year 1956-57
 1,249,000

 Fiscal year 1957-58
 1,698,000

 Fiscal year 1958-59
 1,900,000 (estimated)

Comparison with mainland tobacco taxes:

As of December, 1958, 43 states, Hawaii and the District of Columbia imposed tobacco taxes. In 34 jurisdictions the tax was limited to cigarettes only, in 10 states and Hawaii it applied to other forms of tobacco as well. Local governments in 11 states also levied tobacco taxes. With few exceptions, state tobacco taxes are administered by sale of stamps which must be placed on a package of tobacco before sale.

In using the following table of states and territorial tobacco tax rates, two facts should be borne in mind: (1) state tax laws typically allow the wholesaler or retailer a discount (11/2 to 10%) in purchasing stamps, so that the effective tax rate may be slightly lower than the table indicates; (2) annual license taxes are frequently much larger than the \$2.50 collected by Hawaii--ranging as high as \$350.

Tobacco Tax Rates Per Package of Cigarettes

8¢		. -	2 states (Louisiana and Montana)
6¢			4 states (Arkansas, Massachusetts, Mississippi and South Dakota)
5¢			16 states (Alaska, Florida,* Georgia, Maine, Michigan, New Jersey,* New Mexico,* Oklahoma, Pennsylvania, Rhode Island, Tennessee,* Texas, Vermont, Washington, West Virginia, Wisconsin)
4¢			6 states (Alabama,* Idaho, Kansas, Minnesota, Nebraska, Utah)
3.6-	3.8¢		HAWAII (approximate tax under 20% excise)
3.25	i¢.		1 state (South Dakota)
3¢			13 states (Connecticut, Delaware, Illinois,* Indiana, Iowa, Ken- tucky, Maryland,* Nevada, New Hampshire, New York,* Ohio, South Carolina, Wyoming)
2¢			2 states (Arizona, Missouri*) and District of Columbia
No	state	e tax	California, Colorado,* North Carolina, Oregon, Virginia*
*Lo	cal to	obacc	o tax, in addition to state (if any).

CHAPTER 7 Tobacco Tax *

Of the many tax changes made by the 1957 territorial legislature, none was less controverted than the increase in the tobacco tax rate from 15 to 20 per cent of the wholesale value. From the record of committee testimony, it appears that no one appeared to protest this substantial enlargement of the tax rate, one which boosted the tax on a package of cigarettes from approximately 2.7 cents to almost 4 cents. Nevertheless, the basic question raised concerning the liquor tax--is the rate approaching a level where further increases may so reduce consumption that revenues will actually decline?--is equally applicable to the Hawaii tax on all tobacco products.

An answer to this question requires an examination of the factors which determine the amount of taxable tobacco purchased in the territory. These factors are the same as the ones considered in the preceding chapter on the liquor tax--the age and sex distribution of the population, the proportion living in cities and in rural areas, the income level and distribution, and the sensitivity of the demand for tobacco (elasticity) to changes in its retail price.

Age and Sex Distribution

Data recently compiled by the United States Department of Agriculture show that the proportion of men who smoke regularly (i.e. daily) is more than twice as great as the proportion of women smokers. t (Little difference in smoking habits was found between women who receive independent incomes and those who do not.) Tobacco consumption tends to increase with age between about 20 and the mid-30's. After 35, there is a marked falling-off in both the percentage of persons smoking and the amount of tobacco consumed each day. t

Urbanization

The Department of Agriculture study also revealed a close relationship between city living and amount of smoking. Approximately 60 per cent of men dwelling in urban areas (2,500 population or more, or in suburbs) indicated that they were regular or occasional smokers, compared with 48 per cent of men living on farms and 56 per cent of those living in rural communities. The contrast was even greater for women: 31 per cent of women living

^{*}By Robert M. Kamins, Professor of Economics.

^{100 1955} data, it was calculated that 55 per cent of males 18 years and older smoked cigarettes regularly, 8 per cent smoked a pipe regularly and 6 per cent smoked cigars regularly. (These percentages cannot be added, since about one-third of men who smoke use two or all three of these ways. Among women 18 or over, approximately 25 per cent smoked cigarettes regularly and only as small number—some 20,000 in the entire nation—smoke cigars or pipes. U. S. Department of Agriculture, Tobacco Smoking in the United States in Relation to Income, Agricultural Marketing Service, Market & Research Report No. 189 (July, 1957), especially pp. 15, 31. ‡Ibid., especially pp. 27, 60.

in cities were reported to be regular or occasional smokers, compared with only 12 per cent of women on farms and 26 per cent of women in non-farm areas.*

Personal Income

It was also demonstrated by the study of the Department of Agriculture that the amount of tobacco consumption varies with the amount of income, although not in a simple way. More people smoke as income rises--from \$1,000 annually to \$2,000 to \$3,000-up to about \$4,000 (according to 1955 data). From that point on the proportion of persons who smoke regularly decreases. Similarly, the amount of tobacco consumed tends to increase with income, but again up to a limit. In the highest income bracket used in the survey--\$7,000 and over--there was a reduced number of heavy cigarette smokers. The proportion of heavy cigar smokers (those smoking five or more daily) rises at incomes above \$6,000, t but the quantity of tobacco consumed in the United States in the form of cigars is only about one-eighth of the quantity of tobacco consumed in the form of cigarettes. As the study indicates however, age is a more important factor than income in accounting for variations in smoking habits.

Consumption of Tobacco in Hawaii

From the foregoing analysis, one would expect the consumption of tobacco in Hawaii to be relatively high. Our population is young (the median age in 1950 was 25 compared with 30 years for the mainland United States); it is highly urbanized (more than 70 per cent, compared with approximately 64 per cent for the rest of the United States); the ratio of males is high (121 per 100 females within the total civilian population in 1950, compared with a national average of 99 per 100). Cnly in one respect--among the several factors discussed in the Tobacco Smoking report--is Hawaii in a below-average position: per capita income in the Territory (1957) was only 90 per cent of the \$2,027 average for the entire United States. Furthermore, it would be expected that the large number of tourists entertained each year in Hawaii would add to the volume of local tobacco sales.

However, despite a preponderance of factors which are conducive to a more-than-average use of tobacco, receipts from the territorial tobacco tax in fact indicate a less-than-average level of tobacco consumption in the territory. During 1957, for the entire United States the per capita consumption of cigarettes by persons 15 years and older was 3,449--about 172.5 packs. In Hawaii during the fiscal year ending in 1957, the average consumption of territorially taxes cigarettes per head of civilian population 15 or over is estimated at 2,888 or 144.4 packs, approximately 84

^{*}*lbid.*, pp. 29, 33, 47, 50. †*lbid.*, pp. 27, 61.

Statistical Abstract of the United States, 1957, Table 1032, p. 808. Tobacco Smoking in the United States in Relation to Income, p. 27.

Table 24 TOBACCO TAX BASE AND REVENUES

			Per Capita	Revenue Per
		Revenue	Consumption	Capita
Jurisdiction	Tax Rate*	Per Capita	of Cigarettes	Per 1¢ of Tax
Louisiana	\$0.08	\$7.61	2,090	\$0.95
Montana	0.08	6.80	2,202	1.05
Florida	0.05	6.44	2,690	1.29
Alaska	0.05	6.38	2,578	1.28
Maine	0.05	6.34	2,626	1.27
Massachusetts	0.05	6.16	2,520	1.24
New Jersey	0.05	6.16	2,540	1.23
New Hampshire	0.03	5.86	4,112	1.95
Vermont	0.05	5.52	2,556	1.23
Washington	0.05	5.16	2,116	1.03
Pennsylvania	0.05	5.16	2,150	1.03
Texas	0.05	5.12	2,110	1.02
Nevada	0.03	4.83	3,388	1.61
North Dakota	0.06	4.82	1,691	0.80
Oklahoma	0.05	4.71	1,962	0.94
New Mexico	0.05	4.65	1,937	0.93
Michigan	0.04	4.48	2,226	1.10
West Virginia	0.05	4.47	1,862	0.89
Wisconsin	0.05	4.42	2,040	0.98
Georgia	0.05	4.37	1,852	0.87
Arkansas	0.06	4.22	1,496	0.70
Connecticut	0.03	4.21	2,938	1.40
Rhode Island	0.03	4.13	2,898	1.38
Tennessee	0.05	4.12	1,735	0.82
New York	0.03	3.99	2,770	1.33
Delaware	0.03	3.90	2,736	1.30
Minnesota	0.04	3.76	1,958	0.94
Ohio	0.03	3.71	2,558	1.24
Mississippi	0.05	3.68	1,635	0.74
Illinois	0.03	3.67	2,574	1.22
Idaho	0.04	3.47	1,826	0.87
Indiana	0.03	3.21	2,312	1.07
Alabama	0.04	3.18	1,719	0.80
Kansas	0.04	3.12	1,765	0.83
Nebraska	0.04	2.96	1,917	0.91
Wyoming	0.03	2.96	2,572	1.18
Kentucky	0.03	2.91	2,064	0.97
Iowa	0.03	2.66	1,866	0.89
South Dakota	0.0325	2.66	1,760	0.82
South Carolina	0.03	2.64	1,955	0.88
District of Columbia	0.02	2.55	2,712	1.28
Arizona	0.02	2.42	2,546	1.21
Utah	0.04	2.39	1,258	0.60
Missouri	0.02	2.38	2,428	1.19
HAWAII	0.027 +	2.26	1,828	0.87
Federal Government	0.08	9.62	2,405	1.20

43 States, Hawaii and District of Columbia -- Fiscal Year 1957

Sources: National Tobacco Tax Association, Comparative Tobacco Tax Collections . . by States for 1957, Tables I and II (September 1958; Hawaii data from territorial Tax Department, per capita consumption estimated. Civilian populations as of July-1, 1957 used. *Per package of cigarettes. ‡Computed on wholesale price of regular cigarettes. Tax on filtered brands approximated 3 cents.

per cent of the national average.* Similarly, Table 24 shows that in the fiscal year 1957, per capita consumption of taxed cigarettes in Hawaii by persons <u>of all ages</u> was less than in all but nine mainland jurisdictions. By this measure, cigarette purchases in Hawaii (1,828 per capita) were again far below--76 per cent--the national average (2,405).

Several factors, not yet considered, can be advanced to explain why the actual level of tobacco consumption in Hawaii is lower than the national average, rather than exceeding it, as might have been surmised. One explanation might be that the level of tobacco use <u>is</u> actually at or above national averages, but that part of the local consumption does not show up in the territorial tobacco tax base because of the use of tobacco which has not been reached by the tax. This would occur if local consumers in significant amounts (1) imported cigarettes and other tobacco directly from sources on the mainland or abroad, (2) purchased untaxed tobacco from local <u>civilian</u> sources, or (3) purchased untaxed tobacco from local military sources.

It does not seem likely that the first two possible factors are of any great significance in Hawaii. Most states, in 1957, had cigarette taxes higher than the Territory's, (see Table 24) and since 1949 federal law has required reporting by vendors of interstate sales of cigarettes, so that the taxing authority of the state to which the tobacco is shipped can tax the person receiving it. Within the territory, tax evasion by purchase from civilian sources not paying the tax is minimized by collecting the levy from tobacco wholesale distributors, of whom there are only 29.

The third of these factors, however, may be significant. Since 1949 local sales of tobacco to post exchanges, ships service stores, commissaries and other military facilities have been exempted from the territorial tax. These tax-free sales have been rather large, as Table 25 shows. Furthermore, Hawaii is visited by some 1,300 overseas merchant vessels each year, plus a large number of naval

Table 25 WHOLESALE SALES OF TAX-EXEMPT TOBACCO

Territory of Hawaii July 1, 1955 - December 31, 1957

Tere

Period	Amount of Sales	(if it were taxable)
July 1 - Dec. 31, 1955	\$1,126,479	\$168,972
Jan. 1 - Dec. 31, 1956	2,150,066	322,510
Jan. 1 - Dec. 31, 1957	2,870,974	509,598
Jan. 1 - Dec. 31, 1958	3,739,402	747,880

Source: Department of the Tax Commissioner

*The Hawaii average of cigarette consumption was estimated on the assumption that, as for the nation as a whole, 86 per cent of all tobacco purchases were for cigarettes.

vessels, all bearing untaxed cigarettes in their ship's stores. One may surmise that some of these tax-free tobacco products find their way, by purchase or gift, to civilian users. It is impossible, however, to measure or estimate how much tax evasion takes place by these routes. In the opinion of territorial tax officials, who are in the best position to know, the amount of illegal sales of tax-exempt tobacco in Hawaii is small. There seems to be no evidence of any organized traffic in such tobacco and complaints as to the misuse of tobacco products bought from federal facilities or from ship's stores are rare. However, the volume of tax-exempt sales in the past year increased sufficiently to raise a question as to this possible source of tax evasion.

Another factor deserves mention, although it too cannot be quantified. Social attitudes toward smoking--by women or by both sexes--may play an important role in determining how much tobacco is used in any community. For example, it will be observed from Table 24 that per capita consumption of tobacco in Utah is the lowest in the nation, despite the fact that the state is highly urbanized (over 65 per cent) and has a higher-than-average ratio of men to women. It is most likely that the offsetting factor is the fact that the largest religious denomination in Utah is the Church of Jesus Christ Latter-Day Saints (Mormon), a denomination which discourages the use of tobacco by its members. In Hawaii, it may well be that in addition to religious deterrents to smoking there is also operative the discouragement of some ethnic groups to smoking, particularly by women.

Trends in Tobacco Consumption

Turning from the current level of tobacco consumption to the changes in that level which may be anticipated in the future, it would appear that most factors are on the positive side--i.e., that continued increases in the tobacco tax base are to be expected. Barring unanticipated economic trends, the size of the population will grow, particularly of persons in the age brackets from 20 to 40 where smoking is most heavy; urbanization will continue; and per capita income will increase.

A factor working in the opposite direction is the balancing of the sex ratio in Hawaii. As the proportion of females in the territorial population increases, the tendency to smoke may in this respect be reduced from what it would be if the present relative excess of males were continued. However, social changes seem more likely to create a permissive attitude toward smoking--by both sexes--than further to discourage smoking. All factors considered, the consumption of tobacco in Hawaii--per capita and total--is more likely to increase than decrease.

[•]It was estimated by the National Tobacco Tax Association (an association comprised of tobacco tax administrators) that in 1956 only 2.4 per cent of cigarettes subject to federal taxation illegally escaped taxation by the states and territories. An additional 2.5 per cent were sold tax-free on federal reservations. Estimated State Cigarette Tax Evasion in 1956 (September 1957).

Limits on the Tax Level

There remains to be determined at what approximate level increased taxes will reduce the amount of revenues, instead of enlarging them--i.e., the point at which the oviduct of the goldenegg laying goose begins to rupture. The experience of states which have changed their tobacco taxes in the past, as well as Hawaii, is informative. Between 1949 and 1951, several states increased their cigarette tax and a few reduced them. Table 26 summarizes the resulting effects on the per capita consumption of tobacco and attempts to measure the sensitivity of demand⁺ to price changes caused by adjustments in the tax rate.

Table 26 TAX RATE CHANGES AND PER CAPITA CIGARETTE CONSUMPTION

	(1)	(2)	(3)	(4)	(5)
		Resulting	70	% Change in	Price
	Tax Rate	Change in	Change	Per Capita	Elasticity
<u>_State_</u>	Change	Price/Pack	in Price	Consumption	(4÷3)*
Arkansas (1951)	4¢ to 6¢	21¢ to 23¢	+ 9.5	- 4.7	0.49
Florida (1949)	4¢ to 5¢	20¢ to 21¢	+ 5.0	+ 3.0	-0.60
Georgia (1951)	5¢ to 3¢	22¢ to 20¢	- 8.1	+ 19.5	2.41
Montana (1950)	2¢ to 4¢	19¢ to 21¢	+10.5	- 2.4	0.23
New Hampshire (1951)	2 1/2¢ to 3¢	19c to 191/2¢	+ 2.6	- 3.1	1.19
North Dakota (1951)	5¢ to 6¢	22¢ to 23¢	+ 4.5	+ 4.3	-0.96
South Carolina (1950)	3¢ to 5¢	20¢ to 22¢	+10.0	-19.4	1.94
South Carolina (1951)	5¢ to 3¢	22¢ to 20¢	- 8.1	+23.4	2.89
Tennessee (1951)	3¢ to 5¢	20¢ to 22¢	+10.0	- 5.2	0.52
T e xas (1950)	3¢ to 4¢	20¢ to 21¢	+ 5.0	- 8.4	1.68
Washington (1949)	2¢ to 4¢	18¢ to 20¢	+11.0	~ 5.0	0.45
West Virginia (1951)	1¢ to 4¢	17 1/2¢ to 201/2	\$ \$ +17.1	-21.8	1.27

*Arc elasticity, algebraic sign reversed.

Source: National Tobacco Tax Research Council, Cigarette Taxes in the United States (1953), p. 39.

It will be observed that in nine of the 12 jurisdictions, the effect of a tax increase--assuming, as throughout this discussion, that tax changes are fully reflected in retail prices--was to decrease per capita consumption. In four states (Arkanšas, Montana, Tennessee and Washington), the level of consumption fell, but by a smaller percentage than the price of cigarettes rose, while in Florida and North Dakota per capita consumption actually rose despite the price increase. In only the remaining five of the 12 jurisdictions, then, did per capita consumption change more than proportionately to the change in price; i.e.,

[†]In the terminology of economics, such sensitivity is called "elasticity" when it measures the change in quantity demanded (other factors being constant) when price is changed by a very small amount.

only in these states was there evidence that the total expenditure for cigarettes would be reduced by tax-induced increases in tobacco prices.

If an unweighted average is made of the figures shown in the fifth column of Table 26, it shows an average price elasticity of 0.96--i.e., that for a price increase of 1 per cent, per capita purchases of cigarettes decreased, on the average, also by somewhat less than 1 per cent.

Hawaii's recent experience suggests that the local demand for tobacco products may be rather inelastic, not highly responsive to price increases.[‡] In July, 1957 (the beginning of a new fiscal year), when the territorial tobacco tax was raised from 15 to 20 per cent of wholesale value, retail prices rose approximately two cents per pack--by five cents in many vending machines, whose prices are usually in nickel multiples. The price rise at retail was stimulated by increases in wholesale prices, as well as the tax change. Table 27 indicates that the total amount spent for tobacco products in Hawaii, measured by the wholesale tax base, was enlarged in the following fiscal year, 1958, despite the price increase. Valued at wholesale, per capita outlays for tobacco by the civilian population rose from \$15.10 in 1957 to \$15.48 last fiscal year.

Table 27 EXPENDITURES FOR TOBACCO IN HAWAII 1957 AND 1958

Fiscal <u>Year</u>	<u>Tobacco Sales*</u>	<u>Civilian Population**</u>	Per Capita Sales	Estimated Per Capita <u>Cigarette Sales</u>
1957	\$8,326,891	551,537	\$15.10	91 packs
1958	8,913,359	575,771	15.48	78 packs

*Wholesale value, from reports of Tax Commissioner. **As of July 1.

From this experience, it is conservative to assume that, for relatively small changes in prices, the elasticity of demand for tobacco is no greater than unitary.[§] States in another way, it

[†] That the demand for tobacco products is relatively inelastic is also indicated in studies of *income* elasticity—*i.e.* the change in quantity of tobacco purchased at various income levels as a person's income is slightly increased. A study made for the U. S. Department of Agriculture (*Tobacco Smoking in the United States in Relation to Income*, summarized in *The Tobacco Stutation*, June 1958, pp. 56-57) estimates the income elasticity coefficient of ergentes to be coly 0.1 to 0.2, that of cigars to be about 0.3—*i.e.* an increase of 1 per cent in income for all urban families is accompanied by an increase of 0.3 per cent in cigar expenditures per adult male.

increase of 1 per cent in income for all urban families is accompanied by an increase of 0.3 per cent in cigar expenditures per adult male. The elasticity of demand for tobacco, in the judgment of local wholesalers, was apparently not considered to be large when they stated in 1953: "There was no real objection evidenced against a reasonable increase in the Tobacco Tax. That is, the people present did not feel that a reasonable increase would adversely affect the sales." (Memorandum to the Governor's Tax Committee, dated September 30, 1953 and signed by A. V. Steward on behalf of local wholesalers. The memorandum transmitted the opinion of wholesalers concerning a proposal to increase the tax rate from 15 to 20 per cent, precisely the amendment subsequently made in 1957).

Son the basis of Tables 26 and 27, one would be justified in stating that the price elasticity of the demand for tobacco is far smaller than unity. However, the table does not consider all pertinent factors—notably changes from one year to the next in income levels. While tobacco consumption is apparently not highly responsive to income changes, as the first foctnote, above, documents, effects of income changes must be allowed for. Therefore, not to err by understating the importance of tax increases, it is assumed in Table 28 that the price elasticity of the demand for tobacco has a coefficient of one.

is assumed that price increases will not cause any reduction in the total expenditure for tobacco, <u>inclusive of taxes</u>. (The quantity sold, however, may be reduced, as shown by the experience of all but two of the states in Table 26 and Hawaii.)

Using this assumption of unitary elasticity, it is possible to explore the effects of tax rate changes on tobacco sales and on tax revenues. By way of illustration, Table 28 traces the results of increasing the tobacco tax rate from its present level of 20 per cent (of wholesale price) by 5 per cent steps, up to 50 per cent. As before, it is assumed that tax increases are fully passed on to the consumer in the form of higher retail prices.

Table 28

ILLUSTRATION OF EFFECT OF TAX INCREASES ON REVENUES AND ON WHOLESALE SALES

(1) Tax Rate (on whole- sale sales)	(2) Approx. Tax Per Pack	(3) Retail Price of Cigarettes	(4) Volume of Wholesale Sales (Tax Excluded)	(5) Territorial Tax (4 x 1)	(6) Gross Receipts (Sales Plus Taxes) (4 + 5)
20%	3.6¢	24¢	\$8,500,000	\$1,700,000	\$10,200,000
25%	4.5¢	25¢	8,160,000	2,040,000	10,200,000
30%	5 . 4¢	26¢	7,846,000	2,354,000	10,200,000
35%	6.3¢	27¢	7,556,000	2,644,000	10.200.000
40%	7 .2¢	28¢	7 ,2 86,000	2,914,000	10,200,000
45%	8.1¢	29¢	7,035.00	3,165,000	10,200,000
50%	9.0¢	30¢	6,800,000	3,400,000	10,200,000

Calculated on assumptions: (i) within range of retail prices, same amount is spent for tobacco (column 6); (ii) increases in taxes (column 2) are entirely reflected in retail prices (column 3), to nearest penny.

Table 28 also illustrates the divergent interests of the taxing authority and the vendors of the products taxed. Within the limits explored, tax revenues continue to rise with each increase in tax rate. However, while the value of wholesale purchases <u>inclusive</u> of tax remains constant--under the assumption of unitary elasticity of demand--the receipts of wholesalers <u>exclusive</u> of tax decline. So, a policy difficulty involved in both tobacco and liquor taxation is made clear. Within limits, the government can derive more and more revenue from the heavier taxation of these "luxury" products, but at least in part at the cost of a decreasing volume of sales--and therefore decreasing profits to sellers of these products.

Opinion is probably divided as to the desirability of using the taxing power to discourage the consumption of liquor and tobacco. One attitude, perhaps less prevalent than in earlier decades, is that the government should discourage their consumption. A more neutral attitude is that the government should not deliberately seek to reduce the purchase of tobacco and liquor, but that it need not be particularly solicitous of the profitability of their sale.

Without attempting an answer to this highly subjective policy question with respect to tobacco taxation, it may be pointed out that a wide range of tax increase causes a much smaller increase in the retail price of cigarettes and other tobacco products. For example increase in the retail price of cigarettes and other tobacco products. For example, Table 28 estimates that a doubling of the present 20 per cent tax rate would result in a one-sixth increase in the retail price of cigarettes--from 24 to 28 cents per pack. (At that point the territorial tax would approach the federal tax of 8 cents per pack.)

Data are lacking as to how high the tax, and resulting price of tobacco, could go before the total outlay for tobacco in the territorv begins to shrink--otherwise stated, how elastic the demand for tobacco may be at significantly higher prices. At some point, legal avoidance of the tax (as through rolling one's own cigarettes) or illegal evasion of the tax (as through selling tax-exempt cigarettes from ship's stores) may begin to eat into the tax base so deeply as to reduce revenues. The conclusion to which existing evidence seems to point is that, having been increased from 15 to 20 per cent, the present tobacco tax does not seem to be at that upper limit.*

^{*}This conclusion necessarily assumes no great changes in basic conditions underlying the demand for tobacco. However, great changes, completely unrelated to taxes, may occur and modify the foregoing analysis. For example, if it were generally accepted that smoking is a direct cause of lung cancer, the elasticity of demand for tobacco might become much greater and increased taxes might hasten a general decline of the tobacco industry. If may be pointed out in this connection that average consumption of all tobacco products by all persons in the United States has annually declined from an all-time high of 12.5 pounds in 1947 to 11.1 pounds in 1957. However, population growth and price increases have maintained an annual increase (except during 1954, when many persons became, concerned about smoking and cancer) in total expendi-tures for tobacco throughout the nation. (U. S. Department of Agriculture, Annual Report on Tobacco Statistics, 1957, p. 49.)

Public Utility Tax (Chapter 126, Revised Laws of Hawaii 1955)

Structure of Tax:

Electrical, gas, telephone, railroad and transportation companies other than airlines pay a tax based on their gross operating receipts in lieu of all taxes other than income taxes and certain specific taxes and fees. Thetax rate is graduated according to the ratio of net to gross income.

1957 Amendments:

Minimum tax rate for all public utilities, other than buses and other land passenger transportation companies, raised from 5 to $5 \ 1/2$ per cent of gross receipts.

Annual Revenues - All to Territorial General Fund:

Fiscal	Year	1955-56	٠	•	•		•	•	•	•	•	•	\$2,626,000	
Fiscal	Year	1956-57	•		•	•	•	•	•	•	•	•	\$3,003,000	
Fiscal	Year	1957-58		•	•	•	•		•	•	•	•	\$3,383,000	
Fiscal	Year	1958-59	•	•	•	•	•	•	•	•	•	•	\$3,768,000 (Estimat	e)

Comparison with Mainland Public Utility Taxes:

A simple comparison of Hawaii's tax to mainland states' is difficult due to the great diversity of tax forms employed by state governments. A few states levy no special tax on public utilities. Among those states which do have some kind of a special tax on utilities, the variations in the types of utilities which are covered by the tax are legion. Hawaii's tax coverage ranks among the most comprehensive.

Most states (like Hawaii) make extensive use of the gross receipt method of taxation. Other measures of tax base which are employed include net profits, kilowatt hours, pole line miles, value of capital stock and so forth. Several states use a combination of tax bases. Unlike Hawaii, most states differentiate tax rates by type of utility, taxing certain utilities more heavily than others. Although many states have graduated tax rates, in none of these states is the tax rate determined by the ratio of net to gross income, as in Hawaii.

Several states impose this special tax in lieu of certain other taxes. However, in most states the utility tax is in addition to other taxes. Not all states use the tax as a source of general revenues. In some states, the tax rate is limited to the amount necessary to meet the expenses of the public utility commission and the costs of inspecting utility facilities.

Due to the great variation among states as to coverage and method of taxation, the following table lists only public utility taxes on electric power companies.

STATE PUBLIC UTILITY TAX RATES ON ELECTRIC POWER COMPANIES As of January 1958

- A. <u>No Special Tax:</u> 13 states (California, Georgia, Indiana, Iowa, Kansas, Maine, Michigan, Minnesota, Missouri, Nebraska, West Virginia and Wyoming)
- B. <u>Commission Maintenance or Inspection Fee Only:</u> 4 states (Arizona, Colorado, New Mexico and Utah)

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C. Gross Receipt Taxes:
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6.0% & Over -- 2 states (Louisiana* and North Carolina)
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- 4.0 5.9% -- 1 state (New Jersey †‡), HAWAII and the District of Columbia
 2.0 3.9% --13 states (Illinois, Kentucky*\$Maryland\$, New York*, North Dakota, Ohio\$, Oklahoma, Oregon‡, Rhode Island\$, South Dakota‡, Tennessee\$, Washington\$ and Wisconsin)
- Below 2.0% -- 9 states (Alabama[†][§], Arkansas[§], Connecticut[§]^{‡••}, Delaware. Florida^{*}, Montana, Pennsylvania, Texas[†] and Virginia[†])
- D. <u>Tax Base Other Than Gross Receipts:</u> 6 states (Idaho^{\$}, Mississippi^{\$}, Nevada, New Hampshire^{\$}, South Carolina^{\$} and Vermont)

^{*}Plus taxes computed on other tax bases. † Minimum of graduated gross receipts tax rate. schedule. ‡ In lieu of certain other taxes. [§]Plus inspection fee and/or commission maintenance fee. ** Plus 12 1/2% surtax.

CHAPTER 8 Taxation of Public Utilities*

All public utility companies, except airlines, pay a graduated tax on their operating revenues in place of property taxes and all other taxes except territorial income taxes, the specific taxes and fees imposed by the terms of their franchises. Since the end of 1952, local airlines have been exempted from the public utility tax and in lieu thereof have been taxed under the general excise tax. The airlines thus do not receive an exemption from the real property tax, which is enjoyed by all firms paying the public utility tax. Overall, however, they would be taxed more heavily if they were taxed like other public utility companies.

1957 Amendment

The minimum public utility tax was raised by the 1957 law from 5 to 5 1/2 per cent for all public utility companies except carriers of passengers by land on scheduled routes; these continue to pay 5 per cent. This minimum rate is applied to the gross income of any public utility, if the ratio of its net income to its gross income is 15 per cent or less. For all public utility companies having net income in excess of 15 per cent of the gross, the rate of the tax on gross income is increased continuously by 1/4 of one per cent for each increase in the ratio of the net to gross income of one per cent.

Administration of the Tax

Each public utility company is required to file a tax return on or before April 20 each year in a form presented by the Tax Commissioner showing its taxable gross receipts and net incomes for the preceding calendar year. The tax due for any one year is, therefore, based on the taxable gross receipts of the preceding year, e.g., the tax for 1958 is based on the gross receipts for 1957. Where the public utility firm carries on lines of business other than public utility operation, such as wholesaling or retailing of industrial equipment and household appliances, the Tax Commissioner has generally relied upon the rulings of the Public Utilities Commission in differentiating the receipts from public utility business (taxable under the levy) and those from non-utility business (taxable under the general excise and net income taxes).

Tax Rates and Revenues

Tax rates, applied against public utility receipts have ranged to 6 per cent and occasionally higher, as Table 29 shows. However, practically all the companies are taxed at the minimum rate. For example, between 1955 and 1958 the minimum rate applied to all but two of the companies, which happened to be the largest public utilities in the territory.

It will also be observed that, with minor fluctuations, public utility tax revenues have been rising during the past 10 years, from

^{*}By Yau Sing Leong, Professor of Economics.

Table 29

Calendar <u>Yea</u> r	Number of Returns	Range of <u>Tax Rates</u>	Average <u>Tax Rate</u> †	Tax Revenues (Thousands)	Tax Base‡ (Gross R ece ipts in <u>Thousands)</u>
1949	28	5-*%	5.0%	\$1,949	\$38,979
1950	27	5-5.28	5.1	1,973	38,649
1951	28	5 - *	5.2	1,982	38,171
1952	28	5-5.60	5.0	2,144	42, 766
1953	26	5-6.00	5.1	2,403	47,360
1954	27	5-5.55	5.1	2,326	45,449
1955	21	5-5.26	5.1	2,388	47,254
1956	22	5-6.14	5.5	2,866	51,644
1957	21	5-6.07	5.6	3,128	56,103
1958	21	5-6.34	5.8	3,600	61,990

PUBLIC UTILITY TAX RATES, REVENUES AND BASE, 1949-58

Source: Department of the Tax Commissioner.

* Maximum rates applied not available.

[†] Obtained by dividing total tax revenues by gross receipts for each year.

[‡] Gross receipts of the preceding year serve as the tax base for the given year, for example, gross receipts for 1957 are the tax base for 1958.

\$1.9 million in 1949 to \$3.6 million in 1958, an increase of almost 100 per cent. Since the tax revenues for 1958 are determined by the new rates, at least a part of the rise in revenues in 1958 from the preceding year is attributable to the increase in the tax rates.

How much of the increase in public utility tax revenues for 1958 is due to the change in tax rates? At our request, the Tax Comissioner's office recomputed the tax liability for each company under the old rates. On this basis, tax revenues for 1958 would have been \$3,315,000 instead of \$3,600,000 as yielded by the new increased rates now in effect. The difference--\$285,000--is then to be attributed to the 1957 tax rate increase, leaving \$187,000 attributable to the expansion in the operating receipts of utility companies, Effect of the Tax

On whom does the burden of this increase in the public utility tax rest?--on the public utility companies or the consumers of public utility services?

Since the new, increased tax rates have been in effect only one utility company--the Hawaiian Telephone Company--has successfully applied for an increase in its rates by the Public Utilities Commission. Taking into consideration estimated changes in operating revenues and expenses over the next few years, the Commission authorized an increase in telephone rates which would vield a rate of 6.5 per cent on the fair value of the utility plant in service in

1958, instead of 5.1 per cent which would have been the yield under the old utility rates.*

It is interesting to note that in estimating changes in operating expenses, the Commission took into consideration not only the utility levies but all other taxes, including both territorial and federal corporate income and unemployment taxes \dagger In view of this, there is little question that the users of public utilities have been bearing the utility tax, and will be bearing the increase of this tax, even though for the present all the other utility companies, in the absence of any request for a raise in rates, are temporarily absorbing the tax increase. It is to be expected that the tax increase will eventually be shifted forward to the consumers.

Effect on Rates of Total Tax Burden

Since the Commission includes all taxes as a part of operating expenses in prescribing rates for all public utilities to yield a fair return, it may be instructive to study not only the burden of the gross receipts tax but also the total load of all taxes placed on the public utilities, and to assess the possible effects on the public utility companies and on the users of public utility services.

It will be seen from the accompanying table that taxes paid by the utility companies for the period 1950-57 varied from 14.3 to 18.5 per cent of gross revenues. Assuming that all taxes are shifted forward, this means that the users of public utilities were bearing from 14.3 cents to 18.5 cents for taxes in every dollar paid for public utility services.

					Table 3	30				
TOTAL G	ROSS	REVENUES	, TOTAL	FEDERAL	AND	TERRITORIA	L TAXES	AND PER	CENT	OF
TA	XES TO	GROSS	REVENUE	S, OF AL	L PUBL	IC UTILITY	COMPAN	NIES, ‡ 195	0-57	

Year	Gross Revenues (Thousands)	Taxes ** (Thousands)	Ratio of Taxes to Gross Revenues
1950	\$33,500	\$ 4,800	14.4%
1951	37,200	6,100	16.3
1952	42,100	6,000	14.3
1953	46,100	6,700	14.5
1954	47,600	7,000	14.7
1955	52,300	9,100	17.4
1956	57,500	10,600	18.5
1957	63,600	11,600	18.2

Source: Hawaii Public Utilities Commission.

- * Territorial taxes include public utility, corporate income, Public Utilities Commission fee and unemployment; federal include corporate income, insurance contributions and unemployment.
- **Including all public utility companies, except air carriers which are not subject to the public utility tax.

^{*} Public Utilities Commission, Decision and Order No. 946, In the matter of the application of Hawaiian Telephone Company for approval of revised schedules of rates, services and charges, Docket No. 1324, effective May 1, 1958, † See Public Utilities Commission, *Earning Position*, a report on the application of the Hawaiian Telephone Company for increases in its rates and charges, April 1958, p. 5-5.

Since all taxes are treated as operating expenses in establishing utility rates, if the rates so authorized by the Commission should yield returns that approximate its "fair return," the presumption is that the burden of all taxes is borne by the users. Whether or not the taxes are shifted to the consumers then will depend on whether the rates as prescribed will give each company a fair return. Statistics on net income and the rate base (average value of utility plant in service, minus average depreciation and amortization reserves plus average working cash capital) are available, with which may be computed the average rates of return for various utilities and for all utilities in the aggregate.

An examination of these data shows that the average rates of return fluctuate from year to year for each group of utility companies, and vary from one group of utility to another for the same year.* These fluctuations are to be expected since rates of return are dependent upon revenues received, operating expenses and costs incurred on the one hand, and capital expenditures and depreciation on the other, all of which may vary from year to year. Apparently only over a period of several years can any company expect to approximate the Commission's fair-return rates and to shift forward the entire burden of all the taxes. In any particular year, taxes may be borne out of net profits for some companies, when the actual rates of return fall short of the allowed rates of return. Conversely, the actual rates of return may exceed the fair-return rates in other years.

The shifting of the income tax through rate-making raises the question as to the appropriateness of taxing the incomes of public utility companies by both the territorial government and the federal government--especially the latter, whose collection represents about two-thirds of the total taxes on utilities. The territorial corporate income tax is relatively small, being 5 per cent on the first \$25,000 of net income and 5.5 per cent above this amount, but the federal levy takes approximately 50 per cent of the net incomes of the companies supplying our major utilities, such as electric, gas, telephone and mass transportation. In theory, the income tax is intended to reduce the net profit of a corporation, that is, the residual after deduction of all expenses and costs from the gross income that is available for the disposal of the owners. For corporations whose prices and whose rates of return are not subject to government regulation, taxable income is such a residual, and the income tax may serve to take a part of the stockholders' claims, reducing the amounts that would otherwise have been available for dividends or for addition to surplus.

For a public utility corporation, however, the fair return allowed by the Commission, if earned under the prescribed utility rates, is presumably net to the owners, equivalent to net profit of unregulated

^{*} Appendix Table C.

companies after income taxes. For this reason the Commission has included both the territorial and federal income taxes as well as other levies as a part of operating costs in adjusting utility rates to yield a fair return. To the extent that the authorized rates yield the fair return, no more nor less, the burden of the taxes is entirely shifted to the consumers: to the extent that the return is less than the fair return, a part of the burden may be shifted to the users and a part of it rests on the owners; and to the extent that the return exceeds the fair return, the income taxes would reduce the excess profits by approximately one-half, leaving the remainder to the owners. In any case, except when the return is less than the fair return, the consumers are footing the entire tax bill on utilities by paving higher utility rates than they would otherwise.

Apart from the fact that consumers are, in the long run, paying all the taxes imposed on utility companies, what are the consequences? Two important effects are possible: first, the tax-induced high utility rates may increase the regressivity of the structure, and second, they may result in an underutilization of the plant capacity of utility companies.

Both the gross receipts tax and the income taxes on public utility companies are graduated levies. But since all taxes are shifted to the consumers, is the effect likely to increase the regressivity of the tax structure, that is, is the tax burden likely to be heavier on consumers in the lower-income groups who may have to spend a greater percentage of their incomes on utilities, as they generally do on food and other necessities, than those in the higher-income brackets? Available statistics indicate that expenditures of American families for major public utilities are proportional to income. For example, data compiled by the National Resources Planning Board in 1935-36 for its study of Family Expenditures in the United States show that expenditures by households or families for electricity, gas and telephone are proportional to income through all except the last (highest) or last two brackets*. A recent study of household expenditures within the continental limits of the United States for Life magazine suggests that the proportionality of household expenditures for the major utilities to family income has continued to the present[†].

Does this proportional relationship of these expenditures to income hold for Hawaii? In many mainland areas, utility companies use the block-rate system of pricing based on volume purchased by households, a form of price discrimination applied especially to electricity and gas.[‡] Price discrimination based on quantity purchased is likely to have a regressive effect by increasing the cost

^{*}Washington, 1941, pp. 3, 39.

⁻ wasnington, 1941, pp. 3, 39. T See Time, Inc., Life Study of Consumer Expenditures, (N. Y., 1957) Vol. 1, p. 92. The data pre-sented here are not strictly comparable with those of the National Resources Planning Board study, but the parallelism is sufficient for the point at hand. \pm This method of pricing may be used to bring about a fuller utilization of plant capacity without re-sorting to marginal-cost pricing, which would mean charging a price below average cost, and hence the necessity of subsidizing consumers for the difference between marginal cost and average cost by means of general taxation. Through a system of quantity discount based on the quantity purchased, total revenue may be raised up to the level of total cost.

of utilities to the lower-income groups and lowering it to the higher. Here in Hawaii utility companies generally utilize only a two-step rate structure--one rate for residential consumers and the other to business users, with no discounts for volume purchased--thus obviating a possible source of regressivity. We can, therefore, say that probably the portion of the total tax burden borne by residential users is unlikely to increase the regressiveness of Hawaii's tax structure.

How important are our residential consumers? In 1957 it is estimated that the gross receipts derived from the sales to residential consumers represented 44 per cent for electricity, 78 per cent for gas and 73 per cent for telephone services of the respective total sales of each of these utilities. As to the utility taxes paid by the business users, they are reflected in higher prices for the goods and services offered, and their ultimate incidence may be roughly comparable to that of the general excise tax on sales.

A more important consequence of the shifting to consumers of the heavy federal-plus-territorial tax burden is that the resulting tax-induced high utility rates tend to hold down consumption, causing the utility production capacity to be underutilized. Typically, in the short-run public utility companies have plant capacities greater than those required to supply the current demand, so that additional output can be produced at very low marginal cost, with the short-run average cost falling. If there were no taxes, or if taxes were lower, it is expected that utility rates would have been lower, consumption would have been higher, and additional output up to the point of full utilization of capacity could have been turned out at lower per unit cost. There would have been a better allocation of resources and an improvement in social welfare. It is perhaps possible to utilize more fully the existing plant capacities of certain utilities by employing a system of price discrimination or price discounts based on volume or quantity used, the mainland practice previously mentioned. However, territorial utility companies do not utilize such pricing practices.

In the long run, too, the high taxes on utilities tend to restrict the size of plants, requiring the community to get along on with a smaller capacity than would be optimum. Had pricing been such as to encourage the maximum use of each utility, and hence the construction of larger plants to take advantage of economies of largescale production, long-run marginal costs would be lower and the long-run average cost would be declining. As it is, present tax-induced high utility rates tend to discourage consumption; consequently plants of less than optimum size are being built, and hence production costs tend to be higher than what they might be.

CHAPTER 9 Net Income Taxes*

Among the changes in Hawaii's tax structure made by the 1957 legislature, the most sweeping took place in the net income taxes. Prior to these amendments, the Territory had imposed a 10 per cent corporate income tax, and a 2 per cent on wages, salaries and other personal compensation, and on dividends. It also levied a personal net income tax, graduated from 3 to 6 per cent, but for a variety of reasons the yield from this tax was relatively small -- in most years less than \$2 million.

The omnibus tax law enacted by the special session of 1957 made these basic changes in the personal income tax statutes:

- 1. It repealed the 2 per cent compensation-dividends tax, effective January 1, 1958.
- 2. It adopted a new personal income tax, generally based upon that of the federal government, with the following results, among others:
 - (a) The deductibility of federal income tax payments was discontinued, but the privilege of income-splitting by married couples was retained;
 - (b) Exemptions (formerly \$1,000 each for taxpayer and spouse and \$200 per dependent) were set at a uniform \$400;
 - (c) Capital gains, previously excluded from taxation, were taxed, but with special treatment, as under the federal tax;
 - (d) Higher rates, ranging from 3 per cent on the first \$500 of taxable income to 9 per cent on amounts over \$30,000, were imposed.

Federal Internal Revenue Code

The Hawaii income tax law of 1957 generally adopts the definitions and procedures of the Internal Revenue Code of 1954. Instead of itself describing what is recognized as taxable income, what business and personal deductions are allowable and in what amounts, what persons may be claimed as dependents--or attempting many of the other definitions which inevitably abound in a self-sufficient income tax statute--the law states that:

. . . It is the intent of this chapter, in addition to the essential purpose of raising revenue, to conform the income tax law of the Territory as closely as may be to the Internal Revenue Code in order to simplify the filing of returns and minimize the taxpayer's burdens in complying with the income tax law...

^{*}By Robert M. Kamins, Professor of Economics.

by Robert 21. Ramma, reference in London 23. $\hat{\tau}$ Among the factors which limited the yield of the personal net income tax were: wave earners (who comprise approximately two-thirds of the population) were for the most part taxed under the 2 percent tax, rather than under the graduated income tax, receiving a credit of 75 per cent of compensation-dividends taxes paid; federal income taxes were allowed as deductions, substantially reducing the tax base; rates were graduated only slowly, the base rate of 3 per cent applying on the first \$5,000 of taxable income— $\delta 10,000$ in the case of married couples taking advantage of the option of splitting their joint income.

The Internal Revenue Code, so far as made applicable by this chapter, is a statute adopted and incorporated by reference... (Section 121-2, Revised Laws of Hawaii 1955.)

The effect of this adoption is to incorporate within the territorial tax such features of the federal law as medical deductions and a standard deduction, previously lacking in the Hawaii law, to change the rules under which business expenses--such as obsolescence and corporate organization costs--are computed, and, in a word, to make part of the territorial law the voluminous procedures provided by statute and regulation for the federal law.

In passing, it must be noted that what was adopted for local application were the provisions of the Internal Revenue Code <u>as</u> <u>they existed on June 7, 1957</u>, when the new tax law went into effect. By disclaiming any attempt to incorporate automatically any future changes in the federal law, the legislature skirted a possible constitutional question. It is not yet clear whether or not a state or territorial legislature may incorporate by reference possible future amendments in federal statutes without committing an improper delegation of power to the national Congress. Several states, however, like Hawaii, adopt by reference some or all of the Internal Revenue Code, as it stands.*

The Hawaii legislature, however, made several exceptions in its general adoption of the rules of the Internal Revenue Code. For example, the exclusion from taxable income of the first \$50 of dividend income is not allowed under the territorial law, t nor is the exclusion of the "cost-of-living" salary differential received by federal employees in Hawaii. Net operating loss deductions permitted as carry-backs under the federal code are not permitted, but a carry-forward for a single year--instead of the five years permitted under federal law--is allowed. No provision is made, as under the federal levy, for special rates on the net income of heads of households who have no living spouse. Conversely, the local law gives a special benefit to persons who take up residence in Hawaii after attaining the age of 65. They are taxed only on income from property, business and personal services performed in the territory, or otherwise derived from local sources, but not on income derived from outside the territory.

Capital Gains

One of the consequences of fashioning Hawaii's income tax in the image of the federal law is that capital gains on real estate, stocks, loans, etc. were made subject to taxation, rather than being generally excluded (unless realized in the normal course of business) as they had been previously. Following the compromise attitude towards capital gains taxation which has long characterized the Internal Revenue Code, under the Hawaii tax short-term

See Robert M. Kamins, "Federally-Based State Income Taxes," National Tax Journal, March 1956, p. 54.

p. 54. + However, partial deduction of inter-corporate dividends is permitted. (Section 121-5c, Revised Laws of Hawaii 1955.)

gains--on assets held for less than six months--are taxable at regular rates, but long-term gains are taxed in this manner: either half of the excess of long-term gain over short-term loss is taxed at regular rates, or else the entire excess is taxed at 3 per cent, the smallest rate in the schedule--whichever method yields the lesser tax. (The 3 per cent special tax, it will be seen, is the counterpart of the 25 per cent alternative tax under the federal treatment of long-term capital gains.)

The capital gains tax for corporations is 2-3/4 per cent, or half of the maximum rate on other forms of income.

Personal Exemptions

Hawaii's new income tax law grants exemptions of \$400 each for the taxpayer, his spouse and for each dependent. Blind persons are allowed exemptions of \$5,000 annually, a generous amount compared with the \$1,200 double exemption permitted by the Internal Revenue Code. However, the Territory allows an exemption of only \$800 to persons over 65, as against the \$1,200 permitted by the federal government.

The \$400 exemption is lower than that found in any state income tax law for individual taxpayers; so is the \$800 exemption for man and wife. (Closest are the \$500 individual exemptions of Oregon and Vermont.) A \$400 exemption for dependents is not so unusual, since five states now provide an identical amount and five others (Alabama, Idaho, New Mexico, North Carolina and Virginia) permit the deduction of only \$200 or \$300 for each dependent.

Two motivating purposes may explain why the legislature set the exemption allowances conspicuously low. One was the need for revenue: more generous allowances cut into the broadest part of the income tax base. The second purpose was expressed in a sentiment, voiced by members of both political parties and in both legislative chambers, that "everyone should pay a direct tax to the Territory"--that repeal of the exemptionless compensationdividends tax should not serve to exclude lower income groups from all taxes on their wages and other income. Considered with relation to prevailing prices and wages, a \$400 exemption should succeed in bringing within the scope of the income tax virtually all income recipients, except student and other seasonal employees, persons receiving small amounts of rent, interest and dividend income, and persons with regular employment but also with large families--five or more, in the case of those receiving more than \$2,500 in a year.

Non-deductibility of Federal Taxes

Much of the debate over the 1957 income tax law centered

^{4.} It was estimated in 1949 that exemptions of \$250 for taxpayer, \$250 for spouse and \$100 per dependent would remove about 20 per cent of the potential income tax base-before allowing for personal deductions. Exemptions of \$500, but \$200 for dependents, would remove slightly more than one-third of the base, while \$600 exemptions as under the federal law would remove almost half. Enlarging Hauai's Net Income Tax, Legislative Reference Bureau, University of Hawaii, Report No. 4, 1949, p. 46.

about the issue of allowing federal income taxes to be deducted in computing the Hawaii tax, as under the then-existing law, or of eliminating the deduction. Advocates of the two opposing policies each found ample mainland precedent for their points of view, since state income tax laws are narrowly divided on this point. (As of this writing 15 states allow the deduction in full, 14 do not allow it at all, and 4 allow the deduction of a limited amount of federal income taxes. With respect to corporate income levies, 14 allow a full deduction, 19 no deduction, and one a limited deduction.)

Many debating points can be made on either side of the issue, such as whether the federal government, by its heavy rates, has preempted the income tax field, or whether <u>all</u> taxes have to be considered as being borne out of either income or savings. The basic question underlying the debate is how high the effective rates of the income tax are to be. It is readily apparent that the deduction or non-deduction of amounts as large as federal income taxes has an important effect on how much territorial income tax will be paid under any schedule of local tax rates. By way of illustration, the old Hawaii personal income levy had seven brackets, ranging up to 6 per cent, but virtually no one paid at rates higher than 4-1/2per cent, the fourth bracket of the seven, because above that level the deduction of federal income taxes served to hold down the amount taxed by the Territory.

Persons who wish to raise more tax revenues from upper income brackets are generally disposed against deductibility of the federal tax. Those who are opposed to high effective rates have their tactical ground strengthened by permitting the deduction, for then the rates of the state or territorial tax have to go so high to compensate for the deduction that resistance is likely to be encountered, within the legislature and out.

Administration: Forms and Rules

A prime purpose of the 1957 income tax law, already noted, was to bring the Hawaii income tax in substantial conformity with the federal income tax, so that the taxpayer's labor in keeping tax records and in preparing annual returns for two levels of government would be minimized. By the same token, the administration of Hawaii's income tax could apply much of the body of interpretative rules, regulations and court decisions evolved under the federal levy. To this end the Hawaii income tax law (Section 121-2, Revised Laws of Hawaii 1955) states that:

. . . The rules and regulations, forms and procedures adopted and established under this chapter shall conform as nearly as possible, and unless there is good reason to the contrary, to the rules and regulations, forms and procedures adopted and established under the Internal Revenue Code.

In establishing the administrative framework of the new income tax, the territorial Tax Department has operated under the fore-

going instruction of the law. Taxpayers' returns--both "short-form" (for employees earning less than \$6,000) and "long-form"--are modelled after their federal counterparts, as are the instructions which accompany the tax returns. The optional tables by which taxes on adjusted gross incomes under \$6,000 can be computed look familiar to persons accustomed to the federal tax tables; so are the withholding forms and tables.

However, the administration of Hawaii's income tax cannot completely rely on federal rules and regulations. Not only are there many differences between the two income taxes--some of them being listed earlier in this chapter--but many adopted provisions of the Internal Revenue Code must be supplemented by rule to fit into Hawaii's law. For example, the taxation of capital gains, previously exempt in Hawaii, requires rules setting forth the methods of establishing the value of capital assets for tax purposes.

Since March 1958, the Tax Commissioner has promulgated rules and regulations encompassing 81 articles. These articles, which have the force of law, spell out various definitions applied in the enforcement of the income tax, the use of the standard deduction in lieu of itemized deductions, the tax treatment of alimony payments, the circumstances in which advance estimates of income must be filed, and a large variety of other interpretations and instructions to taxpayers. It appears that the Department of the Tax Commissioner has promulgated most of the basic regulations affecting large groups of taxpayers, but it must be anticipated that the number of regulations will continue to grow, though perhaps slowly, to meet changing circumstances and problems not yet encountered.

How frequent and how important these future regulations will be will depend in part on the extent to which the Hawaii income tax is amended to adopt changes made from time to time in the federal Internal Revenue Code. As noted previously, provisions of the Code as they read on June 7, 1957 are adopted by reference in the Hawaii law is amended to adopt changes made from time to time in the federal Internal Revenue Code. As noted previously, provisions of the Code as they read on June 7, 1957 are adopted by reference in the Hawaii law; subsequent amendments to the federal income tax, if not enacted by the Hawaii legislature, will cause the local income tax law progressively to diverge from the federal. In this case local regulations must spell out an increasing amount of tax definitions and procedures, for the comparable federal regulations will no longer be applicable.

Withholding of Income Taxes

The level of revenues under the new income tax will not be determined until after April 20, 1959, when the first annual returns will be due (for taxpayers on a calendar year basis). However, data on tax withholdings from wages and salaries permit some comparison between the new tax and the compensation-dividends tax which it replaced. Such a comparison is made in the following table.

Table 31

HAWAII PERSONAL INCOME TAX BASES AND TAX WITHHOLDING

	1957 Personal Net Income Tax	Former Compensation- Dividends Tax				
	First 10 months of 1958	First 10 months of 1957				
No. of returns	67,001	68,126				
Tax base (payrolls)	\$534,590,000	\$520,990,000				
Tax Withheld	\$ 14,187,000	\$ 10,420,000				
Average rate of withholding	2.65%	2%				

It will be observed that the number of wage earners covered by withholding returns under the new income tax declined by slightly less than 2 per cent from the number covered in 1957 under the exemptionless compensation-dividends tax. However, economic expansion increased the payrolls subject to taxation by 2.6 per cent. Furthermore, the average rate of withholding under the new tax law was 2.65 per cent, compared with 2 per cent under the compensationdividends tax. The joint effect of expanded base and increased rates (in the first 10 months under the new law) was to enlarge tax withholdings by 13.6 per cent over the 1957 level. A portion of the 1958 withholdings, not readily estimated, will be refunded as overpayments when returns are filed.

Some 17,000 declarations of estimated income were made to the Department of the Tax Commissioner during the first eleven months of 1958 by self-employed persons and others (including those receiving salaries exceeding \$12,000) whose tax liabilities are not completely covered through withholding. Taxes returned with these declarations totalled \$3,148,000--together with taxes withheld from wages making a total revenue of \$17,355,000 during the first eleven months of administering the new personal income tax law. Income tax revenues for the biennium ending June 30, 1959 were estimated at \$33,300,000, and receipts from the compensation-dividends tax (repealed effective January 1, 1958) were expected to be about \$9,300,000. This total of \$42,600,000from the taxation of personal incomes for the current biennium may be compared with the \$30,000,000 revenue which had been anticipated for 1957-59 under the old individual income and compensation-dividends taxes prior to their repeal.*. Collections of approximately \$47,000,000 under the 1957 personal income tax law are estimated for the 1959-61 biennium.

The \$30,000,000 estimate would almost certainly have been exceeded had the old laws remained in effect, since higher levels of income were reached in 1957-59 than had been anticipated earlier when the estimate was made.

Table 32 ESTIMATED EFFECTIVE PERSONAL NET INCOME TAX RATES FOR SELECTED ADJUSTED GROSS INCOME LEVELS: 30 STATES, HAWAII AND THE DISTRICT OF COLUMBIA

(As of January 1958)

A. SINGLE PERSON, NO DEPENDENTS

97

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\$1,0	\$1,000		00	\$6,000)	\$10,0	00	\$25,00	\$25,000		000
State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate ඌ	State	Effec- tive Tax Rate (例)	State	Effec- tive Tax Rate (%)
HAWAII	1.5	HAWAII	3.3	Ore.	4.0	Vt.	4.3	Vt.	5.8	Wis.	7.6
Alaska	.9	Ore.	3.3	HAWAII	3.7	Ore.	4.0	Wis.	5.8	Alaska	7.1
Ore.	.8	Vt.	2.7	Vt.	3.6	HAWAII	4.0	HAWAII	5.3	HAWAII	6.9
Vt.	.8	Alaska	1.2	Ida.	2.8	Ida.	3.3	N. Y.	4.9	Vt.	6.1
Del.	.5	Md.	2.1	N. C.	2.8	N. C.	3.1	N. C.	4.9	N. Y.	5.6
Ky.	.5	N. C.	2.1	Alaska	2.5	N. Y.	2.8	Ore.	4.6	N. C.	5.6
Ida.	.4	Ida.	2.0	Md.	2.4	Minn.	2.6	Alaska	4.1	Ga.	4.7
Kan.	.4	N. Y.	1.7	N. Y.	2.3	Al a ska	2.5	Ida.	4.1	Miss.	4.3
Wis.	.4	D. C.	1.6	Del.	2.0	Wis.	2.5	Ga.	3.8	Calif.	4.2
Md.	.3	Del.	1.5	Ky.	2.0	Ky.	2.4	Minn.	3.8	S. C.	4.0
Mont.	.3	Ky.	1.5	Minn.	2.0	Del	2.3	S. C.	3.6	Va.	4.0
N. D.	.3	Minn.	1.4	Wis.	2.0	Va.	2.3	Va.	3.6	Ark.	3.8
Utah	.2	Va.	1.4	Va.	1.9	Md.	2.2	N. D.	3.5	D. C.	3.8
Ala.	_	Wis.	1.4	D. C.	1.8	S. C.	2.2	Del.	3.4	Minn.	3.0
Ariz.	-	S. C.	1.2	S. C.	1.8	Utah	2.0	Ky.	3.4	N. D.	3.0
Ark.	-	Ind.	1.1	Utah	1.6	D. C.	1.9	Colo.	3.1	Ore.	3.0
Calif.	-	Utah	1.1	Кап.	1.4	G a.	1.8	D. C.	2.7	Ida.	2.7

2 Table 32 (continued)

\$1,0	000	\$4,00	0	\$6,0	000	\$10,	000	\$25,	000	\$100,0	000
State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate (%)	State	Effec- tive Tax Rate (%)	State	Effec tive Tax Rate (%)
Colo.	-	Kan.	1.0	Iowa	1.4	Ala.	1.7	Ark.	2.6	Colo.	2.7
D. C.	-	Iowa	.9	Mass.	1.4	Colo.	1.6	Md.	2.5	Md.	2.5
Ga.	-	Mass.	.9	Mo.	1.4	Mo.	1.6	Miss.	2.4	Del.	2.4
Ind.	-	Mont.	.9	Ga.	1.3	Kan.	1.5	Utah	2.4	Ky.	2.3
Iowa	-	Colo.	.8	Ind.	1.3	Iowa	1.5	Kan.	2.3	Okla.	1.7
La.	-	Ga.	•8	Ala.	1.2	Ark.	1.4	Okla.	2.3	Kan.	1.6
Mass.	-	Mo.	•8	Ariz.	1.2	Ind.	1.4	Ala.	2.3	Ala.	1.5
Minn.	-	Ala.	.7	Mont.	1.2	Mass.	1.4	Mo.	2.1	Ind.	1.5
Miss.	-	Ariz.	.6	Ark.	1.0	Mont.	1.3	Mont.	2.1	Mont.	1.5
Mo.	-	Ark.	.6	Colo.	1.0	N. D.	1.3	Calif.	2.0	Utah	1.5
N. M.	-	N. D.	.6	Okla.	1.0	Okla.	1.3	Ariz.	1.9	Ariz.	1.3
N. Y.	-	Okla.	.6	N. D.	.8	Ariz.	1.2	Iowa	1.8	Mo•	1.3
N. C.	-	Calif.	.4	Calif.	.6	Miss.	.9	Mass.	1.5	Iowa	1.2
Okla.	-	N. M.	.4	La.	.6	Calif.	•8	Ind.	1.4	La.	1.0
S. C.	-	La.	.3	Miss.	.5	La.	.8	La.	1.1	Mass.	1.0
Va.	-	Miss.	-	N. M.	.5	N. M.	.5	N. M.	.6	N. M.	.7
MARRIEI	COUPLE,	TWO DEPEN	DENTS								
		HAWAII	1.6	HAWAII	2.3	Vt.	3.2	Wis.	5.7	Wis.	7.6
		Ind.	1.1	Vt.	2.1	HAWAII	2.8	Vt.	5.3	HAWAII	6.1
		Vt.	1.1	Ore.	1.8	Minn.	2.6	Minn.	4.5	Vt.	6.0
		Alaska	.9	Minn.	1.7	Ку.	2.3	N. C.	4.5	N. C.	5.5
		Ore.	.9	Wis.	1.7	Ore.	2.3	HAWAII	4.2	Alaska	5.4
		Wis.	.9	N. C.	1.6	Wis.	2.3	N. Y.	4.2	N. Y.	5.4
		N. C.	-8	Ky.	1.5	N. C.	2.2	Ore.	41	Ga.	4.6

Table 32 (continued)

--- Adjusted Gross Income (i.e., before personal deductions)

\$4,000		\$6,000		\$10,000		\$25,000		\$100,000	
State	Effec- tive Tax Rate (%)	State	、Effec- tive Tax Rate の	State	Effec- tive Tax Rate <u>(7)</u> .	State	Effec- tive Tax Rate ලබ	State	Effec- tive Tax Rate (%)
Ida.	.7	Alaska	1.4	Ida.	1.9	Ky.	3.9	Minn.	4.3
Va.	.7	Ida.	1.4	Alaska	1.6	Ida.	3.8	Miss.	4.2
Del.	.6	Ind.	1.3	Del.	1.6	Del.	3.6	N. D.	4.1
Ky.	.6	Iowa	1.2	N. Y.	1.6	N. D.	3.6	Va.	4.0
Minn.	.6	Va.	1.2	Va.	1.6	Va.	3.4	S. C.	3.9
Mass.	.5	Del.	1.1	Iowa	1.5	Ga.	3.2	Ore.	3.8
D.C.	.4	Md.	1.1	Md.	1.5	S. C.	3.2	Ark.	3.7
Iowa	.4	Mass.	1.1	Ala.	1.4	Colo.	3.1	Colo.	3.7
Kan.	.4	D. C.	1.0	Ind.	1.4	Alaska	2.8	D. C.	3.7
S. C.	.4	N. Y.	.9	S. C.	1.4	Ark.	2. 5	Ida.	3.4
Md.	.3	Kan.	•8	Utah	1.4	Utah	2. 5	Calif.	3.3
Mont.	.3	S. C.	.8	D. C.	1.3	D. C.	2.4	Del.	3.2
Utah	.3	Utah	.7	Mass.	1.2	Kan.	2.4	Ky.	3.2
N. M.	.2	Mont.	.6	Ark.	1.1	Ala.	2.3	Md.	2.4
N. Y.	.2	Ark.	.5	Kan.	1.1	Md.	2.2	K a n.	2.2
N. D.	.2	Mo.	.5	Mo.	1.0	Mo.	2.2	Okla.	2.1
Ariz.	.1	Ala.	.4	Mont.	.9	Mont.	2.2	Utah	2.1
Colo.	.1	Colo.	.4	Ga.	.8	Iowa	2.0	Ala.	2.0
Mo.	.1	N. D.	.4	Colo.	.7	Miss.	2.0	Mont.	2.0
Okla.	.1	N. M.	.4	N. D.	.6	Mass.	1.7	Mo.	1.7
Ala.	-	Ariz.	.3	Ariz.	.5	Okla.	1.6	Ariz.	1.6
Ark.	_	Okla.	.3	Calif.	.5	Ind.	1.4	Iowa	1.6
Calif.	-	Calif.	.2	Miss.	.5	Ariz.	1.3	Ind.	1.5
Ga.	_	Ga.	.2	Okla.	.5	Calif.	1.0	Mass.	1.3
La.	-	La.	-	N. M.	.4	La.	.9	La.	1.2
Miss		Miss.	-	La.	.3	N. M.	.7	N. M.	.7

Comparative Personal Income Tax Burdens

Low exemptions (no state has smaller) and relatively high rates combine to make the burden of Hawaii's income tax among the heaviest in the United States--as had been true for wage and salary earners, and for stockholders, under the old compensation-dividends tax. The burden of the territorial personal income tax is compared with those of 31 states and the District of Columbia in Table 32.

Part A of the table shows that for single taxpayers with no dependents, the effective income tax rate (i.e. tax payment divided by income) is highest in Hawaii for incomes up to \$4,000. Above \$6,000 the relative burden of Hawaii's tax, while remaining high, falls below that of two states.

Much the same patterns emerge from Part B of Table 32, which estimates comparative tax burdens on incomes of married couples with two dependents. Hawaii's low exemptions and high initial rates make its tax burden the largest in the nation for incomes up to \$6,000. Between \$10,000 and \$25,000 the burden in Hawaii is overtaken by an increasing number of states, but at the income level of \$100,000 Hawaii's effective rate is again almost the largest, being exceeded only in Wisconsin.

Corporate Income Tax

The Hawaii corporate income tax was remodelled by the 1957 amendments along with the personal incometax, i.e., the definitions and constructions of the Internal Revenue Code were generally adopted, the deductibility of the federal corporate income tax discontinued, and capital gains subjected to (special) taxation. The rate was nominally reduced, from a flat 10 per cent to 5 per cent on the first 25,000 and 5-1/2 per cent on net income in excess of

Table 33

COMPARISON OF HAWAII CORPORATE INCOME TAXES UNDER OLD AND NEW RATES*

Old Tax Rate	<u>New Tax Rate</u>	Old Tax Rate	New Tax Rate
\$100,000	\$100,000	\$1,000,000	\$1,000,000
\$ 46,500	\$ 46,500	\$ 514,500	\$ 514,500
\$ 53,500	\$100,000	\$ 485,500	\$1,000,000
10%	5-51/2%	1.0%	5-51/2%
\$ 5,350	\$ 5,375	\$ 48,550	\$ 54,875
5.35%	5.38%	4.89%	5.49%
\$ 51,850	\$ 51,875	\$ 563,050	\$ 569,375
	Old Tax Rate \$100,000 \$46,500 \$53,500 10% \$5,350 5.35% \$51,850	Old Tax Rate New Tax Rate \$100,000 \$100,000 \$46,500 \$46,500 \$53,500 \$100,000 10% \$-51/2% \$.35% \$.38% \$51,850 \$ 51,875	Old Tax Rate New Tax Rate Old Tax Rate. \$100,000 \$100,000 \$1,000,000 \$46,500 \$46,500 \$11,000,000 \$53,500 \$100,000 \$14,500 \$53,500 \$100,000 \$485,500 \$10% \$5-51/2% \$10% \$5,350 \$5,375 \$48,550 \$5,35% \$5,38% 4.89% \$51,850 \$51,875 \$563,050

*The table does not allow for the reduction in federal taxes caused by an increase in (deductible) Hawaii taxes.

that amount. However, since the federal income tax goes as high as 52 per cent, repealing its deductibility actually increased the effective rates of the Hawaii corporate income tax. As Table 33 illustrates, the increase for small corporate incomes was nominal, but becomes significant (approximately \$6,300 at the income level of \$1 million) for larger corporate returns.

Hawaii's tax rates on corporate income fall in a high, but not top, rank on a comparative basis. Among the 35 states imposing taxes on corporate income, eight -- Alaska, Massachusetts, Mississippi, North Carolina, Oregon, Pennsylvania, Virginia and Wisconsin -- impose effective rates going higher than Hawaii's. Another seven -- Arkansas, Delaware, Maryland, New York, Rhode Island, South Carolina and Vermont -- and the District of Columbia -- levy rates substantially equal to Hawaii's, that is ranging between 5 and 5 1/2 per cent. All 16 jurisdictions, as Hawaii, do not permit the deduction of federal income taxes.

The remaining 20 state corporate income taxes impose burdens lower than the territory's. For the most part, their nominal rates are not far different from Hawaii's, but in effect they are reduced by the deductibility of federal taxes.

CHAPTER 10 Real Property Tax

Before the great depression of the 1930's the real property tax was the mainstay of Hawaii's tax structure. Thus in 1929 it provided over half of the revenues, and together with the personal property tax which was finally repealed in 1947, it contributed four-fifths of the revenues towards the support of government in the territory. Since the 1930's, with the augmentation of the general excise, excises on specific commodities and businesses and taxes on income, the property tax has become less important, supplying in recent years between 13 and 15 per cent of total revenues, but it still rankr third as a revenue producer.

Although the tax is imposed and administered by the territorial Tax Office, the entire revenue goes to the counties for their support. It contributes about two-fifths of the counties' revenues, the remainder being derived from the share of the territorial general excise and motor fuel tax, and from the counties' selfadministered tax program.[†]Costs of property tax administration are borne by the Territory.

Hawaii's real property tax, like that of all states, is beset by a number of difficult problems. Some of the more important of these, the attempts to solve them by legislative and administrative actions, and the effect of these solutions will be discussed in this chapter.

Some Administrative Problems

Most jurisdictions experience difficulty in staffing their revenue departments with competent property tax administrators. Persons technically qualified for assessment and equalization work are chronically in short supply, particularly under the modest salary schedules established in most state and local governments. So it is in Hawaii. Here, at least, the civil service coverage of the Tax Office has avoided the rapid turnover of personnel experienced in many other jurisdictions, where assessors and their assistants are selected through political channels. New blood is revitalizing for any agency, however, and it is possible that greater movement of personnel within the property tax unit would be conducive to still better administration.

Following the replacement of revenue ceilings with rate ceilings in 1957, and anticipating further expansion in the tax base with new construction and rising property prices a continuous re-assessment program will bolster revenues, even if rates are not raised. But revenue considerations aside, more frequent assessment is justified from the equity standpoint by the rapidity

^{*}By Yau Sing Leong, Professor of Ecopomics.

[†] The four counties—the City and County of Honolulu, County of Maui, County of Hawaii and the County of Kauai— administer their own tax program, that of licensing vehicles and businesses, from which they have been deriving in recent years about one-sixth of their total tax revenues.

of changes in real estate values. It is well-known that values of real property do not change at the same rate, nor even in the same direction. Some may rise steeply, others gently or remain unchanged, while still others may even be falling. Equity, therefore, demands that the real property of each taxpayer be reassessed frequently to reflect its relative fair market value in order that the tax burden may be equitably adjusted and distributed.

Perhaps what is needed is a complete and thorough revaluation of all real property classified according to the criteria prescribed by the tax law. (Section 128-9, Revised Laws of Hawaii 1955.) Once such a definitive revaluation and assessment is done, the task of a biennial or annual revaluation may not be formidable.

Under the guidance of the Public Administration Service, the property tax division of the Tax Office has already made considerable progress in developing a comprehensive plan for classifying urban properties, and improvements, and is making preparations for classifying land according to use. The new methods for appraising and classifying urban properties and improvements will be used to recalculate the values of urban realty for the tax rolls. Thoroughgoing revaluation of rural lands according to more scientific methods of appraisal than those employed at present * must await the completion of a comprehensive soil classification of such property, recently begun by the University of Hawaii.t For the task of revaluing all taxable properties, of completing the classification of land according to fertility and use, and of conducting valuation research on a continuing basis, the Public Administration Service recommends the creation of a technical unit within the property tax division to be staffed by a group of high-level employees trained in property tax research and in real property appraisal methods.[‡]

Territorial or County Administration?

A question which has received legislative consideration is whether the administration of the property tax should be transferred to the counties, which receive all the revenues from the levy. Centralization of tax administration in the territorial Tax Office, under civil service, has avoided the rapid turnover of personnel, politicking and resulting inferior assessment work which characterizes property tax assessment in many mainland

[•] Appraisal of rural land in use has been based mainly on crop produced, and of unused and underdeveloped land, largely on the judgment of individual assessors. See Public Administration Service report Real Property Assessment in Hawaii, (1958), pp. 41-58, 116-130.

[†] For a discussion of the problems of classifying land and improvements for property taxation op. eit. pp. 146-155; and of the progress made by the Property Tax Division in developing improved methods of property classification, see "Preliminary Summary of Findings and Conclusions re Property Tax Assessment in Hawaii," Public Administration Service report to the Governor of Hawaii, October 28, 1958, pp. 20-21.

Among the types of valuation research deemed to be essential are: development of accurate and current cost factors for each structural, quality and use-type classification of improvements; collection of data relative to neighborhood characteristics; determination of the highest and beat use of unused and under-used property currently and in the near and more remote future; and analysis of the productivities of agricultural land to establish objective criteria for valuing such property. See Public Administration Service report to the Governor of Hawaii, October 28, 1958, p. 10.
jurisdictions, where the administration of the tax is placed in local governments.

An argument against transferring the assessing and collection function from the Territory to the counties is that it might jeopardize the professionalism of property tax administration--that county administration may be less effective, more subject to political influence. However, proponents of the transfer have argued that the professional disinterestedness of the territorial Tax Office in the level of assessments is indeed too great, that the legitimate concern of the counties in <u>their</u> tax bases should give them some voice in setting the level of assessments and in assuring themselves that parcels are not underassessed. Furthermore, they say, there is no inherent reason why county assessors cannot be quite as skillful and incorruptible as territorial personnel.

At least two possible patterns for increasing the role of the counties in property tax administration suggest themselves. One is to maintain a centralized, territorial assessment procedure, but to have a review by each county government of assessments within its area. An officer or commission, responsible to the county board of supervisors, could be empowered to review assessment procedures, working with territorial assessors to arrive at correct tax appraisals. In the event of disagreement, the county review authority could appeal to the board of review or tax appeal court, just as a protesting property owner can do. To work at all well, the county review authority must be technically competent and strictly non-political.

Alternatively, the counties could be given the entire responsibility for the assessment function. Under this arrangement they might still obtain the services of the territorial Tax Office in assessing areas of particular dificulty -- such as plantation lands, water sources, or mineral deposits -- where each county may not be able to obtain the services of a specialist. (Analogously, some mainland states assess, or help local governments assess, their areas of particular difficulty, such as railroads and public utility properties.) The results of such valuations by the Tax Office could be made obligatory upon the counties, or merely advisory.

The question of equalization arises, if the counties are given the assessment power. The need for equalization--the process of determining that assessment procedures in each county are sufficiently alike to yield substantially similar ratios of assessed-tomarket values--is not nearly so strong in Hawaii as it is in mainland jurisdictions where several units of government use the same tax base,* but the Territory does have some concern. First, the territorial (and proposed state) debt limit depends on the level of property assessments. Second, there may be some adverse in-

[•] In a mainland state, assessment may be done by cities or townships. The resulting tax roll may be used not only by the assessing unit of government, but also by the county, school districts and other special units—and in a few instances by the state itself. Each government unit is concerned with the uniformity of assessment methods, for its own revenues are affected.

fluence on economic development if effective property tax rates vary greatly from county to county. In the opinion of the writer this latter point has only a limited force, as is evidenced by the apparent lack of difficulty in recent decades, during which property tax rates among the counties have varied substantially. The point may be conceded, however, that if one county should impose effective rates greatly above those of other counties, it might impede investment and construction within that county.

The third point is one of legislative control over county property tax collections. If the legislature conceives that it is its responsibility to see that counties do not exceed certain maxima in the imposition of property taxes--and this would seem to be the purpose of the statutory rate limits--it seems logical that it would want assurances that the limits are not exceeded through the assessment process. Without some check on the level of assessment, for example, assessment at 90 per cent of market value, rather than the 70 per cent now contemplated by statute, would enable a county to increase its property tax base and revenues under existing rate ceilings by over 28 per cent (computing the ratio of 90 to 70).

If it were desired to retain this check and to maintain a general uniformity in assessment methods and ratios throughout the territory, a territorial equalization board similar to state equalization agencies in many mainland jurisdictions, might be established. Depending on how large the legislature thinks the stake of the territorial government in assessment to be, the power of the equalization agency could be as little as that of merely advising the counties, as much as unilaterally adjusting all county assessments which were determined by the agency to be too high or too low.

Exemptions

Another problem is the large amount of real property exempted from real property taxation. As shown in the accompanying table, in 1958 about half of the realty value was eliminated from the tax base, or in other words, the burden of the property tax is borne by only half of all realty values.

The largest part of the exempt property is owned by government, particularly the federal government. Table 34 indicates that 22 per cent of the total assessed valuation in 1958 was held by the federal government, about 8 per cent by the Territory and 4 per cent by the counties. (These amounts are probably understated, since exempted properties are given only a nominal value for statistical purposes, but they serve to illustrate the magnitude of governmental holdings in Hawaii.) There is no point in taxing the property holdings of the Territory or of the county governments; the holdings of the federal government are exempt, unless Congress consents to their taxation.

The fact that governmental property holdings lie outside the area of legislative control suggests that other exemptions, which are granted by statute, be critically examined. Such exemptions include

			<u>(1n</u>	millions of	dollars)					
	City and County of Honolulu		County of Maui		County of Hawaii		County of Kauai		Territorial Total	
	Amount	Per cent	Amount	Per cent	Amount	Per cent	Arnount	Per cent	Amount	Per cent
Gross Valuation		ł				[
Land	\$ 855.4	49.1	\$ 57.2	53.3	\$ 74.5	53.9	\$34.5	53.0	\$1,021.6	49.8
Improvements	887.3	50.9	50.2	46.7	63.7	46.1	30.6	47.0	1,031.8	50.2
Total	1,742.7	100.0	107.4	100.0	138.2	100.0	65.1	100.0	2,053.4	100.0
Exemptions										
United States	448.1	25.7	4.0	3.7	1.6	1.2	0.2	0.3	453.9	22.1
Territory	135.8	7.8	6.6	6.1	18.9	13.6	4.9	7.6	166.1	8.1
Counties	62.4	3.6	3.8	3.6	5.6	4.0	3.6	5.5	75.3	3.7
Homes	121.2	6.9	12.7	11.8	15.2	11.0	7.3	11.2	156.4	7.6
Public Utilities	26.9	1.6	3.0	2.8	1.1	0.8	0.1	0.2	31.2	1.5
All others	73.2	4.2	4.0	3.8	4.8	3.5	2. 5	3.8	84.5	4.1
Total Exemptions	867.6	49.8	34.1	31.8	47.2	34.1	18.6	28.6	967.4	47.1
Assessor's Net Valuation Less:	875.2	50.2	73.2	68.2	91.1	65.9	46.4	71.4	1,086.0	52.9
Half of Valuation Appealed	4.4				0.3				4.7	
<u>Valuation for Tax Rate</u> <u>Purposes</u> Per cent of each county to	\$ 870.8	50.0	\$ 73.2	68 .2	\$ 90.8	65.8	\$46.4	71.4	\$1,081.3	52.7
Territorial Total	80.5		6.8		8.4		4.3		100.0	
Amounts to be Raised by Taxation Per cent of each County	\$ 13.2		\$ 1.2		\$ 1.4		\$ 0.8		\$ 16.6	
to Territorial Total	79.3		7.3		8.5	 	4.9		100.0	
County Tax Rates per \$1000 of Assessed Value	\$ 15.15		16.57	I	15.62		17.52			

Table 34 GROSS VALUATION, EXEMPTIONS, VALUATION FOR TAX PURPOSES, BY COUNTIES, CALENDAR YEAR 1958

(In millions of dollars)

Source: Department of the Tax Commissioner.

homes, privately owned lands in forest reserves, property of certain classes of handicapped persons, properties used by educational, eleemosynary and religious organizations, and property of public utility companies. (The latter are exempted because they are subject to the special levy discussed in Chapter 8.)

Specific exemptions of properties have been granted by law from time to time. There are at present more than 60 such exemptions to designated schools, churches, hospitals, homes for the aged, veterans' organizations, charitable trusts, etc.* The 1957 legislature considered, but did not enact, a legislative measure which would have consolidated into general language all specific exemptions granted to designated institutions, set forth criteria for the granting of additional institutional exemptions, and make the Tax Office responsible for scrutinizing organizational operations, to insure that their activities conform to the purposes for which the exemptions were originally sanctioned. It is doubtful, however, whether many of these specific exemptions would be abolished by such a measure, for generally the activities of the exempted institutions would otherwise have to be financed by government or, like church activities, are traditionally exempt in American jurisdictions. Nevertheless, from the standpoint of good administration, there is merit in placing all such exemptions under a general statute of the nature just outlined.

(A 1955 opinion of the territorial attorney general is applicable to this discussion. The opinion, which held illegal a contemplated appropriation to the Lunalilo Home for aged Hawaiians, inferentially questioned the granting of exemptions to institutions serving only one or certain racial groups. The opinion, to the respective chairmen of the Senate Ways and Means and the House Finance Committees, is dated March 25, 1955.)

Privately owned forest land certified by the territorial Board of Agriculture and Forestry to be in watershed areas or necessary to prevent erosion, formerly could be granted tax exemption on a year-to-year basis, or indefinitely if use of the land were temporarily surrendered to the Territory. As of January 1, 1956, the Tax Office reported that a total of 343,000 acres, assessed at approximately \$1 million, including some 74,000 acres around Honolulu, were exempt from taxation. This method of exemption was severely criticized because it permitted the owners to retain forest land tax-free, until such time when it was advantageous to subdivide and sell the land. Responding to this criticism, the 1957 legislature enacted a provision granting exemption to owners only when they agree to surrender to governmental control lands in forest or water reserve for a period of at least 20 years, and providing for payment by the owners to the government at the end of

[•] The total assessed valuation of these specific exemptions is relatively small. The latest available statistics, as of January 1, 1953, show that it amounted to somewhat over \$50 million. See Department of Tax Commissioner, "Real Property Statistical Report," November 18, 1954. (Mimeographed).

the surrender period for improvements made, or timber or other crops planted during the term of surrender.

The immediate effect of the new act has been the withdrawal of some 63,000 acres from the forest reserve in the Honolulu area, thereby increasing the tax base by about \$1 million. However, the Territory may buy some forest land under a continuing appropriation of \$100,000 available for this purpose since 1949.

Owner-occupied homes constitute the largest class of property tax exemptions, amounting to \$156 million in 1958. At a rate of \$15 per \$1,000 of assessed valuation, these exemptions would have vielded a revenue of \$2.3 million. If total property tax revenue were to remain at \$16.6 million (as in 1958), the complete elimination of home exemptions would result in a substantial redistribution of the tax burden in favor of the owners of non-home real property. The 1957 legislature left unchanged the long-standing home exemption provision, which grants to a home owner an exemption ranging up to \$3,250. (An owner-occupied home is completely exempt on the portion of its assessed value up to \$1,500, plus one-half of that portion between \$1,500 and \$5,000, or an additional exemption up to \$1,750.) However, in keying the rate ceilings for each county to an assessment ratio of 70 per cent of market value, the 1959 legislature also permitted the Tax Commissioner (1) to raise the assessment ratio by lowering the rate proportionally, or (2) to lower the ratio by raising the rate proportionally.* This provision delegates to the Commissioner the power to raise the assessment ratio up to 100 per cent of the market value. In the exercise of this power, by using an assessment ratio above 70 per cent, and by adjusting the tax rate proportionally downward, he could in effect redistribute the tax burden by raising that of the home-owners (i.e., minimizing their home exemption advantage) and by lowering that of other taxpayers who do not occupy their own homes.

Unquestionably, raising the assessment ratio by administrative action is a more subtle and hence politically a more feasible way of equalizing the tax burden between homeowners and nonhomeowners than decreasing or eliminating the home exemption through legislation. From the equity standpoint it is perhaps more defensible too.

It is generally assumed that homeowners are given a hidden subsidy through home exemption. Actually, those who bought their

^{*} See Sec. 129-2, Revised Laws of Hawaii 1955.

A current study by the Public Administration Service of thè ratios of assessed value to actual selling prices of sample items of real property for Honolulu shows that the average ratio of assessed to market value is nearer 50 per cent than the 70 per cent heretofore assumed. (See Real Property Assessment in Hanati, 1958, pp. 87-55; 190-114.) An evner-occupied home valued at the market at \$20,000 in 1958 would, on the average, be assessed at \$10,000 and be taxed at a value of \$6,750 after deducting an exemption of \$3,250. If the home were instead assessed at 100 per cent of market value, the taxable value would be \$16,750 after the \$3,250 exemption. Assuming the same amount of revenue to be raised, going from an assessment ratio of 50 per cent to 100 per cent, would approximately halve the tax rate. Thus by increasing the assessment ratio from 50 per cent to the full market value, the taxable values of all owner-occupied homes would be more than doubled; at one-half the original tax rate, this would require the homeowners to pay larger taxes. Since the same amount of revenue is to be raised, a smaller portion of the tax would remain to be paid by non-homeowners.

homes may not be enjoying the full benefit of the exemption. Since the home exemption existed for decades, it is likely to have been capitalized in the market value of property, that is, homes were sold to the owners at higher prices because of their partial exemption from taxation.[•] This means that some past owners rather than present owners were the actual beneficiaries of the exemption, and realized the benefit when they sold their homes. If the legislature should reduce or eliminate the exemption, the present homeowners would suddenly find the tax on their homes increased. If these owners should sell their homes, the tax increase is likely to be capitalized, that is, the sales price of the property would be reduced, and they would bear the brunt of the tax change. Just as the property owners at the time of granting of the exemption realized a windfall profit, so might the present owners suffer a fortuitous loss.

Tax Limitation

Still another problem is that of the tax ceiling. In common with almost all states, Hawaii has long had a property-tax limitation provision. Prior to 1932 the limitation was in the form of ceilings on the tax rate. Between 1932 and 1957, the rate ceilings were replaced by revenue ceilings which set maxima to the amounts of property taxes which might be raised annually in each of the counties. These dollar ceilings were frequently raised, each increase requiring legislative enactment.[†]

What was the effect of these dollar ceilings? They tended to hold down county spending by rigidly limiting the yield from this basic source of county revenue. Repeated raising of the ceilings was not sufficient to keep the real property tax revenues apace with the growth of income and wealth in the territory.: Partly because of the revenue ceilings and partly because of the elimination of personalty from the levy, the relative importance of the property tax was greatly reduced. Whereas it had been supplying about four-fifths of county revenues until 1947, in the next decade it contributed only about two-fifths. By putting this principal source of county tax collections in a strait jacket in the face of growing revenue needs, it became necessary for the Territory to share its general excise and motor fuel taxes with the counties, so shifting a large part of the local tax burden, which otherwise would have rested on property owners and tenants, to other taxpayers at large, mainly consumers.

^{*} The exemption of homes that have been built and occupied by the owners could not have been capitalized in the way that purchased homes have. But in the case of such homes, the owners might have been induced by tax exemption to put more into the construction than they otherwise would. It is recognized that some taxpayers are stimulated to build elaborate and expensive homes for reasons other than tax exemption, for example, for conspicuous consumption or as an investment for resale.

[†] For a brief historical account of the changes of property tax ceilings, see Robert M. Kamins, Hawaii's Revised Tax System, (College of Business Administration, University of Hawaii, 1957), p. 24.

[‡] Under fixed revenue ceilings, a net increase in property valuation, such as that resulting from new construction and subdivision, simply lowers the taxes of existing real properties.

Table 35

COMPARISON OF REAL PROPERTY TAX RATES AND REVENUE, 1956-1958

	1956				1957		1958			
County	Tax <u>Rate</u>	Tax Base	<u>Revenue</u> †	Tax <u>Rate</u>	Tax <u>Base</u>	<u>Revenue</u>	Tax <u>Rate</u> *	Tax <u>Base</u>	<u>Revenue</u>	
Honolulu Maui Hawaii Kauai	\$10.74 13.80 13.88 13.10	\$773,558 72,459 86,484 <u>45,810</u>	\$ 8,308 1,000 1,200 <u>600</u>	\$15.15 16.57 13.88 <u>16.52</u>	\$ 822,612 72,395 88,217 46,136	\$12,463 1,200 1,224 762	\$15.15 16.57 15.62 <u>17.52</u>	\$ 870,751 73,217 90,855 <u>46,441</u>	\$13,192 1,213 1,419 <u>814</u>	
Total	-	\$978,311	\$11,108	-	\$1,029,359	\$15,649	-	\$1,081,265	\$16,638	

(Base and revenues in thousands)

Source: Department of the Tax Commissioner.

* Per \$1,000 of assessed value, computed by dividing the revenue by the tax base and multiplying the resulting ratio by \$1,000.

[†] The revenue for each county in 1956 was the dollar ceiling as prescribed by law.

The provisions in the 1957 tax law which replaced the revenue ceilings with rate ceilings should obviate some of the problems created by the old ceilings. The new limits, which became effective for 1957 and until such time as the legislature chooses to change them, are as follows: \$16 per \$1,000 of assessed value for Honolulu, \$18 for the other counties, plus \$2 for financing county urban redevelopment agencies (operating only in Honolulu so far).

These maxima are conditional on the assessment ratio being 70 per cent of the fair market value, which is assumed to have prevailed in 1956. However, if the Tax Commissioner in any year certifies to the boards of supervisors that the assessment ratio is greater than 70 per cent, the rate ceilings are to be decreased proportionally, and if less than 70 per cent, the rates are to be raised proportionally.[‡]The new law also prescribes that all taxable real property is to be assessed at its "fair market value" instead of its "fair and reasonable value," specified in the old law, but^{*} these terms seem to be legally synonymous. The law also requires land to be assessed at its fair market value in accordance with its "highest and best use," regardless of whether it is actually put to such use.

One obvious observation may be made on the effect of the new tax ceilings on the fiscal control of the counties. The four counties are at least temporarily free from the rigidity of revenue ceilings,

[‡] The synonymity of the two terms is assumed following the territorial Supreme Court decision in re Taxes B. P. Bishop Estate (33 Hawaii 149).

and have greater latitude in determining the size of their respective budgets. In 1957, for the first time in many years, revenue from the taxation of real property substantially increased, by slightly more than 40 per cent--and by an additional 6 per cent in 1958, as Table 35 shows. Each county's revenue changed independently, presumably in accordance with its fiscal needs and changes in the tax base in each of the two years.

How flexible are the new tax ceilings? The margins between the current tax rates and the ceiling rates vary among the counties. Based on an assessment ratio of 70 per cent of fair market value, the rate for Honolulu in 1958 was \$1.35 below the \$16.00 ceiling (exclusive of levies for financing urban redevelopment). In Kauai, the margin was only 48 cents but the margins for Maui and Hawaii were \$1.43 and \$2.38, respectively. But even should the counties reach the ceilings, they might still increase their revenue collections if their property tax base should expand as a result of new construction, revaluation through urbanization, subdivision, reclassification, or for any other reason.

The Incidence of the Increase in the Property Tax

The new tax law, in abolishing the revenue ceilings and replacing them with rate ceilings, has permitted each county board of supervisors to increase the levy on taxable real property. Thus for Honolulu the tax increased from \$10.74 per \$1,000 in 1956, when the revenue ceiling was last in effect, to \$15.15 in 1957 and 1958. A piece of real property assessed at \$10,000 (70 per cent of market value) was taxed \$44 more in 1957 and 1958, and may possibly in the future be taxed another \$9--or \$53 in all--if Honolulu uses its maximum rate of \$16--still more if the levy for urban redevelopment is utilized to the legal limit.

On whom does the burden of this increase in the property tax fall? This question, unfortunately, cannot be answered satisfactorily with statistical proofs, mainly because of the many changes in the prices of real property that follow in the wake of actual or anticipated increased in the real property tax and these changes make it impossible to isolate the effect of the tax alone. Consequently, an answer requires the use of deductive logic based on accepted economic principles, rather than inductive proofs based on statistical evidence.

In the case of owner-occupied homes, owners cannot shift the tax forward to any one else. For example, there is no way for wage earners whose homes are taxed to shift the tax forward to their employers in the form of higher wages. So long as the owners continue to occupy their homes, they will continue to pay the tax. But if they sell their homes, the tax may be capitalized, that is, the prices offered for the houses and lots would decline below the prices that would have existed in the absence of the tax or tax increase. Thus, if a home has to bear a tax increase of \$50 per year, and if the going rate of return on investment is 5 per cent, the buyer would offer \$1,000 less than he would otherwise--since having to pay an extra \$50 annually is the equivalent of bearing a capital loss of \$1,000. This does not necessarily mean that the buyer would be able to buy the property at \$1,000 less than what the price was originally. In a period of inflation of real property values, such as the past decade and more, any capitalization of tax increases would have been masked by rising realty prices. Nevertheless, had there not been a tax increase, the prices offered would probably have been still higher.

Not only the tax increase now in effect may be capitalized, but anticipated future increases as well. For example, suppose it were anticipated that Honolulu in the next 5 years would have to increase its tax rate to \$20, after making allowances for growth in real property and increase in valuation. And suppose, too, this would typically result in about doubling the recent tax increase causing a new increase of \$100. Capitalized at 5 per cent (the assumed rate of return for investments) this means that the seller would be likely to receive \$2,000 (the capitalized value of the present and anticipated tax increases of \$100) less than what he would have if there were no tax increase. The incidence of the tax increases, therefore, is on the seller, the buyer being free from the tax burden for all time. If the buyer and seller underestimate future tax increases--and taxes turn out to be greater than anticipated at the time of capitalization--the burden of the unforeseen increases, will rest with the bayer. On the other hand, if the increases happen to be less than anticipated, the buyer is in effect getting a bargain by buying the home at a lower price than he would otherwise have had to pay.

Suppose the legislature were to increase the tax on real property by eliminating home exemptions, rather than by raising the tax rate. Elimination of an owner's home exemption is equivalent to an increase in his assessment by the same amount. The resulting increase in his property tax is likely to be capitalized, as in the case of a rise in the tax rate. For a home assessed at \$5,000 and over, the additional tax on an exemption of \$3,250 at the current rate of \$15 per \$1,000 will be approximately \$50 per year, which if capitalized, at say 5 per cent, would reduce the market price by \$1,000.

The legislature may, instead of boosting the tax rates or of abolishing or reducing home exemptions, increase the realty tax by raising the assessment ratio from the present actual average of about 50 per cent of full market value, to say 80 or 90 per cent. So far as homeowners are concerned, this increase in the tax through higher assessments is also likely to be capitalized. Moreover, this method, as compared with that of raising the tax rates, puts some homeowners at a disadvantage relative to other property owners. An increase of the assessment ratio, while leaving the rates unchanged, makes the home exemption, whose maximum is \$3,250, relatively less valuable to the owners of more expensive homes. Thereby, a part of the tax increase is shifted from non-homeowners to owners of more expensive homes.

An increase in the real property tax by whatever means on rental housing is likely to be shifted forward to the tenants in proportion to the rent that they are paying, since the tax is a direct cost to the landlord. If the landlord is to continue his business he must at least cover all expenses, including the property tax on his rental units, over a period of time. However, if there is a rental contract in force at the time of the tax increase, shifting of the burden must await its expiration and the signing of a new one. Also if there is an oversupply of houses and apartments for rent, or rent control, the tax increase may not be immediately or entirely shifted forward.

Business firms, too, tend to shift an increase in property tax to the consumers of their products or services. The tax is a direct expense, and like the landlord, the firm must at least cover all costs over a period of time. Ingeneral the tax on the property of business firms is likely to be shifted forward to consumers of the products or services in proportion to their purchases, and is, therefore, distributed in much the same way as a sales tax or a system of excises.

An increase in the property tax on income-producing land tends to be capitalized, according to the following argument. The supply of such land is virtually fixed, at least in the foreseeable future. Hence the tax on the land will not reduce the supply, nor the output on it, nor, therefore, will the tax cause an increase in the prices of products produced on the land. If product prices do not rise, the tax is not shifted forward to the consumers. Thus the owner of the land at the time the tax is increased is burdened with the tax so long as he continues as the owner; if he sells it, his price would likely be smaller, by the capitalized value of the tax increase, than what it would be otherwise. The same general result would occur if the tax on such land is increased by raising the rate, increasing the assessment, reducing the exemptions, or any combination thereof.

Appendix Table A

RELATIVE CHANGES IN RETAIL PRICES IN HONOLULU FOR SELECTED ISLAND AND MAINLAND PRODUCTS, 1957-1958

(2nd Quarter 1957 Prices=100)

			3rd Quarter '57		4th Quarter '57		1st Quarter '58		2nd Quarter '58		3rdQuarter '58	
Food Items		Island	Mainland	Island	Mainland	Island	Mainland	Island	Mainland	Island	Mainland	
Macaroni	8 oz	95	103	97	105	103	105	103	106	102	108	
Soda Crackers	1 lb	101	106	105	109	114	113	114	112	115	114	
Cookies	7 1/2 oz	101	102	101	101	102	100	101	101	101	109	
Cottage Cheese	1 pt	101	102	101	103	101	102	100	103	102	101	
Round Steak	1 lb	103	105	105	108	109	111	113	110	114	121	
Chuck Roast	1 lb	100	106	104	109	111	115	116	128	123	114	
Beef Liver	1 lb	101	105	101	105	103	107	109	113	104	116	
Pork Chops	1 lb	102	103	105	104	99	104	108	112	115	113	
Roasting Chicken	1 lb	105	101	107	98	108	102	113	102	115	101	
Tuna	6 1/2 oz	101	96	102	95	102	96	101	101	100	98	
Eggs	1 doz	116	108	134	131	125	122	112	117	123	119	
Carrots	1 lb	122	101	174	102	-	107	132	111	168	112	
Round Onions	1 lb	90	93	-	86	102	88	98	112	77	85	
Tomatoes	1 lb	88	100	103	113	125	-	115	-	83	101	
Juice, Regular	#2 can	104	101	105	102	105	102	106	105	109	112	
Juice, Frozen	6 oz	105	103	125	107	107	135	133	143	130	138	
Coffee	1 lb	100	101	98	99	98	97	96	95	95	93	
Jelly	\$	101	94	102	99	102	100	102	102	101	106	
Honey	*	101	100	105	100	112	101	113	102	106	103	
Nuts	1 lb	101	101	102	101	103	101	104	102	103	102	

Source: Data from bureau of record & statistics, Department of Labor & Industrial Relations. Raw data on file with the Legislative Reference Bureau, University of Hawaii.

* Size of jars varies slightly between island and mainland brands.

Item	Value of producer's purchases (excluding general excise)	General excise taxes on his purchases and sales	Producer's costs and returns	Individual costs as percentage of total costs
 Costs A. <u>Subject to general excise</u> Feed and feed transportation Chicks Egg cartons Gasoline Other supplies Depreciation (portion) Professional services Sub Total Not subject to general excise Utilities Depreciation (portion) Insurance Hired labor @ \$0.83 per hour Family labor @ \$0.83 per hour Family labor @ \$0.83 per hour family labor @ \$0.83 per hour for 3,541 hours Interest at 6% on present value of investment of \$23,600 Taxes other than general excise Miscellaneous Sub Total 	\$12,498 1,288 976 269 652 1,150 <u>65</u> \$16,898	\$312 32 10 5 16 29 2 \$406	12,810 1,320 986 274 668 1,179 	52.9% 5.5 4.1 1.1 2.8 4.9 3 71.6% 1.6 1.3 .6 4.4 12.1 5.9 .6 3 26.8%

Appendix Table B COSTS AND RETURNS OF MODEL EGG PRODUCER IN 1957 Assuming purchases handled by one dealer: under OLD rates*

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Appendix Table B (continued)

Item	Value of producer's purchases (extending general excise)	General excise taxes on his purchases and sales	Producer's costs and returns	Individual costs as percentage of total costs
 C. <u>General excise taxes on sales</u> 2 1/2% of sales value of 2,011 dozen eggs sold at retail 1 1/2% of sales value of 38,204 dozen eggs sold at wholesale by cooperative 1 1/2% of sales value of chickens sold at wholesale by the producer Sub Total Total Costs 		27 351 <u>-24</u> <u>402</u> \$808	27 351 <u>24</u> <u>402</u> \$24,198	.1 1.4
 Gross returns Eggs (40,215 doz. @ \$0.528) Chickens Total gross returns Net loss 			\$21,234 <u>1,600</u> 22,834 -1,364	
 Total family labor income Family labor income per hour 			1,575 Q.44	

*Costs and returns are those of a hypothetical farmer, but they are based on the actual accounts of representative Hawaiian egg producers. See Chapter 3 for price assumptions and "old" tax rates.

Appendix Table C

Υ.

RATE OF RETURN, NET INCOME AND RATE BASE OF PUBLIC UTILITY COMPANIES, CLASSIFIED BY KINDS OF UTILITIES, 1950-57 (Rate of return in per cent, income and rate base in thousands of dollars)

Electric Companies (8)	<u>1950</u>	1951	1952	1953		1955	1956	
Net Income	2,453	2.458	2,719	3,204	3,615	4,440	4,993	5,189
Rate Base	47,439	52,055	54,774	56,641	65,322	75,119	78,331	85.044
Rate of Return	5.2	4.7	5.0	5.7	5.5	5.9	6.4	6.1
Gas Companies (1)								
Net Income	286	290	387	379	445	486	583	439
Rate Base	6,617	6,877	7,164	7,493	7,846	8,184	8,531	8,869
Rate of Return	4.3	4.2	5.4	5.1	5.7	5.9	6.8	4.9
Telephone Companies (1)								
Net Income	1,148	1,266	1,395	1,775	2,011	2,486	2,744	2,753
Rate Base	20,525	22,860	25,964	31,082	34,359	36,449'	39,377	44,325
Rate of Return	5.6	5.5	5.4	5.7	5.9	6.8	7.0	6.2
Transportation: Mass Ca	rrier (1)							
Net Income	232	111	273	179	202	218	188	166
Rate Base	3,236	2,962	2,744	2,732	2,589	2,293	2,076	2,728
Rate of Return	7.2	3.7	9.9	6.6	7.8	9.5	9.1	6.1
Transportation: Motor Ve	ehicle Common	Carrier (5)						
Net Income	-3	-6	-17	-15	13	36	20	29
Rate Base	136	139	165	106	219	212	187	157
Rate of Return	-2.2	-4.3	-10.3	-14.2	5.9	17.0	10.7	18.5
Railroads (2)								
Net Income	-94	-76	326	456	298	472	612	618
 Rate Base 	6,516	6,405	8,481	8,805	10,352	10,498	10,177	10,437
Rate of Return	-1.4	-1.2	3.8	5.2	2.9	4.5	6.0	5.9

$\frac{1}{2}$ Appendix Table C (continued)

	<u>1950</u>	1951	1952	1953	<u>1954</u>	195 5	1956	1957
Water Companies (3)								
Net Income	-1 5	1	41	24	20	-9	-16	14
Rate Base	1,065	1,180	1,025	110	83	76	90	86
Rate of Return	-1.4	0.1	4.0	21.8	24.0	-11.8	-17.8	16.3
All Utilities (21)								
Net Income	4,289	4,181	5,261	6,133	6,579	8,130	9,123	9,208
Rate Base	88,618	95,654	101,841	108,775	120,891	132,829	138,769	151,646
Rate of Return	4.8	4.4	5 .2	5.6	5.4	6.1	6.6	6.1

Source: Hawaii Public Utilities Commission.

The rate of return is the percentage ratio of net income to the rate base.

Net income is equal to the gross revenue minus expense and cost for a given year.

The rate base is equal to the average value of utility plants in service less average depreciation, plus working cash capital for a given year.

The figure in parentheses following each group of utility companies indicates the number of firms as of the end of 1957.