

GOODS VS. SERVICES: FROM THE PERSPECTIVE OF CONSUMER SPENDING

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This paper examines the phenomenon of the American economy shifting towards a service economy from the perspective of consumer spending. The first section analyzes aggregate data from the Consumer Expenditure Survey with other national sources for the period 1972-73 to 1984-85. Consumers painted a less services-oriented picture of the economy than that painted by employment or output. U.S. consumers have allocated an increasing share of their spending dollar to services. Overall total consumer expenditures are divided evenly between goods and services. The second section focuses on the allocation of spending between goods and services for subgroups of the population defined by age and by income in 1985. It is found that these subgroups have generally behaved much like the population as a whole.

INTRODUCTION

In recent years, a major theme which has emerged in tracing the American economy has been the basic shift from the production of goods to the provision of services. Images of shut-down steel mills and laid-off auto workers are juxtaposed with burgeoning strips of fast-food restaurants and magical bank cards that instantaneously provide an array of financial services. Indeed, the heralded advent of the 'service' economy has evoked both choruses of cheers and cries of consternation among the popular media and professionals in the social science arena. An increasingly services-based economy affects the prescriptions for public policy and private action offered by economists, educators, and information specialists in the consumer field. This paper hopes to shed some light on the character of this transformation by accomplishing two objectives.

OBJECTIVES OF THE STUDY

The first objective is to determine whether and to what extent sources of economic data, with special focus on consumption data from the Consumer Expenditure Survey (CEX), corroborate the popular conception of a "service" economy. Most reports detailing the shift toward services cite national trends in employment statistics to support this view. But an alternate picture of the economy from the consumption perspective may be different. As Stanback (1981) observed, "The popular notion that we now live in a service economy, in the sense that consumer services purchased directly in the marketplace constitute

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a major share of our budgets, is simply not borne out by the facts (p.25)". In addition, other national sources of time-series data, such as gross national product data from the Department of Commerce, are frequently cited as measures of economic activity, providing their own distinctive view. What kind of pictures develop when one looks at these alternative sources and how do they compare with that taken through the consumption lens?

To focus more sharply on the distribution of consumer spending between goods and services by examining the expenditure patterns of selected subgroups of the population comprises the second objective of this paper. Using CEX characteristics data, age of household head and quintiles of income before taxes are chosen to segment the population into groups that provide fruitful insights into the economic behavior of consumers.

Before proceeding further, a brief definition of goods and services should be given. Goods are essentially tangible objects which consumers can purchase for their own or some other party's use. Services are essentially intangible objects, normally actions performed for the benefit of consumers, which consumers may buy.

GOODS VS. SERVICES: ANALYSIS OF FOUR AGGREGATE NATIONAL MEASURES

Using the period from 1972-73 to 1984-85 as a time frame, this paper will examine four different yardsticks which gauge the division between goods and services. These are: 1) the Consumer Expenditure Survey, 2) Personal Consumption Expenditures from the National Income and Product Accounts (PCE), 3) the Current Employment Statistics program (CES), and 4) Gross National Product from the National Income and Product Accounts.

The CEX is a household survey consisting of two distinct components: 1) a Diary or recordkeeping survey and 2) a quarterly Interview panel survey. Data from the Interview survey are analyzed in this paper. About 95 percent of total consumption expenditures are collected, excluding expenditures for nonprescription drugs, household supplies and personal care items. For the purposes of this study, expenses for personal insurance and pensions have been excluded as components of consumption. Expenditures are defined as the transaction cost, including taxes, for goods and services acquired by the household for non-business purposes. The CEX considers only direct, out-of-pocket expenses. This impacts areas such as medical care, where a household's expenditures may represent only a

small part of the actual cost of goods and services received. In addition, any indirect expenses subsumed in the purchase of the final item are not considered. For instance, expenditures made for many goods actually reflect services used to bring the goods to the consumer. These intermediate costs cannot be separated.

A different concept of aggregate consumption emerges when studying PCE.¹ Total national production of goods and services is estimated and then allocated to intermediate users and to final demand. Purchases of goods and services by individuals, the operating expenses of non-profit institutions serving individuals, and the value of food, fuel, clothing, rent of dwellings and financial services received in kind by individuals compose the PCE universe.²

The consumption data collected in the CEX and PCE primarily reflect purchases of output from the private economy. Most public goods and services are not bought explicitly by consumers and consequently do not appear in the data. Thus, to standardize the four measures used in this analysis, the contributions of government to consumption, employment, and national product will not be considered.

Employment is another yardstick by which to measure the shift to services in the national economy. Employment data from the Current Employment Statistics program of BLS is used to analyze the proportion of workers employed in goods and services production respectively. Only non-agricultural employees are included in the CES program. Not covered by this data are proprietors, the self-employed, unpaid volunteer or family workers, farm workers and domestic workers. The 1972 Standard Industrial Classification Manual is used to organize employees into goods-producing and services-producing sectors.³

In addition to consumption estimates from PCE, the National Income and Product Accounts provide estimates of national product which can be organized to measure portions of output attributable to goods and services. This paper concentrates in particular on the gross market value of goods and services produced by labor and property from private industries located in the U.S. expressed in current dollars. For the sake of brevity, this will be referred to as the private industries component of gross domestic product (GDP).⁴

¹For a fuller explanation of the differences that exist in the concept, definition, and classification of items between the CEX and PCE, see Gieseman, Raymond, "The Consumer Expenditure Survey: quality control by comparative analysis," *Monthly Labor Review*, March, 1987, pp. 8-14.

²For a more complete definition, see U.S. Department of Commerce, Bureau of Economic Analysis, *The National Income and Product Accounts of the United States, 1929-76 Statistical Tables*, September, 1981, pp. 89-95, or U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July, 1986, pp. 38-39.

³For a description of the industries in each sector, see U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, July, 1987, pp. 77-88.

⁴As with the CES employment data, the industries comprising this private industry component are organized into goods and services by the 1972 Standard Industrial Classification Manual.

The Consumer Expenditure Survey

Each of the four data sources indicates a clear shift to the services sector, albeit of differing magnitude, between 1972-73 and 1984-85. Results from the CEX are depicted in Table 1. Total consumption expenditures for goods and services rose 137 percent to \$1.71 trillion from 1972-73 to 1984-85. Purchases of goods demonstrated a comparable increase of 119 percent to \$901 billion, while expenditures for services rose even higher, 160 percent, to \$813 billion. The more rapid increase in expenditures for services pushed the aggregate share accounted for by services up over 4 points, to over 47 percent of total expenditures.

TABLE 1. Aggregate consumption expenditures and percentage share for goods and services for all households, Consumer Expenditure Interview Survey, 1972-73 and 1984-85

	1972-73		1984-85	
	Aggregate expenditures (billions)	% share	Aggregate expenditures (billions)	% share
Goods	\$323.3	57.01	\$ 901.1	52.58
Services	243.8	42.99	812.8	47.42
Total	567.1	100.00	1,713.9	100.00

Personal Consumption Expenditures of the National Income and Product Accounts

PCE, the counterpart to the CEX, is examined in Table 2. The shift to services can be seen in the 1984-85 data where services exceeded more than one-half of all expenditures. Total consumption expenditures increased 222 percent to \$2.47 trillion from 1972-73 to 1984-85. Consumption on goods showed a healthy rise of 184 percent to \$1.23 trillion, but this was dwarfed by the 273 percent increase in expenditures on services. The aggregate shares for goods and services were essentially equal, resulting from a nearly 7 point shift to services.

TABLE 2. Aggregate personal consumption expenditures and percentage share for goods and services, National Income and Product Accounts, 1972-73 and 1984-85

	1972-73		1984-85	
	Aggregate expenditures (billions)	% share	Aggregate expenditures (billions)	% share
Goods	\$434.5	56.64	\$1,233.4	49.86
Services	332.7	43.36	1,240.5	50.14
Total	767.2	100.00	2,473.8	100.00

The Current Employment Statistics Program

Table 3 shows the average number of workers employed in the goods-producing and services-producing sectors in 1972-73 and 1984-85 from the CES program. Although employment in the production of goods remained stable over this period, its share of total employment declined significantly. Between 1972-73 and 1984-85, the total number of employees increased 29 percent

to almost 80 million workers. Almost all of the increase was reflected in the services-producing sector, where employment rose to 55 million workers, up 47 percent. In terms of aggregate shares, the services-producing sector increased its share by over 8 points to almost 69 percent of total employment.

TABLE 3. Number of employees and percentage share in goods-producing and services-producing sectors, Current Employment Statistics program, 1972-73 and 1984-85

	1972-73		1984-85	
	Number of employees (thousands)	% share	Number of employees (thousands)	% share
Goods-producing	24,280.5	39.35	24,793.0	31.07
Services-producing	37,419.5	60.65	55,006.0	68.93
Total	61,700.0	100.00	79,799.0	100.00

Private industries component of Gross Domestic Product

Table 4 presents national output data from the private industries component of GDP. During the period from 1972-73 to 1984-85, total output from private industries rose 213 percent to almost \$3.4 trillion. Goods and services each demonstrated healthy increases during the period. The value of goods produced swelled to almost \$1.2 trillion, a rise of 169 percent. Services showed even more spectacular growth, touching just over \$2.2 trillion, a gain of 244 percent. As a result, the share of private industry GNP attributable to services rose from just under 60 percent to over 65 percent, close to a 6 point shift.

TABLE 4. Domestic product of private industries and percentage share of goods and services, National Income and Product Accounts, 1972-73 and 1984-85

	1972-73		1984-85	
	Domestic product (billions)	% share	Domestic product (billions)	% share
Goods	\$ 437.1	40.51	\$1,174.7	34.74
Services	642.0	59.49	2,206.4	65.26
Total	1,079.1	100.00	3,381.1	100.00

While each data source concurs in showing a palpable shift toward services over the 1972-73 to 1984-85 period, it is also interesting to note the disparity between the "snapshot" view of the economy produced by the consumption measures versus those produced by the employment and national product measures in 1972-73, the starting point for this analysis. Table 5 amply demonstrates this divergence. Both consumption measures revealed a markedly goods-oriented economy in 1972-73 with approximately 57 percent of expenditures allocated to that sector. Even with the shift toward services exhibited by all sources, the consumption measures still showed a significantly higher percentage allocated to goods than did the employment or national product measure.

TABLE 5. Summary of percentage allocated to goods and services, and percentage shift to services, by data source, 1972-73 and 1984-85

	Percentage allocated		Percentage shift to services 1972-73 to 1984-85
	1972-73	1984-85	
Consumer Expenditure Survey			
Goods	57.0	52.6	
Services	43.0	47.4	10.2
Personal Consumption Expenditures, National Income and Product Accounts			
Goods	56.6	49.8	
Services	43.3	50.1	15.7
Current Employment Statistics program			
Goods (producing)	39.3	31.0	
Services (producing)	60.6	68.9	13.7
Private industries component of Gross Domestic Product, National Income and Product Accounts			
Goods	40.5	34.7	
Services	59.4	65.2	9.8

In terms of employment and national product, the U.S. economy has been a predominantly service economy since 1972-73. Indeed, the percentage allocated to services by these data series nearly matched at approximately 60 percent.

Several factors contribute to the disparity between consumption and the other data sources. The consumption measures tend to underestimate the importance of services by focusing primarily on those services which consumers purchase directly for the benefit of themselves or others. The range of such services is markedly smaller than the range of services that workers produce. Employees engaged in business-related activities such as advertising, accounting services, and personnel supply, provide services which consumers do not generally purchase in significant amounts. Similarly consumers do not ordinarily buy services related to transportation and storage, wholesale trade, and retail trade, where numerable employees work to bring goods and services into the marketplace.

In fact, while these services may not be purchased directly, consumers frequently do purchase them indirectly. The prices charged for goods reflect the input of these services in making goods available for consumers to purchase. In buying a sofa, a consumer pays for more than just the wood, metal, and fabric which form the sofa. Included in the price are the costs of transportation and storage between the factory and the selling floor. The costs of advertising the sofa along with compensation for the salesperson selling it add to the price paid. So, the consumer's purchases of a sofa, which is considered a good, implicitly entails the purchase of a number of services. The entire expenditure, however, would be classified under goods. In this light, the shift to services shown by the consumption measures over this time period is even more striking, since it represents expanded consumption on the limited number of services directly available to consumers from the universe of all services.

It might be argued that, by focusing on consumption only, the CEX and PCE underestimate the importance of services by not considering the effects of non-consumption or savings. In essence, this would transform the study into an 'Engel' analysis, using income rather than consumption as the basis for analyzing CEX and PCE data. While this would certainly be a useful extension of this study, certain conceptual problems and empirical limitations arise in defining and specifying savings in the CEX data base precluding this kind of analysis.

GOODS VS. SERVICES:
ANALYSIS OF POPULATION SUBGROUPS FROM THE CEX
CLASSIFIED BY AGE OF REFERENCE PERSON AND
QUINTILES OF INCOME BEFORE TAXES

While CEX consumption data showed all U.S. households spending slightly more on goods than services in 1984-85, various population subgroups may have exhibited different spending patterns for goods vis-a-vis services. The examination of this proposition forms the basis for the descriptive analysis that comprises the second part of this paper. It should be emphasized that this section is independent of the analysis presented in the first section. The aim is not to address questions on the aggregate spending behavior of American consumers, nor to conduct an Engle-type analysis of spending by the selected subgroups.

Since the CEX collects household characteristics as well as expenditure data, these subgroups can be identified and their consumption behavior can be examined for possible differences. This analysis does not trace changes in allocation of spending between goods and services for each subgroup over time, but rather examines each subgroup in comparison with every other subgroup and the U.S. population as a whole at a particular point in time. The analysis uses the most current CEX data available for calendar year 1985. In this study, two characteristics, age of reference person⁵ and quintiles of income before taxes, were chosen to divide the population into subgroups for analysis.

Age was chosen since data released from the CEX since its reinitiation in 1980 support the idea that age represents a proxy for different stages in a household's life cycle.⁶

A characteristic based on income, such as quintiles of income before taxes, is a natural choice for this kind of research. A distributional type of income measure, such as quintiles, has advantages over strict dollar income

⁵"Reference person" is the first member of the household mentioned by the survey respondent when asked to "Start with the name of the person or one of the persons who owns or rents the home."

⁶Detailed characteristics and expenditure data are available from the three bulletins of CEX Interview survey results released. See U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey: Interview Survey, 1980-81*, Bulletin 2225, April, 1985; same author, *Consumer Expenditure Survey: Interview Survey, 1982-83*, Bulletin 2246, February, 1986; and same author, *Consumer Expenditure Survey: Interview Survey, 1984*, Bulletin 2267, August, 1986.

categories by defining 'lower,' 'medium,' and 'upper' income groups based on the actual dispersion of income through the country.

Table 6 displays the allocation of consumption dollars between goods and services by age of reference person and quintiles of income before taxes respectively for 1985 from the CEX. All age groups except for the 75-and-over group spent more money on goods than services. The under 25 age group showed the highest portion attributed to goods at almost 57 percent, while the 75-and-over group's expenditures on goods accounted for just over 44 percent of their consumption expenditures. The allocation of consumption between goods and services for the age groups in between fluctuated in a narrow range, revealing a distribution skewed at each end of the age spectrum.

TABLE 6. Percentage of total consumption allocated to goods and services classified by age of reference person and quintiles of income before taxes, 1985, Consumer Expenditure Interview Survey

Characteristic	Percentage allocated to:	
	Goods	Services
All households	52.3	47.7
Age of reference person		
Under-25	56.5	43.5
25-34	51.9	48.1
35-44	53.1	46.9
45-54	52.4	47.6
55-64	53.6	46.4
65-74	50.1	49.9
75-and-over	44.1	55.9
Quintiles of income before taxes		
Lowest 20 percent	49.4	50.6
Second 20 percent	51.9	48.1
Third 20 percent	53.0	47.0
Fourth 20 percent	53.8	46.2
Highest 20 percent	52.1	47.9

There were few differences in the overall distribution between goods and services among quintiles of income before taxes. Expenditures on services composed over half of total consumption for only the lowest quintile. Spending on services made up a progressively smaller share of total consumption across the first four quintiles, before rising in the highest quintile, but nothing appears of a dramatic nature.

Tables 7 and 8 have been compiled to aid in studying further the patterns displayed in Table 6. These tables present the percentage distribution of expenditures allocated to goods and services by component item categories of total consumption, such as food, transportation, and entertainment.

The dominance of expenditures for goods by the youngest households and for services by elderly households can be analyzed more thoroughly in Table 7. A comparatively large share of total consumption for goods in the transportation sector combines with a relatively small share for

housing services as the major factors accounting for the higher share of total consumption allocated to goods by the under-25 group. These factors become apparent when comparing shares from the under-25 group with the 25-34 group. Expenditures on goods in the transportation sector, encompassing vehicles, gasoline, oil, tires, batteries, and similar vehicle products, made up about 22 percent of the under-25 group's

total consumption versus about 17 percent for the 25-34 group. At the same time, the under-25 group spent much less on housing services as a proportion of total consumption, just 25 percent, than the 25-34 group which spent over 31 percent on housing services. With the exception of fuel oil and other fuels, and housefurnishings and equipment, all other housing expenses, whether for homeowners or renters, are considered services.

TABLE 7. Percentage of total consumption allocated to goods and services for major expenditure categories classified by age of reference person, 1985, Consumer Expenditure Interview Survey

Item	Age of reference person													
	Under-25		25-34		35-44		45-54		55-64		65-74		75-and-over	
	Goods	Serv.	Goods	Serv.	Goods	Serv.	Goods	Serv.	Goods	Serv.	Goods	Serv.	Goods	Serv.
Food	16.1	-	15.9	-	17.5	-	17.9	-	18.5	-	19.1	-	18.8	-
Alcoholic beverages	2.4	-	1.8	-	1.4	-	1.3	-	1.3	-	1.2	-	.8	-
Housing	4.0	25.3	5.5	31.6	5.4	30.1	5.6	27.2	5.4	26.3	5.7	28.2	5.2	33.3
Apparel and services	5.7	.8	5.4	.6	5.9	.5	6.0	.5	5.5	.5	4.5	.4	3.0	.4
Transportation	22.2	6.4	17.3	7.0	17.0	6.5	15.7	7.5	17.1	7.3	13.9	7.1	10.9	5.6
Health care	.3	2.9	.4	3.2	.6	3.2	.7	4.0	1.1	5.5	1.9	8.2	2.8	11.2
Entertainment	3.2	2.4	3.6	2.5	3.4	2.7	3.0	2.7	2.6	2.5	1.8	2.5	1.0	2.0
Personal care	<.05	.9	<.05	.8	<.05	.9	<.05	1.0	<.05	1.2	<.05	1.3	<.05	1.4
Reading	.5	-	.7	-	.7	-	.7	-	.8	-	.9	-	.9	-
Education	.9	3.4	.1	.9	.2	1.3	.2	2.6	.1	1.0	.1	.5	<.05	.3
Tobacco	1.1	-	1.1	-	1.1	-	1.2	-	1.2	-	1.1	-	.7	-
Miscellaneous	-	1.4	-	1.5	-	1.5	-	2.1	-	2.1	-	1.8	-	1.8
Total	56.5	43.5	51.9	48.1	53.1	46.9	52.4	47.6	53.6	46.4	50.1	49.9	44.1	55.9

TABLE 8. Percentage of total consumption allocated to goods and services for major expenditure categories classified by quintiles of income before taxes, 1985, Consumer Expenditure Interview Survey

Item	Quintiles of income before taxes									
	Lowest 20 percent		Second 20 percent		Third 20 percent		Fourth 20 percent		Highest 20 percent	
	Goods	Services	Goods	Services	Goods	Services	Goods	Services	Goods	Services
Food	20.4	-	19.2	-	17.8	-	17.2	-	15.4	-
Alcoholic beverages	1.4	-	1.4	-	1.7	-	1.4	-	1.4	-
Housing	4.4	31.7	4.9	29.3	4.7	28.8	5.7	28.1	6.2	28.6
Apparel and services	4.7	.6	4.7	.6	5.1	.6	5.4	.5	6.2	.5
Transportation	12.5	5.5	15.4	6.4	17.7	7.1	18.1	7.2	17.0	7.5
Health care	1.2	5.9	1.4	6.4	1.0	4.7	.8	4.1	.6	3.5
Entertainment	2.1	2.2	2.5	2.0	2.9	2.3	3.2	2.6	3.6	3.1
Personal care	<.05	1.0	<.05	1.0	<.05	1.0	<.05	.9	<.05	1.0
Reading	.7	-	.7	-	.7	-	.8	-	.7	-
Education	.5	2.0	.1	.9	.1	.7	.1	1.2	.2	1.7
Tobacco	1.5	-	1.5	-	1.4	-	1.2	-	.7	-
Miscellaneous		1.7		1.5		1.8		1.6		2.0
Total	49.4	50.6	51.9	48.1	53.0	47.0	53.8	46.2	52.1	47.9

Unpublished CEX data at a more detailed expenditure item level indicates the under-25 group spent more on transportation goods as a share of total consumption, because a larger percentage of this group, along with the 25-34 group, were buying vehicles--placing a higher value on mobility. Given the lower income (and total consumption) of the under-25 group, these purchases made up a larger share of expenditures.

The lower share for housing services by the under-25 group, extends to the whole housing category which is lower overall, combining goods and services, than for all other age groups. The relationship between the shares allocated to housing goods and housing services was fairly constant across age groups with expenditures for housing goods being approximately one-fifth to one-sixth as large as expenditures for housing services.

Differences in shares apportioned to housing services, health care services and transportation made a major contribution to the significant shift to services by the two oldest age groups.

Households allocated a larger portion of total consumption to health care as the age of the reference person increased with the trend accelerating as one looks at the three oldest age groups. As the elderly are most susceptible to disabilities and illnesses, this increase in share from about 6.5 percent in the 55-64 age group to 14 percent in the 75-and-over group is not surprising. With the exception of prescription drugs, eyeglasses, and other medical equipment purchases, all health care expenses are considered services. The acceleration in share apportioned to health care primarily affected services since spending on health care services was approximately 4 to 5 times larger than health care goods, this shift was of sufficient magnitude to tilt the allocation of total consumption toward services for the two oldest age group.

Households in the 65-74 and 75-and-over age groups reduced the share total consumption directed toward transportation sharply. This is particularly noticeable in the share allocated to transportation goods which dropped 6 percentage points between the 55-64 and 75-and-over age groups. The share allocated to transportation services fell less than 2 percentage points between the same two age groups.

Analyzing unpublished expenditure data shows that less than 5 percent of the 65-74 group and just 2 percent of the 75-and-over group purchased vehicles per quarter.⁷ Characteristics

⁷Selected demographic characteristics classified by AGE OF REFERENCE PERSON

	All CU's	Under 25	25-34	35-44	45-54	55-64	65-74	75 and over
Number of CU's (thousands)	91,564	8,146	20,478	18,527	12,712	13,056	11,302	7,343
Size of CU	2.6	1.8	2.7	3.4	3.1	2.4	2.0	1.6
Age of ref. person	46.8	21.4	29.6	39.1	49.2	59.5	69.3	80.7
Number of earners	1.4	1.2	1.5	1.8	2.1	1.4	.6	.2
Number of vehicles	1.9	1.1	1.8	2.3	2.7	2.2	1.6	.9
Children under 18	.7	.4	1.0	1.4	.7	.2	.1	.0
Persons 65 and over	.3	.0	.0	.0	.0	.1	1.4	1.4

Consumer Expenditure Survey, Interview Survey, 1985.

data reflect a declining average number of vehicles owned for the two oldest age groups, reducing expenses for gasoline, motor oil, tires, and other vehicle products. As a result of the lowered expenditures for vehicles and products for vehicle operation, the share allocated by the elderly to transportation goods fell.

The share of total consumption allocated to housing services rose sharply, leading to the dominance of services in total consumption by the oldest age group. The share of expenditures made for housing services was 5 percentage points higher for the 75 and over group than for the 65-74 group. Unpublished expenditure data demonstrate that the bulk of this difference represented increased shares for basic shelter and utility expenses.

In addition, expenditures for domestic services, which include housekeeping services and general care for the elderly, for the 75 and over group accounted for a 3.5 percent share of total consumption, considerably more than for all other age groups.

The absence of notable differences in the distribution of goods and services by quintiles of income before taxes extends to major components of consumption as can be seen in Table 8. Only a few components showed any pattern. Expenditures on food dropped as a share of total consumption from 20.4 percent to 15.4 percent, tracking from the lowest to highest quintile. All food expenditures, both at home and away from home, are considered goods. This drop in share for food ran counter to the trend of increasing share that total goods represented of total consumption reflected in the first four quintiles. However, this result also confirms that food became progressively less important as income levels increased.

The drop in share allocated to food was compensated for by a substantial increase in the share of total consumption allocated to expenditures for transportation goods. Most of this increase in share was due to a rise in share allocated to vehicle purchases, particularly noticeable between the lowest and third quintiles. Unpublished CEX expenditure data reveal the percent of households reporting purchasing vehicles rose from over 4.5 percent per quarter for the lowest quintile to over 11.5 percent per quarter for the highest quintile. Characteristics data show a supporting increase in the average number of vehicles owned across quintiles.⁸

⁸Selected demographic characteristics classified by QUINTILES OF INCOME BEFORE TAXES

	All CU's	Complete reporting of income					
		Total	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%
Number of CU's (thousands)	91,564	81,221	16,199	16,259	16,232	16,255	16,276
Size of CU	2.6	2.6	2.0	2.3	2.5	2.9	3.2
Age of ref. person	46.8	46.6	49.2	50.9	45.3	43.1	44.6
Number of earners	1.4	1.4	.8	1.0	1.4	1.7	2.2
Number of vehicles	1.9	1.9	1.0	1.5	1.9	2.4	3.0
Children under 18	.7	.7	.5	.6	.7	.8	.9
Persons 65 and over	.3	.3	.4	.5	.3	.2	.1

Consumer Expenditure Survey, Interview Survey, 1985.

A number of factors contributed to the finding that the lowest quintile alone spent over half of their total consumption on services. First, lower income households were likely to allocate a greater share of their expenditures to necessities, such as food and shelter. Expenditures on both food and housing services in Table 8 confirm this view.

Second, expenditures on health care services commanded a noticeably higher share of total consumption for the lowest quintile (and the second quintile) than for all other quintiles. A look at the average age of the reference person for these quintiles indicates the presence of a sizable number of elderly households who typically spend more on health care.⁹

Finally, expenditures on education, and particularly educational services, weighed more heavily in the composition of total consumption for the lowest quintile households. This result demonstrates a dichotomy in the age composition of households in the lowest quintile. While over 30% of the households in this quintile were headed by reference persons 65 and over, fully 1/5 had heads under 25 years old. Student CU's, newly added to the sample, tend to have lower incomes, and direct a major share of their outlays toward tuition and other school-related expenses.

In summary, analysis of the distribution of consumption expenditures for goods and services by population subgroups defined by age of reference person and quintiles of income before taxes, has yielded some useful insights. First, in general, the shares of total consumption allocated to goods and services did not seem to fluctuate widely within the subgroups defined by each characteristic studied here, nor did these shares vary greatly from the percentages derived for the U.S. population as a whole. Four of the seven age groups and four of the quintile subgroups exhibited percentages allocated to goods and services within 2 percentage points of the distribution for all households.

This leads to the second observation that the subgroups whose distributions of expenditures between goods and services deviated furthest from the distribution for all households were located at the "ends" of the distribution for each characteristic. When examining subgroups defined by age of reference person, the youngest (under-25) and the oldest (65-74 and 75-and-over) displayed the distributions that differed most greatly from the percentages allocated by all households. In the case of quintiles of income before taxes, the distribution exhibited by the lowest quintile varied most from the all households' distribution.

Finally, to explain patterns of spending among the population subgroups, invariably the analysis turned to changes in the allocation of

expenditures between goods and services for transportation and housing. The goods and services consumers could purchase from these categories included a number of "big ticket" items. In the transportation section, this was a good such as a car or truck; in the housing area, the purchase, maintenance and upkeep of a home or rental of an apartment qualified as a service. Expenditures for these items were large enough to forego the purchase of alternative goods and services by consumers. In addition, those subgroups whose distribution of expenditures deviated furthest from the all households' distribution did so due to the relative absence or presence of these 'big ticket' items in their consumption profiles.

In conclusion, this paper demonstrates that the study of consumption data, like that collected in the CEX, can provide a unique perspective of economic phenomena that may differ from conventional wisdom. In assessing the reported transition of the American economy from being goods-oriented to services-oriented, the data presented here support the proposition that over the 1972-73 to 1984-85 period, services played an increasingly important role, regardless of whether that role was measured in terms of national consumption, employment, or output. It is also clear that from the standpoint of consumption, services did not dominate the picture as they did in employment and output. In 1985, American consumers divided their spending almost equally between goods and services. This was due, in large part, to the narrower focus of the consumption measures toward services. That consumers still allocated an increasing share of their consumption dollar to services over the 1972-73 to 1984-85 period is noteworthy.

In addition, this "macro" view of American consumer behavior can be refined to "micro" views by further examination of CEX data for subgroups of households defined by age of reference person and quintiles of income before taxes. The results here did not show many substantial differences between the behavior of these subgroups and all U.S. households.

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⁹See Note 8.

CONSUMER DEMAND FOR GOODS AND SERVICES: DISCUSSION

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The three papers presented in this session examine how we analyze consumer demand for goods and services. Each presents new perspectives on definitions, measurements, and methods for studying consumer choices. The discussion focuses on additional research questions and issues raised by the papers.

Each of the excellent papers in this session shares a common set of themes related to the ways we study consumer choices. All three papers examine the definition and measurement of goods and services demanded by consumers. The approaches taken in each paper differ significantly, however. This discussion, therefore, reviews each paper separately.

Eastwood and Brooker have provided an outstanding blend of economic theory and market research in "Estimating Demand Relationships Between Close Substitutes Using Limited Observations From Marketplace Experiments." Their work goes beyond the experimental economic analyses pioneered by Vernon Smith and others to a practical and applied, yet methodologically elegant, observation and analysis of consumer choice making behavior in an actual market setting. In addition to providing a good example of economic research in the market, the paper also is characterized by outstanding clarity of exposition and focus on an interesting and valuable issue in consumer choice.

There are several aspects of the experimental design that may aid in interpreting the results. For example, the physical layout of the products in the market needs to be discussed more fully. Although the authors describe the experimental and control groups, there is no information about the order in which the consumer meets the products to be

chosen. This may influence the tendency to choose one product over another. Also, the actual physical characteristics of each product, that is similarities in color, size, and firmness of the products, may influence choices, independent of the experimental treatment and design. Therefore, these qualities need to be more fully elaborated in the paper.

Future studies of this type need to include a sample of sufficient size to analyze the separate effects of price changes, product characteristics, and promotion. In the current study, the analysis of an important set of variables was obfuscated by sample size; the joint effects of logo application and localness of the products were combined because it was not possible to separate the measurably subtle effects of each. A larger number of trials may have alleviated this problem.

The findings presented by Eastwood and Brooker are remarkably supportive of the popular perception that consumers are willing to pay for quality, or perceived quality. Their work should be helpful to farmers and other producers of hard to differentiate products as they develop new approaches to marketing their products.

Barbara Heinzerling's paper on "Differences Between Goods and Services From a Consumer Perspective," reviews five dimensions from which to analyze consumer services--human factors, product/performance, price information, payment procedure, and protection and rights. These dimensions are especially useful to educators and program planners as they develop classification schemes for discussing consumer choice making in the services market.

Heinzerling might want to consider expanding the typology to one that would be useful in classifying consumer transactions for research and theoretical development purposes. For example, based on the dimensions she presents, is there a method to classify borderline expenditures

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as either more like services or more like goods? Could meals away from home be classified as a service or a good in such a scheme? How would electricity be classified?

Similarly, given the basic literature review and conceptual analysis underlying the Heinzerling paper, are there other classification approaches that could be developed to analyze additional dimensions of services? Could services be viewed on the dimension of durability, with something such as education classified as a durable service and entertainment as a nondurable? This type of system would aid researchers in analyzing spending for services using traditional economic models. Similarly, could the luxury/necessity continuum be incorporated in the classification and analysis of services? Heinzerling's thought-provoking discussion of the dimensions of services is an excellent catalyst for the further development of typologies necessary for the systematic analysis of consumer decisions related to the purchase and use of services.

"Goods vs. Services: From the Perspective of Consumer Spending," by William Passero, is an ambitious analysis of several sources of national economic data. The mission of the paper is two-fold. First, Passero attempts to illustrate that the service economy, while growing by all measures, is not burgeoning at the same rate on the consumption side of the ledger as on the labor side. Second, he illustrates that service expenditures are stable across household types.

This is a comprehensive review of the major sources of economic data at the federal level which include information on the service sector. The paper is rich in data presented in sufficient detail for the reader to examine and rework the information for insights beyond those summarized in the text. This is both a strength and weakness in the paper, for it provides the evidence needed for criticism.

When reviewing and comparing four sources of data to illustrate the relative importance of the service sector in the economy as a whole, it is critical that the data be comparable or that careful procedures be employed to standardize the variables compared. This turns out to be nearly impossible given the data used by Passero. Some of the problems may be offsetting. For example, the employment data include only those in nonagricultural jobs, which adds a slight bias to service rather than production jobs. At the same time, this limitation is compensated by the generally better measurement of production jobs which may bias the data in the opposite direction.

Passero notes that expenditures for goods often include a service component for the distribution and marketing of the product. Thus, expenditures for many consumer products, if classified solely as goods spending, may understate the service component of many items in the market. This understatement is even greater in the classification of complicated expenditures which may have a large, but difficult to isolate, service component, such as food-away-from-home. For the purposes of this analysis, Passero consolidates all food expenditures, counting food-away-from-home expenditures as a good, despite the fact that such expenditures contain a large service component. Given the growing importance of this category of expense, such a classification scheme will create inequities between consumption and earning data, resulting in the impression that the service sector has grown more rapidly in jobs than in spending.

There are many additional research questions raised by the analyses presented by Passero. His work on differences in expenditure patterns by households with varying characteristics could be expanded to include a measure of employment density, perhaps measured as the ratio of the number of earners to the number of adults in the household. This would address the issue of how two-earner families and single parent families manage time pressures through adjusting spending for services. Although Passero's analyses convincingly demonstrate the remarkable stability of spending for services across household types, the Consumer Expenditure Survey data, which Passero reviews in this paper, holds a wealth of information for multivariate analyses needed to reveal the subtleties perhaps masked in the descriptive statistics.

SOME THOUGHTS ON CAREER DEVELOPMENT
FOR CONSUMER AFFAIRS STUDENTS

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Because the field of consumer affairs is so diverse and poorly understood, student majors need stronger career development programs while in school. Consumer studies faculty hold the key to improvement in the direction of the career development process, while students bear the responsibility for most of the necessary "homework."

Academics in the field of consumer studies are still trying to define it and reach consensus on its body of knowledge (Goebel & Miller 1983). Should we be surprised if consumer affairs students are confused about career options open to them? Are we doing all we can and should do to prepare our majors for lifelong career patterns that will be personally satisfying while also serving consumer well-being? Since I have collected no data from various programs or their students I cannot answer that question for you. But I suspect there is room for improvement as there was and is in my own curriculum.

This paper will describe a model of career development most of us have been operating under. Special attention will be paid to the parties we have assumed should have primary responsibility for career development and what the strengths and weaknesses of that model are. The discussion will culminate with a listing of "coulds" and "shoulds" for improved faculty contributions to students' career development processes.

WHAT IS CAREER DEVELOPMENT?

Before I get to that discussion, however, some clarification is in order. First, there is a difference between consumer education and career preparation. The 1984 Journal of Consumer Affairs index to ACCI publications makes a distinction and a comparison shows there are far more entries for consumer education articles and papers than for those on careers for consumer affairs professionals (CAPs). This indicates academics have been particularly focused on educating for the consumer role both directly with our own students and for any subsequent students they may serve.

Certainly skills useful to consumers often are necessary for professionals. The ability to make a request or take a position through organized and articulate written and oral communication is equally useful for both roles. Similarly, analytical decision-making skills are invaluable for professionals as well as consumers. But the transfer of such skills between the two roles is not automatic.

Another important distinction is that between job training and career development. Training for an entry level position, similar to job placement assistance, is akin to giving a student a fish rather than teaching him/her to fish. The often repeated predictions about the frequency of job and career changes during most workers' adult lives should be of special concern to those of us teaching and preparing to be CAPs, since we know the potential for our graduates to reach positions of influence on behalf of consumers will likely be realized only through a series of deliberate career moves. Bolles writes that the purpose of career and life planning is

...to take a long view of a person's life--so that one can avoid short-term, band-aid thinking. It involves building in Alternative Options, from the beginning. Like, in high school or college (Bolles, p 65).

Single minded preparation for entry level jobs severely limits the alternative options students have to fall back on. Such limitations may be real in that an individual can perform only certain tasks in one environment. More likely, the limitations are attitudinal in that the worker or student doesn't realize what skills he/she has and their transferability, a point I will return to later. Thus, faculty need to emphasize and students need to appreciate the importance of preparing for a number of career stages whether they are desired or unexpected.

Rather than focusing on vocational choice alone, ideally career development deals with a person's whole life mission and identity rooted in goals, values, and priorities (Bolles, 1977). Formal education contributes to that process by helping students get clearer ideas about "the way the world works" and what needs to be done to make it work better. And when course assignments and experiences challenge students' cherished but irrational ideas, they assist in the value clarification process.

But I strongly suspect that consumer studies faculty could do a better job, especially with the process of reality testing. For example, our student majors need a better sense of what skills they have (and what to label those skills since that aids in their self-marketing during job searches). But perhaps it is more important to test the reality of whether and where they can earn an income doing what they desire and are able to do! In our role as consumer educators, we help familiarize consumers with the available options and means for information seeking and processing. We do this in order to maximize individual satisfaction and optimal market functioning. Should we not be equally attentive to the marketplace of career options and worker satis-

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faction in the career preparation component of our work?

CAREER DEVELOPMENT: THE TRADITIONAL MODEL

Up to now, it has become obvious that I am critical of the career development process as it traditionally has occurred. The logical question is what's wrong with that process? The model we assume to be operating envisions partnerships among employers, career services, students/workers, and formal education. Unfortunately, the partnership often is unbalanced and the process is accidental rather than deliberate. To understand that, let's look at each of the "partners."

Employers

For most of us, employers are the final arbiters with regard to career paths since, in the marketplace for work, only certain organizations will be hiring at various points in time for specific skills. Since they need to respond to market pressures, employers, through their hiring and layoff behaviors, send messages to students, their parents, and educators about "the best" opportunities. Such messages tell us about cyclical demands for engineers, teachers, or nurses, for example.

But we also read or hear that some employers in business seek liberal arts majors because they have found such students to have good communication skills and can make better decisions taking a number of complicated, subjective factors into consideration. If relevant, educators alter curricula and courses in response to such indirect feedback as well as from direct recommendations of likely employers. (If we did not, faculty would find that our unwillingness to adjust to the work marketplace might leave us out of jobs!)

Employers' needs affect workers' career paths after entering the work force too. There is the need to satisfy supervisors and to stay up to date in one's field, regardless of career aspirations. And if an individual wants to do more than just keep his/her job, that is, if upward mobility is desired, it is vital to develop and demonstrate the skills and character traits deemed necessary for more responsible, higher prestige jobs. Third, because many workers discover other types of work or employing organizations more attractive, they do what is necessary to make themselves more employable there. Finally, workers often are forced to alter career paths when they are laid off. In one of her columns on career advise, Joyce Kennedy writes:

Until a decade ago, you could count on staying with a bureaucracy for life. Now plant closings, downsizing, mergers and other disasters for individual workers are commonplace. Don't plan on a company being loyal to you: instead, keep your contacts and resume up to date (Kennedy, p B8).

This situation points to a major weakness of employers having so much power over our careers: at a general level we understand the need for employer discretion and flexibility but the effects often are less than humane treatment of employees. But how humane are the other influences they exert? Students and already employed individuals are expected to train and retrain, package and repackage themselves to fit employers' demands or else be left out or behind. Poor matches between jobs and workers result from inefficiencies in the traditional model of allowing uninformed or overly casual employers to be the arbiters. I'm sure there are others who have seen consumer affairs graduates being judged on the basis of a biased notion or limited knowledge about what their major means they can or will do.

And, when employers' criteria play too important a role in the choice of a major and the way students experience their educations, considerable dissatisfaction may result because workers end up in the "wrong" career and may not be very adaptable. Just as consumers may have important needs unmet by a mass production economy, workers may find their personal development severely limited when employers call most of the shots regarding careers. Certainly those in career services try to tell us to take more control over our own work destinies.

Career Services

A growing number of individuals and organizations have emerged to aid in the career development process. For those no longer in school and considering re-entering the workforce or changing careers, there are career counseling and mentoring, workshops, and well known publications. Since the primary interest here is with current or recent students, I'll discuss the contributions of campus career services.

Campus service centers have shifted their primary focus from entry level job placement to lifelong career development. In addition to keeping credentials on file and arranging for on-campus interviews, career service offices assemble resource libraries, teach workshops focused on job procurement and career planning, and provide individual counseling. All three of the latter services offer enormous amounts of "consumer" information to students who take advantage of them. As with so many consumer services, accessibility is uneven because of differences in salience and motivation.

Faculty could help their students by strongly encouraging the use of campus career services. The workshops on resume and cover letter writing, interviewing skills, and job search strategies are valuable and need not be attempted by faculty. Their staff members can help develop career exploration exercises suited to students preparing for specific types of careers. Finally, faculty advisors shouldn't hesitate to refer students to the counseling service provided when there are planning or decision-making issues that seem to warrant specialized professional assistance.

There are only two weaknesses to mention here. Not all campus career services are equal. Students and faculty should be familiar with the quality and quantity of service and try to ensure the best possible services for their campus community. In other words, assuming "they" know what they're doing without investigating does not serve student-consumers well. The other problem with relying too heavily on career service professionals is that they are by nature generalists. They cannot be expected to know intimately the many campus curricula or job titles, firms, and typical or desirable career paths related to each field. Students and faculty must provide such information.

Students

The traditional model of career planning places considerable responsibility on the individual student/worker. We expect career satisfaction and progress will come to those individuals who are motivated, resourceful, self-interested, and self-determined. Few of us would argue that each person ultimately is responsible for their own career development. Certainly it is better than leaving it up to the employers for reasons discussed earlier.

No one else can know as well what an individual's interests, values, goals, and abilities are. Furthermore, the marketplace for work is as complicated if not more so than the market for consumer goods and services. None of us has the time to look out for others under such circumstances! In other words, each person must guard and seek his/her own career interests. Students can prepare for that responsibility through greater self-determination during their schooling, starting with the selection of a major.

Faculty know that choosing a major is not the momentous, irreversible decision students often think it is. On the other hand, more careful selection based on complete market information and self-knowledge surely would be as advantageous as with any other consumer choice. Furthermore, students should be aware that every choice they make after deciding on a major has implications for their career development and alternate options.

This includes not only decisions about specific courses and field placements, but what they choose to do with the opportunities presented within each. After all, the ultimate goal of educational experience is to develop skills and confidence. The decision about whether to "receive" an education passively or to "procure" one actively is the student's and has considerable effects on how successfully the goal is reached.

This matter of how an education is obtained relates to one of the weaknesses of placing too great a burden on students. To what extent do teachers (and parents) structure learning experiences so students can develop independence and initiative? Allowing students to succeed and fail on their own and to live with the conse-

quences is one aspect of such a structure. But it also suggests that students should have increasing responsibility for what they learn and how they do it.

A recent class exercise illustrates this point. When student interns were asked to take an inventory of the skills they already possessed and ones they wanted to develop, the former list was far easier for them to create than the latter--not too surprising or troubling. The more interesting challenge they experienced had to do with determining ways to develop those desired skills: students could identify past experiences that led to their present skills, but had great difficulty in proposing activities that could help develop future ones. What we all came to realize was that the past experiences had been suggested, required, and/or structured by parents and teachers. Now that students were being asked to take over that responsibility, most were novices.

At a more general level, expecting students to have too much of the burden for their career development is similar to expecting consumers to watch out for themselves armed with inadequate or confusing product and service information. The tasks associated with making educational and career development decisions surely must seem overwhelming at any stage, but especially when you are young and inexperienced. Furthermore, as anyone who has job hunted and/or been reviewed for their job performance knows, the process can be extremely ego threatening. In short, I think we ask too much of our students in this regard.

THE NEW MODEL: FACULTY TAKE MORE ACTIVE ROLES

Existing Contributions

What role have program faculty played in the traditional model of career development for students? I think it fair to say that all along, most consumer affairs/consumer studies programs have been doing the following things right:

- 1) The philosophy and goals of programs are articulated in promotional and descriptive written materials available to students.
- 2) Job opportunities are described in the catalog and brochures as well as through the advising process. Such descriptions tend to be rather general in pointing to the sectors where jobs might be found and as to the type of work they might entail, not unlike reports to the ACCI membership on career opportunities for CAPs and financial counselors (Burton 1976; Fritzsche & Ferrell 1980; Bannister 1983; Langrehr & Langrehr 1986).
- 3) Curricula are designed to arm students with the knowledge and skills faculty know and believe they would need as competent CAPs. These competencies are identified through market research on employment and comparisons with programs at other universities (Stampfl 1983; Abdel-Ghany 1983; Charters 1983; Garman, Forgue & Burton 1983). In many

cases, choice is permitted so that students can individualize programs and take more active roles in their own educational preparation. However, without better knowledge of what careers are possible, such choices may not be particularly well informed.

- 4) Courses are designed to teach students relevant terms, concepts, and processes and to integrate such knowledge with other courses they take. Additionally, application of principles through case studies and thorough analysis of issues often are integral parts of courses.
- 5) Often our majors are required or encouraged to complete field experiences in order to put theory to practice and to aid in the transition from school to the world of work. Unfortunately, if career information is inadequate, students may simply rely on the visible consumer complaint handling organizations or field experiences they hear about through their peers.
- 6) Attempts are made to offer role models and sources of career information by inviting CAPs to speak in classes or at meetings. But few of these CAPs had consumer affairs educations, thus making it difficult for them to identify with our students and vice versa. Inviting graduates of your own program is ideal for modeling identity, however, it often is difficult to monitor former students' whereabouts and career paths.

What Faculty Could or Should Do Better

In evaluating my own program's contributions to career preparation, three general types of deficiencies were identified which we have begun taking steps to correct. I would submit that other programs might improve the career development of their students through attention to these issues:

- 1) Although courses generally have goals listed on syllabuses, they are not always expressed as learning objectives, that is, tasks that are observable and measurable. (How can students, let alone faculty evaluators, be able to say with confidence that they have "learned about" or "understood" some concepts? What do we mean when we say we want students' communication skills to improve? What are communication skills, anyway?) Faculty should try to express course and assignment goals as learning objectives and then design exams, assignments, and in-class exercises in order to provide opportunities for student mastery of those objectives.
- 2) Because of the previously mentioned problem of students not knowing what skills they had and how to transfer them, the learning objectives mentioned above should be explained and justified on the basis of how they foster professional development. Additionally we need to make more references to jobs and careers in the field within the context

of all courses. For example, as we describe how the current fields of food production, insurance or housing operate and predict ways they might or should operate in the future, faculty could suggest future trends and needs, job titles and descriptions, and potential employers in these industries.

- 3) Most importantly, improving career development demands that helping students make connections between the classroom and their subsequent careers needs to come earlier than the senior year. Typically senior seminars or field experiences are used to discuss careers and job obtainment and although these are important and still needed, they may be too little too late. Career development starts long before college, but we should become a part of that process from the time students arrive on campus. One suggestion is to give students assessments of their strengths and weaknesses as they relate to careers. This can be done through coursework evaluations and during the advising process. Students have expressed surprise when I tell them they would be good at research jobs or that they have particularly good interpersonal or managerial skills, etc.: they don't seem to know it!

It was these three deficiencies in our own program's career preparation efforts which motivated me to write and publish advisees' manuals for distribution to our majors and any other students inquiring about our program. (Copies of these are available to conference participants.) The objectives of preparing these manuals were to 1) introduce and describe the field of consumer affairs while listing more specifically the various career opportunities in the field and 2) explain the curricular requirements for URI's major in consumer affairs as they relate to knowledge and skills recommended for CAPs (Bannister 1983). We found that depending on advising to disseminate this information was inadequate and spotty.

CONCLUSIONS

Observing and listening to students provided the data used to make the conclusions and recommendations in this paper. I have been continually surprised at the limited options our students consider open to them after graduation--notably most frequently mentioned are complaint handling and sales. But even more disappointing is the lack of certainty and confidence concerning the skills they possess. I have argued that part of the problem stems from inadequate career information and guidance, functions that rightly belong to program faculty. Could it be that we are not as confident as we should be about what we help prepare our students to do?

Burton found in 1976, as did Fritzsche and Ferrell in 1980, that the favored educational preparation for CAPs was business administration. But when one looks at the finding by Fritzsche and Ferrell (1980) that current CAPs rated course preparation with a consumer orientation and communication skills as more important than marketing

or management, the desirability of a business administration degree becomes questionable. Perhaps it was the traditional and most obvious answer, especially since at that point, most CAPs came from business backgrounds. I believe our consumer affairs students could better market themselves if 1) they knew far more about what career possibilities were out there and 2) they realized what they have to offer.

The authors of a book entitled How to Help your Child Plan a Career, write that:

Healthy career development and realistic career decision-making seldom occur by chance. Most successful persons decide what they want in a career and how to get there based on firmly established faith in themselves, on a personal feeling of worthiness, and on reinforcement gained through successful experiences (Hummel & McDaniels, p 35).

Clearly educators share several socialization goals in common with our students' parents. In this case, I urge my colleagues who educate future CAPs to do as much as you can to ensure that your students are confident, competent, and experience success so that their career development will be enhanced. It is no more than what we attempt on behalf of consumers.

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TAX REFORM, WELFARE REFORM - THE CONSUMER'S STAKE

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Tax reform and welfare reform made strides toward improving the well-being of most American households. With a more rational approach toward the allocation of our economic resources and our social responsibilities, we will make better decisions. And with a fairer distribution of our tax burden and with more support for poor families, we have put our government's support behind those who need it.

The last few years have been a period of unprecedented economic program reform. The reason is less than clear. It may be that the Congress merely has nothing better to do while waiting for a president who will agree to act on our major economic policy problem: the federal budget deficit. Or it may be the kind of hyperactivity on peripheral matters in which we all indulge when we know that we have something difficult and unpleasant to do.

Whatever the reason, the legislative action has been intense. The Tax Reform Act of 1986 unquestionably was a legislative landmark. It was certainly the most significant piece of tax legislation since the enactment of the current income tax in 1913, and may be the most significant new law of any kind since the Civil Rights Act of 1964.

By this standard, welfare reform in 1988 may well be partially hidden in the shadows. Nonetheless, it should not be overlooked. Welfare reform will still be an achievement that eluded the best efforts of Richard Nixon and Jimmy Carter. It will affect millions of unfortunate Americans, for the better, and it will continue an economic theme--and some might add, a sense of national purpose--that tax reform set two years ago.

What I would like to do today is to discuss the common economic theme and the common national purpose in tax reform and welfare reform. In fact, the commonality here is both strong and significant. And though our economic house is now far from in order, these policy initiatives do speak well of our ability and willingness to grapple with tough economic issues in the years ahead.

THE ECONOMIC THEME

So what is the common economic theme of these two prominent "reform" efforts of recent years? Or indeed, as a more critical observer might ask, do these two initiatives deserve to be called "reform" (if that term retains any

meaning)?

Tax Reform

Let us begin to answer this question from the perspective of the new tax law passed by the Congress and signed by the President two years ago. Interest in fundamental tax reform did not begin with this recent effort; in fact, the interest was there for at least thirty years. And over that thirty year period the interest of tax specialists and public policy analysts only grew, by reason of the irrational turns that actual policy took.

Most everyone--expert or not--would say on reflex that the tax law should first and foremost raise the revenue that the government needs. In practice, however, the tax code was increasingly devoted to the purpose of influencing people's behavior, in pursuit of other economic or social goals. The list of worthy purposes quickly expanded from encouraging home ownership to the purchase of health insurance, to investment in business equipment, to household saving, to the adoption of children, to the exploitation of reserves of clay for flower pots. Before too much time passed, no one really knew how many special privileges and exceptions were tucked away into the far corners of the tax code and its associated case law and regulation.

The best measure of what was going on was the total of what were called "tax expenditures"--the revenues not collected because of preferential features of the tax system designed to influence private behavior. From the invention of this concept in the mid-1960s, the total of tax expenditures marched steadily upward, until by the mid-1980s, tax expenditures under the individual income tax came to about two-thirds of revenues actually collected. In other words, for every dollar that the federal treasury actually took in, it handed out about 67 cents of tax forgiveness, largely with the purpose of influencing taxpayers' economic and social behavior. Under the corporate income tax, the situation was even worse. By the mid-1980s, corporate tax expenditures exceeded actual corporate tax revenues--meaning that the federal government was handing out more than one dollar in tax forgiveness for every dollar of tax actually collected. The corporate subsidy tail was officially wagging the corporate tax dog.

There were many reasons to be concerned about this trend. The tax law may well have become the major vehicle for the operation of economic policy in the United States, making the creation of tax breaks a major policy playing field. Lobbying for those tax breaks became a high paying business. That is in part why Washington has become such a bustling town, with highly

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id lawyers bidding for their pieces of the tax-preference pie. It is why members of the tax-writing committees of the Congress have become leading recipients of PAC campaign contributions. One might well argue that consideration in the legislative process has too often been given to greed before need.

It is also apparent that plain, ordinary taxpayers have become enamored of tax breaks; people feel that the tax system is a game, and that he who pays no less than others with the same income is a loser. A whole army of financial planners has arisen; for the most part, they do no financial planning, only short-run tax minimizing. This whole mindset creates animosities and wastes the nation's time and resources.

A main economic purpose of tax reform that is often ignored is rationalizing the allocation of our resources--taking irrelevant tax criteria out of day-to-day business decisions. Let me try to elaborate.

When Forbes magazine did its annual issue on the 400 wealthiest American individuals a few years ago, it identified one-sixth of those individuals as having accumulated their fortunes in real estate, and another one-sixth as having done so in oil and gas. In the same year, the Internal Revenue Service showed that partnerships operating in those two industries had in aggregate lost money in the most recent tax year. You don't have to be an economist to understand that those fortunes were not accumulated by earning profits in the marketplace; rather, they were built by accumulating preferences from the tax law (which heavily favored the oil and real estate industries). It is one more piece of evidence that the most competitive people in the nation were tax attorneys; it is no wonder that the international competitiveness of much of the rest of the economy is faltering. It is also not surprising the many real estate markets were drastically overbuilt, and that much of our industrial base was correspondingly ignored.

A key objective of tax reform was to rationalize those kinds of choices--to stop sending investors bad signals, leading them to seek tax payoffs instead of economic profits. This is one area where American consumers have an often unrecognized stake. An economy that wastes its resources on zero-sum tax-reduction games will be less prosperous than it could be. Redirecting the economy toward truly valuable activities will redound to everyone's benefit. And tax reform was probably the most important step that our nation could take in that direction.

Welfare Reform

Current proposals for welfare reform likewise involve a rationalization of our economic affairs, but in a sense that is somewhat different. Here I would like to focus on two particular aspects of welfare reform: its emphasis on work, and on the payment of child

support by absent parents.

By now, just about everyone has heard the argument about the welfare system as a poverty trap. The theory goes that welfare breeds dependency by providing unconditional income support. There is no incentive to work, especially when the rewards of work would be little in excess of welfare benefits--including the health insurance provided under Medicaid.

Very few economists would agree with this extreme view of welfare as a disincentive to work. The empirical evidence does not support the hypothesis that most welfare recipients do not want to work. Nonetheless, the welfare system does very little to help recipients to obtain gainful employment; it merely holds body and soul together, and relies on the beneficiaries' own initiative and devices to "work their way off of welfare."

It was this vacuum that federal demonstration projects and several state programs--perhaps most notably the Massachusetts Employment and Training, or "E.T." program--have filled. These initiatives have provided job training along with other services, including child care, to help the participants along in their attempts to become self-supporting. Results thus far have been positive, but small--the welfare population might be reduced by as much as 10 percent. Sticky questions about the selection--or self-selection--of the participants will always cloud the verdict. Further doubts include whether the immediately apparent gains will persist over time, and whether the jobs so created are really new, or merely substitutes for other jobs elsewhere in the economy. The most positive interpretation is that the states have saved welfare costs in return for a modest investment in their citizens.

The welfare reform legislation passed by the House of Representatives takes a long stride in this direction by mandating that all states provide an education, training and work program for their welfare recipients. Most recipients are required to participate. Further, participants are to be provided with additional incentive and support. A greater amount of income may be earned and disregarded for purposes of computing welfare benefits. Child care is to be provided. And for those who do manage to work their way off of cash assistance, a longer transitional period of health insurance coverage under Medicaid is mandated.

There is no doubt that such a program would be expensive; it is a large part of the Congressional Budget Office's estimate of the House bill's five-year cost at \$5.7 billion. There is considerable doubt that the Senate would accept such an expense. The ultimate return on this investment is likewise uncertain, given the insoluble mystery of whether those who respond to such programs are really the self-starters who would have advanced themselves anyway, and whether the additional employment is real or illusory. In the current budgetary

environment, these financial concerns cannot be ignored, and the ultimate anti-poverty and anti-welfare impacts should not be exaggerated. But it is clear that such an initiative may well buy dignity, which is a commodity of considerable value. This does not pay for the program; it merely says that it deserves a somewhat higher priority than it might otherwise receive.

We might recall the English "poor laws," and ask whether work and training requirements are proper in a civilized society. This is not an easy question, but I have to guess that participants handled with respect will learn that personal advancement comes through work. This is an echo of the economic rationalization of tax reform--in both instances, value is created through productive effort, not manipulation of a legal and political system.

This rationalization, a steering of individuals toward productive effort and away from zero-sum transfers, is one of the things that I find encouraging in welfare reform. Everyone will benefit if this initiative in fact expands our productive labor force and adds to the stock of skills in our society. Especially important would be a break in the cycle of poverty if children of recipients are better acquainted with productive effort from their earliest years.

Another fundamental rule of all human relationships is that we accept the consequences of our actions. Failing that notion of responsibility, some people will begin to act with no consideration of the costs that they impose on others, and in the end, we all will be worse off for it. In this regard, our society has been visited by an important breach of responsibility. Our growing welfare population of single mothers with children is dependent upon the state in large part because it cannot depend on those children's fathers. Nine out of ten children in female-headed families have a living father, but eight out of ten poor female-headed families receive no support from the absent fathers. Only 70 percent of child support now legally due is collected. Given that divorced and separated fathers have incomes that are the same, on average, as those of other men, and that survey research indicates that as many as 84 percent of absent parents can be identified and located, a renewed policy emphasis on enforcing child support would seem to be in order.

A 1984 federal law requiring wage withholding of delinquent child support payments of absent parents was an important step in the right direction. But still further action is needed. One major gap in the child support system is the determination of reasonable amounts of child support obligations in the first place. Wisconsin very recently imposed a mandatory percentage-of-income formula for adjudicating child support obligations, and plans to add automatic withholding of payments. Estimates indicate that this type of system imposed nationally, optimistically assuming universal

compliance, would reduce poverty among female-headed families with children by 40 percent, AFDC caseloads by nearly 50 percent, and government outlays by over \$2 billion.

Indications are that welfare reform will make some strides, although significantly shorter than those taken in Wisconsin, in the child support area; this is one area where the Senate and the House are in agreement. These steps will help to rationalize our economic system by putting familial financial obligations where they belong. The burden on the public purse will be less, and the consequences of private actions will be clearer. All consumers stand to benefit.

But beyond these rationalizations of tax and family matters, tax and welfare reform have redefined some of our important national attitudes. These changes also have implications for consumers as we look toward new economic challenges.

THE NATIONAL PURPOSE

Tax reform and welfare reform may well point in a common direction toward principles for resolving our remaining economic problems.

Tax Reform

Over virtually the entire period since World War II, the tax burden has been shifting from corporations to individuals. The corporate income tax's place as the second largest federal revenue source was taken by the Social Security payroll tax. The substantial corporate tax cuts of the early 1980s pushed this trend still farther, and corporate tax revenues, expressed as a percentage of corporate net income, fell to new postwar lows.

The new tax reform law reversed this trend. Corporate taxes are expected to reach the same percentage of corporate net income as they held in the 1960s and the 1970s. The additional revenues will be used to reduce the tax burden on individuals.

And the individual income tax burden itself is being rearranged. Over the last decade, inflation has significantly increased the tax burdens on lower-income taxpayers. In legislation passed in 1974, 1975, and 1976, the Congress lifted the income tax burden entirely from families below the official poverty line. Since that time, inflation has reimposed the burden, and the 1981 law distributed hundreds of billions of dollars of tax cuts while doing virtually nothing for the poor.

The new law returns to the principles of the mid-1970s. In fact, six million poor families will have their tax burdens eliminated, and significant tax cuts are given to near-poor and middle-income families, with the sizes of the tax cuts (expressed as a percentage of tax liability) falling as income rises.

So the broad philosophy of the new tax law is to abandon the attempts of recent years to use billions of dollars of revenue to influence business behavior in such a fashion as to speed economic growth. Instead, those dollars will be distributed in an unconditional fashion to taxpayers of low and modest incomes. To me, this change in philosophy bespeaks an attitude that corresponds more closely to what this nation has traditionally considered fair.

There is a risk in this approach. Some economists would argue that reduced tax incentives for business will inhibit investment and thereby slow economic growth. But the experience of the 1980s shows precious little value from tax incentives. And the new, fairer distribution of the tax burden may well leave us with a sounder base to attack the federal budget deficit.

Welfare Reform

In one important way, the most likely outcome for welfare reform legislation would reinforce the effort of tax reform.

Since the mid-to late-1970s, as the federal government was hampered by large budget deficits and state governments were constrained by tax revolts, welfare benefits have dropped behind inflation. In fact, in the median state, real benefits have declined by 35 percent since 1970. Now, the percentage of the poor who are lifted out of poverty by federal programs is well below where it was ten years ago.

Therefore, it is encouraging that part of the welfare reform legislation passed by the House is an increase in benefits. This modest step will help to relieve some of the pressure on poor families, especially if the kind of child support initiatives described earlier proves successful.

Again, this reform approach involves a risk. Some members of the House, in opposing the bill, argued that the higher welfare benefits could discourage work. But this risk may prove to be well founded. Recent experience has demonstrated that low-income people really want to work. In particular, when welfare benefits for the working poor were eliminated in the early 1980s, many low-wage workers chose to continue to work rather than leave their jobs and collect virtually the same income from welfare. If the job training programs included in the new law prove effective, we could have both better support for families when parents are out of work and more opportunities for the parents to get back to work.

So the new welfare reform legislation might well begin a more compassionate and a more efficient approach toward solving our problems with the low-income population. And those problems will continue. Teen-age pregnancy continues to expand the population of poor families; low-cost housing is still in short supply; and welfare families are still deterred from working their way out of the program by the prospect of the

complete loss of Medicaid benefits. Still, beginning to face these problems, we may have begun the lengthy process of solving them.

CONCLUSION

So, in tax reform and welfare reform, we have made strides toward improving the well-being of most American households. With a more rational approach toward the allocation of our economic resources and our social responsibilities, we will make better decisions. And with a fairer distribution of our tax burden and with more support for poor families, we have put our government's support behind those who need it.

But much remains to be done. Welfare reform has only begun to deal with the task of keeping families out of poverty, rather than merely helping them once they are there. And while tax reform may help us to eliminate our enormous budget deficits, it itself does nothing to accomplish that essential task.

So the consumer's stake in tax reform and welfare reform is considerable, but the stake in our remaining public policy problems is enormous. Let us hope that tax reform and welfare reform have demonstrated a willingness and a capability to deal with these pressing national issues.

THE CONSUMER PROTECTION THEORY OF STRUCTURAL REGULATION

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This paper introduces the definition of structural regulation in health care and discusses briefly how structural regulation might be supposed to have a consumer protection effect. Some difficulties with testing for that consumer protection effect are mentioned.

THE ISSUES

The Federal Trade Commission has recently struck down a number of restrictions on the "commercial" behavior of health practitioners, including physicians, dentists, and optometrists. Matt Daynard will discuss some of these actions later in this session. In 1986 the editor of the Journal of the American College of Dentists took to print to castigate the American Association of Retired Persons (AARP) for giving its members "poor advice" to support denturism-- permitting nondentists to make and fit dentures directly for the public. Mr. Blair said, "AARP members should consider it downright insulting for their organization to recommend that they should choose to have substandard care performed by technicians instead of treatment by qualified dental practitioners." (Blair, 1986) Also in 1986, Florida prepared to implement a law permitting pharmacists to prescribe some drugs that had before required a doctor's prescription ("Highlights: Pharmacists," July 1986). By one estimate, in the past few years more than 10,000 nurses have set up practices independent of physicians and hospitals. The reaction of the American Medical Association-- "...if you want to practice medicine, then go to medical school." ("Florence Nightingale, Inc.," 1986)

The common element in these cases, and some others you will hear about in this session, is that they involve structural regulation in health care. These disputes can be long, bitter, and expensive. Both sides to each dispute claim to be acting in the best interests of consumer. One side claims that consumers' best interests lie in wider choice as protection against sellers, and the other side claims that choice must be constrained to protect consumers against themselves.

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My task is to set the context for the discussion of cases in the session. I will first define structural regulation in health care, then outline a formal model of such regulation as consumer protection, and, finally, indicate how one might test the regulations for a consumer protection effect. I will only suggest the general outline of the technical model.

DEFINITION OF STRUCTURAL REGULATION

The basic taxonomy for evaluation of health care services was set forth by Donabedian (Donabedian, 1980). This taxonomy also will serve as my classification scheme for regulations. Economists will recognize strong similarity to structure, conduct, and performance from industrial organization.

According to Donabedian, the structure of health care comprises the settings and instrumentalities available and used, the physical aspects of facilities and equipment, the administrative organization, and the qualifications of caregivers. These are relatively stable and objective characteristics of the circumstances in which care is delivered. Structural regulations require, for instance, that hospitals have a medical ethics and privileges committee and that persons performing surgery have medical licenses and all the credentials that go with licensure.

Donabedian defines the process of care as the activities of health professionals or institutions in the management of patients. The activities through which care is delivered comprise the process of care. For instance, does a dentist take and use radiographs in diagnosing dental disease? Does a hospital medical ethics and credentialing committee hold meetings and discuss problems? Process issues can be defined from the global to the very specific, as can structure.

The final element of Donabedian's taxonomy is outcome. The outcome of care is (we hope) health and satisfaction. Outcomes may be only probabilistic. For instance, treatment for cancer may only change the probability of recurrence, but a reduction in that probability is a positive outcome. In dental hygiene, about which you will hear more later, a positive outcome can include a more pleasing smile and a greater probability of retaining natural dentition.

Donabedian proposed structure, process, and outcome as three levels or approaches to assessing health care. He acknowledged presumptions that "better" structure will lead to better process, and that better structure and/or process will lead to better outcomes. He did not address the taxonomy from a regulatory context, and he did not purport to demonstrate the truth of the presumptions that structure, process, and outcome are causally related.

Donabedian's taxonomy is useful in analyzing regulation in health care, because regulations in health care are primarily on structure. Licensure is an obvious example. Another example, a supervision requirement in dental hygiene will be discussed in another paper. Regulations that prohibit lay ownership of medical or dental practices are structural regulations. I would argue that bans on advertising or the use of fictitious names by health care providers are structural regulations, since they do not regulate the steps or activities followed in care, just the characteristics of the provider (for instance, advertiser versus nonadvertiser).

I define structural regulation as legal requirements that providers of a health care service have a specified set of characteristics (credentials, facilities, etc.). I believe that structural regulation is the most pervasive type of regulation in health care and the type on which most reliance is put to maintain the quality of care. Process and outcome regulations do exist. For instance, the Joint Commission on Accreditation of Hospitals does inspect records of hospital operations to determine if prescribed procedures are being followed by quality assurance committees. Licensing boards do remove licenses for repeated, egregious adverse outcomes. I believe it is obvious, however, that process and outcome regulations are relatively few, weak, and ex post. The major burden for ex ante consumer protection falls on structural regulations.

THEORY OF CONSUMER PROTECTION

Recently, I have been working on a general theory of structural regulation as consumer protection. The problem is this:

If we accept the presumptions set forth by Donabedian that better structure leads to better process and, particularly, better outcomes, what are the implications of these presumptions for more and less (or better and worse) regulated markets? That is, what observable variables should differ between markets with regulations requiring better structures and markets without such requirements and how should those variables differ?

Better outcomes are defined from a consumer welfare perspective, so Donabedian's presumptions are taken in my work as a hypothesis that structural regulations protect consumers. It is not necessarily true, however, that consumers perceive that their welfare is improved by the regulations. The very consumers whose welfare is improved by the regulations are likely to oppose the regulations. Thus, structural regulations are hypothesized to protect some consumers from themselves.

The question I have been examining can be put differently as:

If structural regulations do protect consumers from themselves, what data could be observed that would verify this? Under what conditions could this data be observed? How does the consumer protection effect come about?

The last question deals with what exactly the connections among structure, process, and outcome must be for consumer protection to result from structural regulation.

Without going into any details or stating all the conclusions of this work, I will explain the basic framework and state some of the broad conclusions. The context of the basic model is a service which can be "good" (for instance, safe and efficacious) or "bad" (unsafe or not efficacious, or both). Consumers make purchases under risk. They can know or estimate the probability that a service will be good before consumption. Consumers make purchase decisions on the basis of their perceived expected utility. Expected utility also is the standard for evaluating consumer welfare.

The basic model supposes that there are two groups of consumers and (potentially) two groups of sellers. The consumers are divided into those who accurately perceive the probability of a service provided by a given seller being good (APC, for accurately perceiving consumers) and those who inaccurately perceive the probability of a good service (IPC, for inaccurately perceiving consumers).


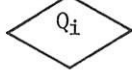

Aside from the accuracy of their perceptions, the consumer groups are identical. Both sets of consumers recognize that a higher quality service (one with a higher probability of being safe and efficacious) can be purchased from any seller only at a higher price. APC perceive the price-quality tradeoffs for different sellers accurately. IPC are wrong in their perceptions of the tradeoffs. Each consumer will buy one unit of service, and each consumer will choose the seller from whom they purchase and the quality of service they demand from


that seller. At the most general level of the model no further assumptions are made about consumers.


There are potentially two types of sellers who are distinguished by whether they possess some structural characteristic. At the general level it is unnecessary to choose a particular characteristic. For exposition, the types of sellers are called "more professional" (MP) and "less professional" (LP). The distinction is not meant to be pejorative. It is assumed that entry is free and that unit cost and price at the market level is constant for any given level of quality and type of seller. Thus, MP can provide any quantity at a constant price for a fixed quality. Likewise, supply from LP is constant-cost for any quality level. No assumptions are made about the relative costs of the same quality from MP and LP, but the marginal cost of quality from either type of seller is positive and increasing.

Figure 1 has the types of consumers on the left margin and the types of sellers across the top margin. The body of the figure shows the levels of quality that consumers would demand from the different sellers if they were to patronize them. For instance, if APC buy from MP, they would choose quality Q_a to maximize their expected utility. If IPC were to buy from LP, they would end up with q_i by maximizing their perceived expected utility.

Figure 1. Quality Levels Chosen By Consumer Group and Seller Type

Seller Type	MP	LP
Consumer Group		
APC		q_a
IPC		

 Observed in regulated market

 Observed in unregulated market

The way in which structural regulation is hypothesized to improve the performance of the market can be represented with the help of Figure 1. The basic hypothesis is that in an unregulated market APC patronize MP and choose Q_a , while IPC patronize LP and end up with q_i .

APC are operating with accurate information in a market with no supply-side imperfections. They maximize their expected utility. APC need no protection, and their expected utility is the standard to which the choice of IPC can be compared. IPC are identical to APC except

for their misperception of the price-quality tradeoffs for MP and LP. Therefore, what is chosen by APC (Q_a from MP) would be best for IPC as well. Structural regulation may not achieve this ideal for IPC, but it should improve on their unconstrained choice.

The consumer protection hypothesis of structural regulation is that the actual expected utility of IPC at their unregulated choice (q_i from LP) is less than their actual expected utility would be if they were forced to patronize MP. If IPC were forced to patronize MP, they would choose Q_i as shown in the lower left corner of Figure 1. The improvement in the actual expected utility of IPC if they are forced into column MP is a fundamental inequality of the consumer protection hypothesis.

Consumer protection regulation takes the form of banning LP's from the market, or the opposite side of that coin, requiring the structural characteristics of MP. The regulation is a way to force IPC to Q_i .




Other inequalities follow from the model, and they demonstrate realism and policy relevance. For instance, even when they are forced to patronize MP, the IPC may not choose the same price-quality combination as APC. After all, the fundamental problem of misperception of price-quality tradeoffs has not been cured. It follows that the actual expected utility of IPC at Q_i is no greater than the expected utility of APC at Q_a . IPC freely choose q_i when they can, so their perceived expected utility there must be greater than their perceived expected utility at any other quality-seller combination, including those combinations in the figure. It follows that IPC will oppose removing LP from the market if LP are present or support introducing them if they are not present. Mr. Blair's comments reported in the first part of this paper amount to accusing the leadership of AARP of being IPC's. IPC perceived expected utility must be at least as great at Q_i as at Q_a .



The inequalities for actual and perceived expected utilities stated above follow from the consumer protection hypothesis of structural regulation in its most general form. For instance, nothing has been assumed about the nature of IPC misperceptions or about the relative prices of MP and LP for any quality levels. Without going into specifics, this general form of the model demonstrates (1) that the model does generate operational tests for a consumer protection effect of structural regulation and (2) that the greatest difficulties in testing the model's implications are in identifying APC and IPC and in constructing comparable measurement scales for quality and perceptions of quality.

TESTING THE CONSUMER PROTECTION HYPOTHESIS

In Figure 1 the circles identify quality-seller-buyer combinations that will be observed when the market is unregulated. The diamonds identify combinations that will be observed when structural regulations are used to ban LP. In Figure 2 the same symbols are used to identify the quality levels as perceived by IPC. $G(Q)$ is a function giving the quality of purchases from MP as perceived by IPC, and $g(q)$ gives the IPC perception of quality purchased from LP.

Figure 2. IPC Perceptions of Quality Levels Chosen By Consumer Group and Seller Type

Seller Type	MP	LP
Consumer Group		
APC		$g(q_a)$
IPC		

	Observed in regulated market
	Observed in unregulated market

$G(Q)$	IPC perception of quality purchased from MP
$g(q)$	IPC perception of quality purchased from LP

The implications of the general consumer protection hypothesis are that IPC underestimate the true differences between the quality levels they purchase and others that are available to them. As one example, it is an implication of the general model that $Q_a - q_i > G(Q_a) - g(q_i)$. In an unregulated market IPC underestimate the difference between the quality they receive from LP and the quality APC receive from MP. This may seem to be the obvious reason IPC can benefit from regulation (It actually isn't obvious), but my interest in it is to illustrate some difficulties with testing such implications.

The first difficulty with testing implications like the one above is that exact tests require measuring quality and perceived quality on comparable interval scales. Measuring quality of services on anything greater than an ordinal scale is difficult enough, without the added problem of comparing differences in actual quality to differences in perceived quality.

The second difficulty with testing implications like the one above is that it requires identifying APC and IPC. As the figures show, this is not difficult when the market is unregulated. APC are all those consumers patronizing MP, and IPC are all those consumers patronizing LP. If LP have been banned from all markets, however, it is not clear what method can be used to identify the consumer groups. Many structural regulations that are controversial are universal in the United States.

We usually know at least something more about a specific case of structural regulation. For instance, we may know that in unregulated markets the price IPC pay for q_i is lower than the price APC pay for Q_a . With any additional facts more implications can be generated, and some of the difficulties in testing for consumer protection can be removed. I have developed some of these implications elsewhere (Kushman, 1988). Even with additional facts to feed into the model, it remains difficult to test for a consumer protection effect of structural regulation. Without at least some unregulated markets to observe it is probably impossible to devise credible tests.

CONCLUSIONS

In this paper I have tried to define structural regulations and make the case that they are a very common form of regulation and quite controversial. On one hand, they are attacked as unnecessary, harmful restrictions on consumer choice. On the other hand, they are defended as protecting consumers from misguided choices.

I also have tried at least to hint that good tests whether a particular structural regulation has a consumer protection effect are likely to be difficult to construct. The more experience we have with unregulated markets or the more experiments in deregulation, the more data we have. The better our techniques for measuring quality and perceptions of quality, the greater are the chances to construct powerful tests for consumer protection. If powerful tests are constructed and the implications of the consumer protection model are not met, the regulation probably should be eliminated or substantially weakened and retested.

The paper by Daynard in this session deals with legal theories that are applied to test structural regulations. The legal theories must work in concert with economic tests of regulation. Reveal deals with a specific structural regulation from the perspective of one provider organization. Powers addresses a broad array of regulations from the perspective of a particular consumer advocacy group. These speakers will amply demonstrate that my model is only a starting place for exploring the jungle of structural regulations. Each

regulation has its own paths and traps in terms of production, marketing, measurement, consumer interest groups, and legal ramifications. I hope that at the end you will still be convinced that some generic framework is helpful.

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THE DENTAL HYGIENIST
INCREASING THE AWARENESS OF AND ACCESS TO QUALITY ORAL HEALTH CARE

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This presentation discusses the progress of accessing preventive oral health care through the services of dental hygienists. Dental hygiene education, regulation, and practice are discussed. A review of the 75 years of dental hygiene suggests a movement toward less supervision of, and more direct access to, the services of this oral health care professional.

WHAT ARE DENTAL HYGIENISTS AND WHAT DO THEY DO?

The profession of dental hygiene began in 1913, when Dr. Alfred C. Fones established the first school for dental hygiene in Bridgeport, Connecticut. One year of study was required for this preventive oral health specialty, which originally consisted exclusively of women. Because dentists were concerned that dental hygienists would be competitors, it was stipulated that dental hygienists must work under dental supervision in dental offices or in schools providing dental health education.

Today there are approximately 45,800 actively practicing registered dental hygienists in the United States (U. S. Department of Health and Human Services, 1986). This year marks the 75th anniversary of dental hygiene, and hygienists across the country are celebrating this Diamond Jubilee.

Dental hygienists provide dental and oral health education and preventive services including screenings for oral abnormalities; treatment and prevention of periodontal or gum disease; root planing; and oral prophylaxis. To prevent dental disease or cavities, dental hygienists apply topical fluorides and place pit and fissure sealants.

Since 1951, dental hygienists have been licensed to practice in all states and the District of Columbia (ADHA, 1988). Dental hygiene is the only licensed profession directly supervised by another licensed profession--dentistry.

In 1913, half of the dental hygienists practiced in dentists' offices, and half practiced in schools. By 1951, 66 percent were practicing in dentists' offices and 25 percent in schools, with nine percent in other practice settings. The concentration of dental hygienists in dental offices has increased from 80 percent in 1962 to over 90 percent today. This concentration can be attributed to the control of dental hygiene

accreditation and dental hygiene program education by dentistry. This overwhelmingly female profession garners higher pay, part-time work, and more flexible hours in the private practice setting.

HOW ARE DENTAL HYGIENISTS REGULATED?

In order to be licensed, dental hygienists must graduate from a program accredited by the American Dental Association Commission on Dental Accreditation. They must pass either the American Dental Association's Joint Commission on National Dental Examination's National Board Dental Hygiene Examination or a written test of the state licensing agency. Additionally, they must pass a clinical examination administered by the state regulatory board or a regional testing agency. Once licensed, dental hygienists renew their licenses as prescribed by a regulating body. This often requires proof of continuing education credit.

There are 198 U.S. accredited programs of dental hygiene offering certificate/diploma, associate, or baccalaureate degrees in dental hygiene (ADA, 1988). Approximately two-thirds of these educational programs award a certificate/diploma or associate degree. It is interesting to note that these are not "two-year" programs. Data indicates that 70% of dental hygiene programs award a certificate/diploma or associate degree to students completing prerequisite and requisite credits equivalent to two and one-half years or more of postsecondary education. One-fourth of the certificate/diploma or associate degree awarding programs require prerequisite and requisite credits in excess of three years.

MEMBERSHIP ON LICENSING AND REGULATORY BOARDS

Most states have only token dental hygiene representation on boards of dentistry (38 have only one member). Dental boards have from four to 17 dentist members. New York, with one of the largest boards, has 17 dentists and three dental hygienist members. However, there are only two dentists for each dental hygienist in the state of New York.

The Colorado board has four dentists, two dental hygienists, and three consumers. Concern about maintaining control of the hygienists, should the consumers side with the RDHs on certain issues, prompted the Colorado Dental Association to introduce legislation to replace one consumer with a dentist. Their justification was that consumer members didn't understand dental issues. The bill quickly died in committee early

¹RDH, MS, MBA, ADHA President

in 1988.

Washington State established a Dental Hygiene Committee in 1985. The three dental hygienist members administer the licensing clinical examinations and certify competency. The dental board, with no dental hygiene members, regulates dental hygiene practitioners.

The New Mexico Dental Hygiene Committee, established in 1987, has five members and is a committee of the Board of Dentistry. The dental board must consider recommendations of the dental hygiene committee in an "expedient" manner. There is one dental hygienist on the Board of Dentistry.

SUPERVISION

All states require dental supervision for at least some dental hygiene services, even in Colorado, Washington, and California. Only five states (Vermont, Connecticut, Delaware, Iowa, and Minnesota) have general supervision in all settings and for all services. General supervision means that the physical presence of the dentist is not required while dental hygienists perform any services for which they are licensed. General supervision of *some* dental hygiene services is allowed in 38 states.

In 1985, the ADA deleted general supervision from its definitions of types of approved supervision for dental hygienists, claiming possible harm to the public. Yet, there has never been a validated complaint against a dental hygienist attributable to the level of supervision.

The removal of general supervision in Illinois prevents the use of public health programs such as fluoride rinse and dental sealant programs unless a dentist is present, except in certain institutional settings. This greatly increases the cost of such programs.

In 1984, Washington State allowed dental hygienists to provide service without supervision in public settings, such as nursing homes or hospitals, but not in dental or dental hygiene offices. Each year since then, dental hygienists have tried to obtain legislative approval to open dental hygiene practices, but have been unsuccessful. Last year, the Washington State Dental Association, with the aid of the American Dental Association, spent \$150,000 to defeat the dental hygiene bill.

In 1987, Colorado allowed dental hygienists to provide the oral prophylaxis without dental supervision, but not other services such as the exposure of dental x-rays. Immediately after the bill was signed by the Governor, the American Dental Association, through its Commission on Dental Accreditation, filed suit to stop the independent practice of dental hygienists, citing certain public harm. The judge ruled that the Commission had no standing and dismissed the case. The Commission appealed the case to the appellate court, and it is slated for hearing in

late 1988 or early 1989. So far, 13 dental hygienists have started to practice independently in Colorado. The ADHA is starting to gather information about the cost-effectiveness of these services for the public. More dental hygienists may begin to practice independently once the law suit is resolved.

CALIFORNIA HEALTH MANPOWER PILOT PROJECT #139

The Health Manpower Pilot Project Act of 1972 permits experimental programs such as HMPP #139, that identify innovative ways of administering health care without legislative change. However, 70 percent of these projects have been adopted permanently through legislation. This is of concern to the California Dental Association.

HMPP #139's purpose is to measure the feasibility of "independent practice" for dental hygienists.

The four goals of the project are (1) to increase access of underserved populations to dental hygiene care; (2) to demonstrate the dental hygienist's ability to manage independent, solo, or group practice; (3) to develop and implement a dental hygiene curriculum in solo and group practice management applicable for college-level and continuing education programs; and (4) to produce empirical data which may lead to a change of healing arts licensure laws governing dental hygiene practice.

In 1987, the California Dental Association (CDA) filed suit to stop HMPP #139, claiming that the project violated state procedures and endangered the public's health. The judge ruled that the project should continue, and that it had not violated state procedures. CDA has said that they will appeal, but to date has not done so.

The California Dental Hygienists' Association (CDHA) itself is now being sued by the California Dental Association for alleged anti-trust violations. The CDHA president has stated that this suit, as well as the previous suit, are attempts to deplete California dental hygienists' financial resources which would otherwise be available to support research projects, such as HMPP #139, which seek to provide evidence about the effectiveness of independent dental hygiene practice.

ASSOCIATION POLICY

The mission of the American Dental Hygienists' Association (ADHA, 1987) is "To improve the public's total health by increasing the awareness of and access to quality oral health care."

The American Dental Hygienists' Association endorses the concept that dental supervision of the patient's comprehensive oral health care is more important to the public interest than supervision of the dental hygienist, and that by virtue of graduation from a dental hygiene program accredited by the Commission on Dental Accreditation of the American Dental Asso-