

AN ANALYSIS OF THE GROWTH OF LIFE INSURANCE IN ARIZONA

by

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STATEMENT BY AUTHOR

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INTRODUCTION

Since the turn of the century the economy of Arizona has been expanding at an increasing rate. This expansion is pronounced in all segments of Arizona's economy, such as population, employment, income, industrial production, wholesale and retail trade, tourism, finance and insurance, and other related segments. This description of life insurance growth in Arizona provides a useful tool for comparing life insurance growth patterns with other growth patterns in the economy of Arizona. By comparing these trends, both economic and those related to life insurance, with national trends, a means of evaluating Arizona's progress is developed.

The major portion of this study is confined to the years 1915 through 1957. The reason for using 1915 as a starting point is that the Insurance Department of Arizona initiated the issuance of its annual report in 1914, and prior to that time data with which this study is concerned had not been compiled. All available data for years prior to 1915 is included for purposes of general information.

The chapters in this discussion are divided into four major parts. In Part I the economy of the United States is

discussed to determine the over-all economic conditions and life insurance growth patterns existing during the period studied. Although the economic indicators discussed in this study are few in number, they adequately represent the nation's growth patterns. Due to the need for many different sets of data illustrating economic growth patterns, government publications are used extensively.

Part II presents a description of growth patterns existing in Arizona during the period studied. Essentially the same economic indicators and life insurance indicators are studied in this section as are studied in Part I.

The next logical step, with the major groundwork of growth relationships established, is a comparison of the economic growth patterns and the life insurance growth patterns in the areas of study. This is accomplished in Part III, which compares the trends existing in the United States and in the state of Arizona.

In the conclusion of this discussion, Part IV, the purpose is to summarize the most important relationships described in Parts I through III that illuminate the original objective, an analysis of the growth of life insurance in Arizona.

**PART 1. DESCRIPTION OF ECONOMIC CONDITIONS AND LIFE
INSURANCE GROWTH PATTERNS EXISTING IN THE
UNITED STATES FROM 1915 THROUGH 1957**

Chapter	Page
<p>I. INDICATORS OF ECONOMIC CONDITIONS EXISTING DURING THE PERIOD</p> <p style="margin-left: 40px;">Gross National Product National Income Personal Income Disposable Personal Income Index of Industrial Production Population and Employment Personal Savings</p>	4
<p>II. INDICATORS OF LIFE INSURANCE GROWTH DURING THE PERIOD</p> <p style="margin-left: 40px;">Life Insurance in Force in United States Life Insurance Companies Life Insurance Sales by United States Life Insurance Companies Income of United States Life Insurance Companies Assets and Earning Rate of United States Life Insurance Companies Number of Life Insurance Companies in the United States</p>	25
<p>III. COMPARISON OF ECONOMIC INDICATORS AND LIFE INSURANCE INDICATORS</p> <p style="margin-left: 40px;">Life Insurance Per Family to Disposable Income Per Family Life Insurance Sales to the Index of Industrial Production Life Insurance Sales to Gross National Product Life Insurance to Other Forms of Long- Term Saving Life Insurance in Force to Population and Employment</p>	50

CHAPTER I

INDICATORS OF ECONOMIC CONDITIONS EXISTING DURING THE PERIOD

Gross National Product

Its nature. - In order to measure economic growth during the period studied in this discussion, initial attention is given to national income analysis, which may be calculated in either of two ways. The first of these is the product approach and the second is the income approach. The income approach is discussed in the three sections following this description of gross national product.¹

Gross national product, by definition, consists of end products, as distinguished from intermediate products, those produced and consumed during the period in the production of other goods. These final goods may be purchased by private individuals, by private industry, by foreign buyers, or by government. The major classifications of gross national product are consumption goods, capital goods, net foreign investment, and governmental services. Gross national

¹Gross national product is the total market value of the final goods (commodities and services) produced by a nation's economy during a given period (usually a year).

product does not involve any deduction for conditions that contribute towards diminishing the nation's capital account, such as depreciation. Gross national product is generally measured at market prices, as is the case in Table I-1, found on page 6.

The size of gross national product. - Table I-1 shows that gross national product has reflected a definite upward trend throughout the period studied with the exception of the period from 1930 through 1935, and a temporary dip in the year 1954. However, when comparing gross national product in different years it is essential to keep in mind changes in the purchasing power of money. Table I-1 illustrates the use of current dollars in measuring gross national product, and Table I-2 illustrates the use of constant dollars in measuring gross national product. These two measurements, constant 1939 dollars and constant 1952 dollars, show the real increase in gross national product. Since the major portion of the data available for this study is stated in current dollars, Table I-1 is utilized for purposes of comparison. These data are presented graphically in Figure I-1, found on page 20, along with the trends of other economic indicators discussed later in this section. For the above reasons, descriptions and comparisons made throughout this study are in current dollars.

The reader's attention should be directed towards the third column of figures in Table I-1, the rate of increase

in gross national product. This trend proves useful in later comparison with other economic indicators and with certain life insurance indicators.

TABLE I-1

GROSS NATIONAL PRODUCT IN CURRENT
DOLLARS FOR SELECTED YEARS,
1915-1957

Year	Gross National Product (billions)	Rate of Increase
1915	\$ 42.1	
1920	86.2	1.04
1925	90.1	.05
1930	91.1	.01
1935	72.5	-.20
1940	100.6	.37
1945	213.6	1.12
1950	284.6	.33
-----	-----	-----
1951	\$329.0	.16
1952	347.0	.06
1953	365.4	.05
1954	363.1	-.01
1955	397.5	.09
1956	419.2	.06
1957	442.5	.06

Sources: 1915-1925: Handbook of Basic Economic Statistics (Washington: Economic Statistics Bureau, May 1960) p. 224. 1930-1957: U.S. Department of Commerce, U.S. Income and Output (Washington: U.S. Government Printing Office, November 1958) pp. 118-119.

TABLE I-2
GROSS NATIONAL PRODUCT IN CONSTANT DOLLARS
FOR SELECTED YEARS, 1929-1957
(billions)

Year	1939 Dollars	1952 Dollars
1929	\$ 85.9	\$172.5
1933	61.5	120.5
1937	87.9	175.4
1939	91.3	184.0
1940	100.0	202.1
1945	153.4	314.1
1950	154.8	311.0
1951	167.3	337.1
1955	196.3	407.4
1957	217.6	451.3

Source: Calculated from figures in U.S. Income and Output, November 1958, pp. 118-119.

National Income

Its nature. - National income is concerned with the distribution of gross national product among the productive factors, land, labor, capital, and entrepreneurship. To arrive at national income, indirect business taxes must be subtracted from the net national product. In this sense, national income is that portion of gross national product that flows to the several factors of production.

The size of national income for the United States. - Table I-3 presents the totals of national income for selected years between 1915 and 1957. These figures follow

closely the upward trend of gross national product. This upward trend is shown graphically in Figure I-1, found on page 20.

TABLE I-3
NATIONAL INCOME IN CURRENT DOLLARS
FOR SELECTED YEARS, 1915-1957

Year	National Income (billions)	Rate of Increase
1915	\$ 37.0	
1920	69.5	.88
1925	73.7	.06
1930	75.7	.03
1935	57.1	-.25
1940	81.6	.43
1945	181.2	1.22
1950	241.9	.33
- - -	- - -	- - -
1951	\$279.3	.15
1952	292.2	.05
1953	305.6	.06
1954	301.8	-.01
1955	330.2	.09
1956	350.8	.06
1957	366.5	.05

Sources: 1915-1925: Handbook of Basic Economic Statistics, May 1960, p. 230. 1930-1957: U.S. Income and Output, November 1958, pp. 126-127.

Personal Income

Its nature. - Thus far, this discussion has been in terms of an aggregate flow of income, but income that is available to individuals must also be studied. Personal income may be defined as the current income received by

natural persons from all sources. In order to calculate personal income, certain deductions from national income must be made, such as undistributed corporate profits, corporate profits, corporate taxes, and contributions for social security. To this figure is added such items as government and business transfer payments resulting in income to individuals. The final value is personal income.

The size of personal income for the United States. -

Table I-4 consists of totals of national personal income for selected years between 1915 and 1957. Once again there is a pronounced upward trend throughout the period studied except for the downswing during the period 1930 through 1935. This downswing coincides with similar occurrences in gross national product and national income, which have already been mentioned. For purposes of this study, personal income is also broken down into per capita values in Table I-5 for later comparison with other data. Personal income, generally, is slightly less than national income; however, this was not the case for the years 1930 and 1935 due to the large number of relief payments to individuals by the government. This is evident in comparison of the figures found in Table I-4 with those found in Table I-3.

TABLE I-4
 PERSONAL INCOME IN CURRENT DOLLARS
 FOR SELECTED YEARS, 1915 - 1957

Year	Personal Income (billions)	Rate of Increase
1915	\$ 35.0 ^a	-----
1920	69.7 ^a	.99
1925	74.7 ^a	.06
1930	76.9	.03
1935	60.2	-.22
1940	78.7	.47
1945	171.2	1.18
1950	228.5	.34
-----	-----	-----
1951	256.7	.12
1952	273.1	.07
1953	288.3	.06
1954	289.9	.01
1955	310.2	.07
1956	330.5	.06
1957	347.9	.05

^aEstimated by the writer as a percentage of national income based on 1930 figures, by using following formula:

$$\frac{1930 \text{ Personal Income}}{1930 \text{ National Income}} = \frac{x \text{ Year Personal Income}}{x \text{ Year National Income}}$$

Source: U. S. Income and Output, November 1958, pp. 144-145.

TABLE I-5

PER CAPITA PERSONAL INCOME IN CURRENT DOLLARS
FOR SELECTED YEARS, 1915 - 1957

Year	Per Capita Personal Income	Rate of Increase
1915	\$ 350 ^a	
1920	660 ^a	.89
1925	650	.02
1930	624	-.04
1935	472	-.24
1940	595	.26
1945	1,234	1.08
1950	1,491	.21
-----	-----	-----
1951	\$1,649	.10
1952	1,727	.04
1953	1,788	.03
1954	1,770	-.01
1955	1,866	.06
1956	1,961	.05
1957	2,027	.04

^aEstimated by the writer as a percentage of national income based on 1930 figures, by using following formula:

$$\frac{1930 \text{ Personal Income}}{1930 \text{ National Income}} = \frac{x \text{ Year Personal Income}}{x \text{ Year National Income}}$$

Source: U. S. Income and Output, November 1958, pp. 158-159.

Regional distribution of personal income. -

Although the general upward trend of personal income is illustrated graphically in Figure I-1 on page 20, it is essential that the regional distribution during the period be studied. For this reason, regional gains in personal income are illustrated in Figure I-2, located on page 21.

For the regions, the measured trends include large relative gains in the Far West, Southwest, and Southeast. The other regions experienced only moderate changes.²

Disposable Personal Income

Its nature. - Although personal income consists of the total income received by individuals during the period, it does not show the sum that is available to individuals to use as they wish. By deducting direct tax payments from personal income, disposable personal income is determined. This figure is usually considerably lower than that of personal income, and is a very useful indicator for purposes of this study. Disposable income in the hands of individuals may be spent for the purchase of consumption goods, or may be saved.

The size of disposable income for the United States.-
Table I-6 presents the totals of disposable personal income for selected years, 1915 - 1957. Once again there is a pronounced upward trend.

²U. S. Department of Commerce, Personal Income by States, (Washington: U. S. Government Printing Office, September 1956), p. 8.

TABLE I-6

DISPOSABLE PERSONAL INCOME IN CURRENT DOLLARS
FOR SELECTED YEARS, 1915 - 1957

Year	Disposable Personal Income (billions)	Rate of Increase
1915	\$ 33.0 ^a	-----
1920	67.5 ^a	1.05
1925	72.5 ^a	.08
1930	74.4	.03
1935	58.3	-.22
1940	76.1	.31
1945	150.4	.99
1950	207.7	.38
----	-----	-----
1951	227.5	.09
1952	238.7	.05
1953	252.5	.02
1954	256.9	.02
1955	274.9	.07
1956	290.5	.07
1957	305.1	.06

^a Estimated by the writer as a percentage of national income based on 1930 figures, by using following formula:

$$\frac{1930 \text{ Personal Income}}{1930 \text{ National Income}} = \frac{x \text{ Year Personal Income}}{x \text{ Year National Income}}$$

Source: U. S. Income and Output, November 1958, pp. 144-145.

Another method of describing disposable personal income is on a per capita basis. Table I-7 lists the figures for disposable income for selected years, 1915 - 1957. Again, economic growth in the United States is pronounced from the increase in per capita disposable income during the period studied. Figure I-3, located on page 22, displays the

regional distribution of this upward trend of disposable personal income on a per capita basis.

TABLE I-7
DISPOSABLE PERSONAL INCOME IN CURRENT DOLLARS
ON A PER CAPITA BASIS FOR
SELECTED YEARS,
1915 - 1957

Year	Per Capita Disposable Personal Income ^a	Rate of Increase
1915	\$ 330	
1920	633	.91
1925	630	-.01
1930	602	-.04
1935	457	-.24
1940	580	.27
1945	1,071	.85
1950	1,370	.28
----	-----	----
1951	\$1,481	.09
1952	1,522	.03
1953	1,518	-.01
1954	1,525	.01
1955	1,670	.09
1956	1,732	.04
1957	1,783	.03

^aCalculated from the disposable income figures in Table I-6, page 13, and the total population figures in Table I-10, page 13.

Possibly the most important series of data on disposable income for the purposes of this study on life insurance is presented in Table I-8, which shows disposable income per family. This series of data is very useful in later comparison with life insurance per family. Of course, the size of family did not remain constant over the period

studied, but since both series of data used for comparison are calculated in the same manner the results are not biased.

TABLE I-8

DISPOSABLE PERSONAL INCOME IN THE UNITED STATES
FOR SELECTED YEARS, 1930 - 1957

Year	Disposable Income Per Family	Rate of Increase
1930	\$1,900	
1935	1,400	-.26
1940	1,700	.21
1945	3,200	.88
1950	4,100	.28
-----	-----	-----
1951	\$4,400	.07
1952	4,600	.05
1953	4,800	.05
1954	4,800	.00
1955	5,100	.06
1956	5,300	.04
1957	5,500	.04

Source: Life Insurance Fact Book, 1959 (New York: Institute of Life Insurance, 1959), p. 11.

Industrial Production Index

Its nature. - Although national income analysis provides a fairly precise method of measuring over-all economic conditions existing during the period studied, it is thought that the index of industrial production is possibly a more sensitive indicator of actual economic conditions. This index measures changes in the physical volume of output of

manufacturing, utilities, and mining. The manufacturing and mining sectors of the economy have accounted for about one-third of national income, and are of particular importance in the analysis of business fluctuations.³

The size of the industrial production index. - Table I-9 consists of the indices of industrial production for selected years, 1920 - 1957, using 1947 - 1949 = 100 as the base. Although this trend is generally upward, greater fluctuations occur than in the description of the four national income indicators.

³U. S. Department of Commerce, Business Statistics (Washington: U. S. Government Printing Office, June 1959), p. 207.

TABLE I-9

INDEX OF INDUSTRIAL PRODUCTION FOR SELECTED YEARS,
1920 - 1957, (1947 - 1949 = 100)

<u>Year</u>	<u>Industrial Production Index</u>
1920	40
1925	48
1930	48
1935	46
1940	66
1945	106
1950	113
----	---
1951	123
1952	127
1953	138
1954	130
1955	146
1956	151
1957	152

Source: Federal Reserve Bulletin (Washington: Federal Reserve Board, December 1959), p. 1528.

Population and Employment

Population. - Due to the very nature of life insurance, population growth trends are very important in any study of this type. Table I-10 shows that the trend of total population in the United States has been climbing steadily to a high point of over 171 million people in 1957. This population growth is compared graphically with employment in Figure I-4, located on page 23.

TABLE I-10
 POPULATION OF THE UNITED STATES FOR
 SELECTED YEARS, 1915 - 1957

Year	Total Population (millions)	Rate of Increase
1915	100.5	
1920	106.5	.06
1925	115.8	.09
1930	123.1	.06
1935	127.3	.03
1940	131.9	.04
1945	139.6	.06
1950	151.7	.09
-----	-----	-----
1951	154.4	.02
1952	157.0	.02
1953	159.6	.02
1954	162.4	.02
1955	165.3	.02
1956	168.2	.02
1957	171.2	.02

Sources: 1915 - 1945: U. S. Department of Commerce, Historical Statistics of the United States (Washington: U. S. Government Printing Office, 1949), p. 26.
 1945 - 1957: U. S. Department of Commerce, Business Statistics (Washington: U.S. Government Printing Office, June 1959) p. 59.

Employment. - Table I-11 lists three separate series of data under the heading of employment; total labor force,⁴ total employment, and total unemployment.

⁴Total labor force consists of all persons, 14 years of age and older, in the continental United States, who, during the census enumeration work, are employed or seeking work.

Table I-11 shows that the total labor force has increased steadily during the period studied, reaching a maximum point of nearly 68 million in 1957. The total employment volume has also experienced an upward trend, except for the depression period, during which sharp drops were observed. Unemployment has undergone a great deal of fluctuation during the period studied.

TABLE I-11
LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT
IN THE UNITED STATES FOR
SELECTED YEARS,
1930 - 1957
(millions)

Year	Labor Force	Employment	Unemployment
1930	49.8	45.5	4.3
1935	52.9	42.3	10.6
1940	55.6	47.5	8.1
1945	53.9	52.9	1.0
1950	63.1	59.9	3.2
----	----	----	----
1951	62.9	61.0	1.9
1952	63.0	61.3	1.7
1953	63.8	62.2	1.6
1954	64.5	61.2	3.3
1955	65.8	63.2	2.6
1956	67.5	65.0	2.5
1957	67.9	65.0	2.9

Source: Business Statistics, 1959, p. 59.

Personal Savings

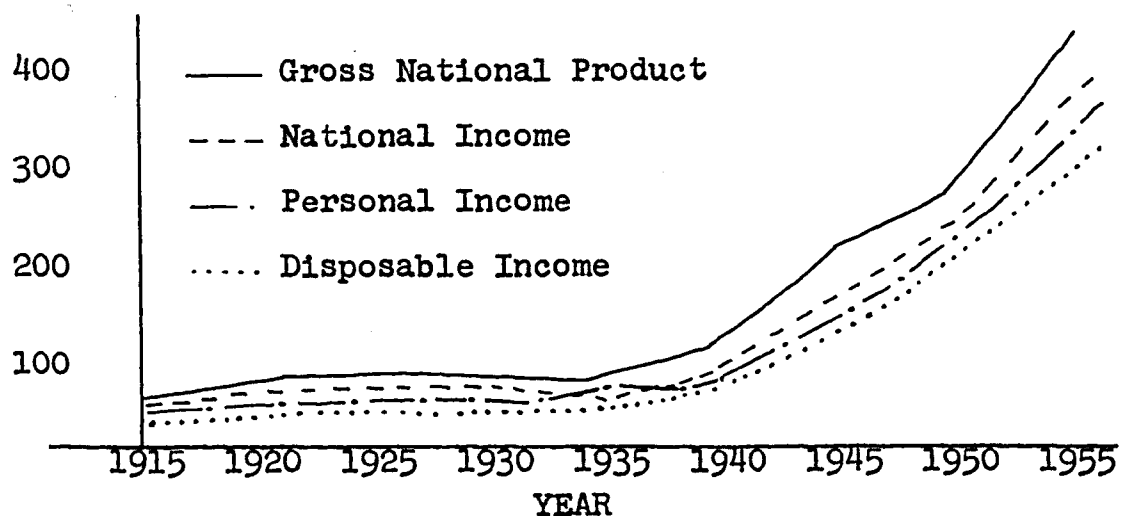
The nature of personal savings. - In this, the last section concerning economic indicators of the United States,

the primary interest is in establishing a relationship between selected types of long-term savings of individuals. The three types of savings chosen for this study are savings in the form of life insurance - represented by life insurance in force, United States savings bonds - total of all issues, and savings accounts. Figure I-5, on page 24, exhibits the relationships existing between these three types of individual savings.

FIGURE I-1

COMPARATIVE TRENDS OF GROSS NATIONAL PRODUCT, NATIONAL INCOME, PERSONAL INCOME, AND DISPOSABLE PERSONAL INCOME FOR SELECTED YEARS, 1915 - 1957

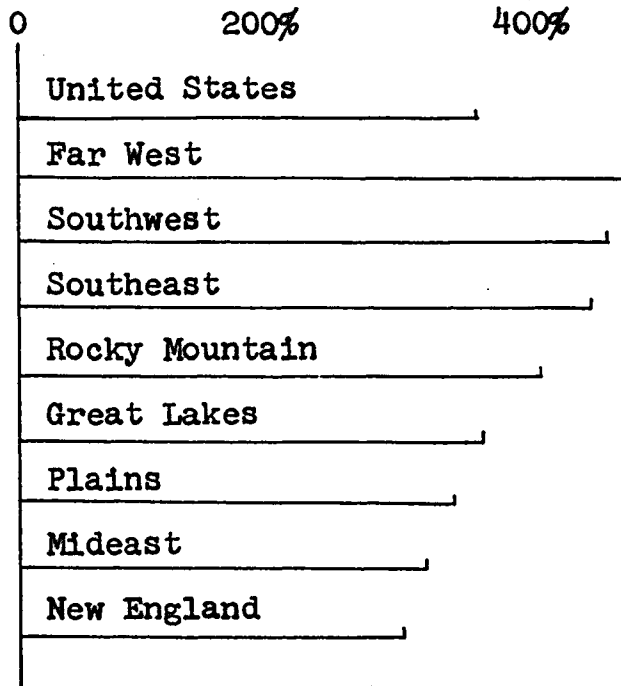
Billions
Of Dollars .



Source: Figures in Table I-1, page 6; Table I-3, page 8; Table I-4, page 10; Table I-7, page 14.

FIGURE I-2

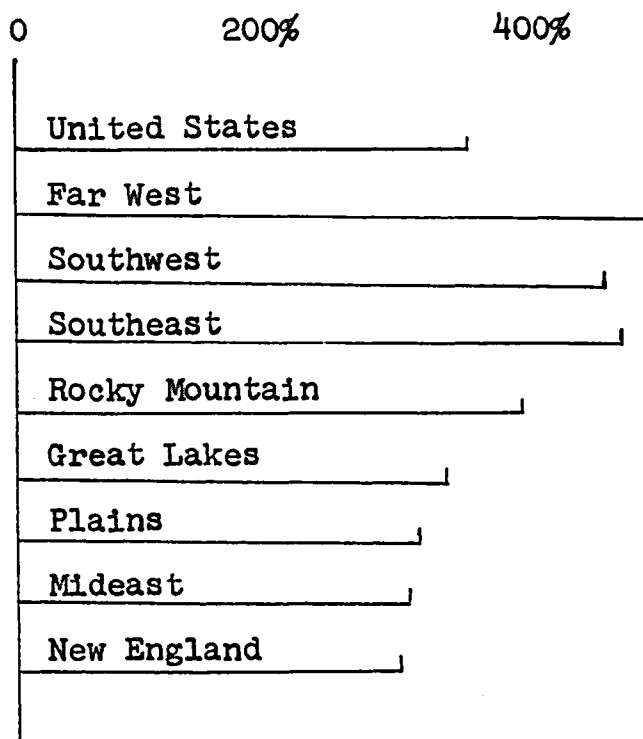
COMPARATIVE REGIONAL TRENDS OF PERCENTAGE INCREASES
IN PERSONAL INCOME IN THE UNITED STATES,
USING 1955 AS A PERCENT OF 1929



Source: U. S. Department of Commerce, Personal Income by States, (Washington: U.S. Government Printing Office, September 1956), p. 31.

FIGURE I-3

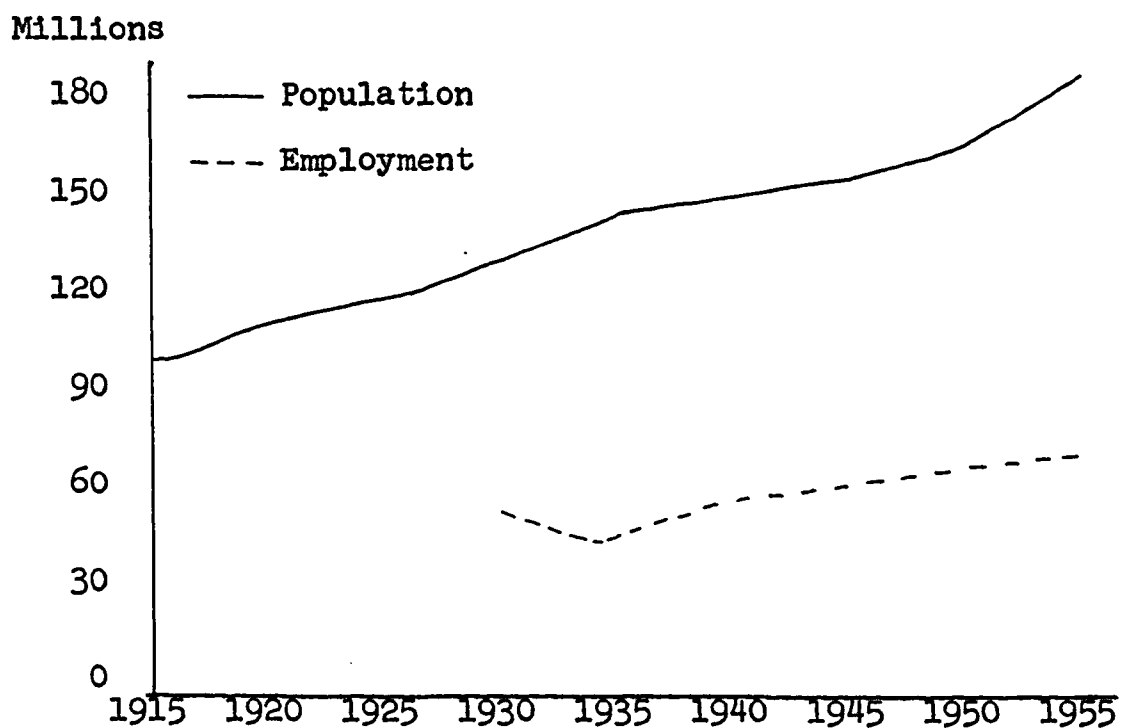
COMPARATIVE REGIONAL TRENDS OF PERCENTAGE INCREASES IN
DISPOSABLE PERSONAL INCOME IN THE UNITED STATES,
USING 1955 AS A PERCENT OF 1929



Source: Personal Income by States, September 1956, p. 31.

FIGURE I-4

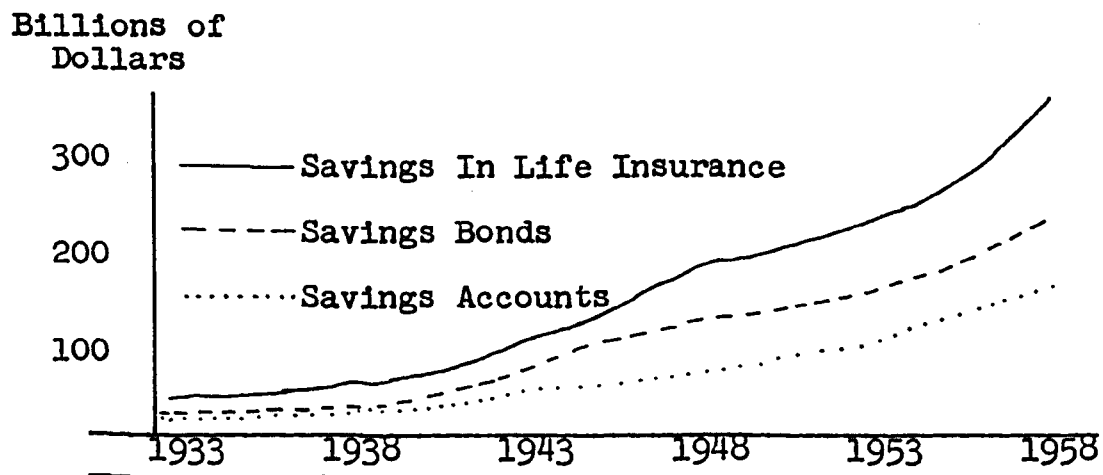
POPULATION AND EMPLOYMENT TRENDS IN THE UNITED STATES
FOR SELECTED YEARS, 1915 - 1957
(millions of people)



Source: Figures in Table I-10, page 18; Table I-11, page 19.

FIGURE I-5

TRENDS IN SELECTED TYPES OF LONG-TERM SAVINGS
OF INDIVIDUALS IN THE UNITED STATES,
1933 - 1958



Source: Life Insurance Fact Book, 1959, p. 8.

CHAPTER II

INDICATORS OF LIFE INSURANCE

GROWTH DURING THE PERIOD

Life Insurance in Force in United States Life Insurance Companies

The nature of life insurance in force. - The sum of the face amounts, plus dividend additions, of life insurance policies outstanding at a given time is known as total life insurance in force. Additional amounts payable under accidental death or special provisions are not included.⁵

Life insurance in force is usually broken down into four types; ordinary life insurance, group life insurance, industrial life insurance, and credit life insurance. This discussion is primarily concerned with only the total figures and the figures representing ordinary life insurance. Ordinary life insurance is the individually purchased protection usually in units of \$1000 or more.

Amount of life insurance in force. - It is believed that this section can best be discussed by studying first, the total life insurance in force and the total number of

⁵The Historical Statistics of Life Insurance, (New York: Institute of Life Insurance, March 1960), p. 22.

policies represented in these totals. This is accomplished in Table II-1. In each of the three series of data there is a pronounced upward trend, with the only interruption coming in the year 1935. The reader should direct his attention not only to the total figures, but also to the increase connected with each series.

TABLE II-1

LIFE INSURANCE IN FORCE IN UNITED STATES
LIFE INSURANCE COMPANIES FOR SELECTED
YEARS, 1915 - 1957

Year	Total Amount (billions)	Policies (millions)	Ordinary
1915	\$ 21.3	43	\$ 16.7
1920	40.5	68	32.0
1925	69.5	101	52.9
1930	106.4	128	78.6
1935	98.5	124	70.7
1940	115.5	137	79.3
1945	151.7	167	101.6
1950	234.2	210	149.1
-----	-----	---	-----
1951	\$253.1	217	\$159.1
1952	276.6	227	170.8
1953	304.3	239	184.9
1954	333.7	250	198.4
1955	372.3	266	216.6
1956	412.6	278	238.1
1957	458.4	288	264.7

Sources: Life Insurance Fact Book, 1959, p. 15.
The Historical Statistics of Life Insurance, March 1960,
p. 7.

Comparison of the increases in the three series of data results in an immediate realization of the fact that

not only is total life insurance in force increasing, but also that the average size policy is becoming larger. This observation can be made concerning life insurance in general, but what about the average size ordinary life insurance policy? Table II-2 indicates that this trend is also definitely upward, although there is an extended decrease between the years 1930 and 1945. The trend in recent years has been climbing upward at an increasing rate.

TABLE II-2

AVERAGE SIZE ORDINARY LIFE INSURANCE POLICY IN FORCE
IN THE UNITED STATES FOR SELECTED YEARS,
1920 - 1957

Year	Average Size Policy in Force
1920	\$1,990
1925	2,270
1930	2,460
1935	2,160
1940	2,130
1945	2,100
1950	2,320
-----	-----
1951	\$2,380
1952	2,450
1953	2,530
1954	2,620
1955	2,720
1956	2,850
1957	3,040

Source: Life Insurance Fact Book, 1959, p. 13.

The final series of data necessary to describe life insurance in force is life insurance per family. In Chapter

VII, this data proves very useful for purposes of comparison. Table II-3 shows that life insurance per family has increased steadily to a record high of over \$8000 in 1957.

TABLE II-3

LIFE INSURANCE PER FAMILY IN THE UNITED STATES
FOR SELECTED YEARS, 1930 - 1957

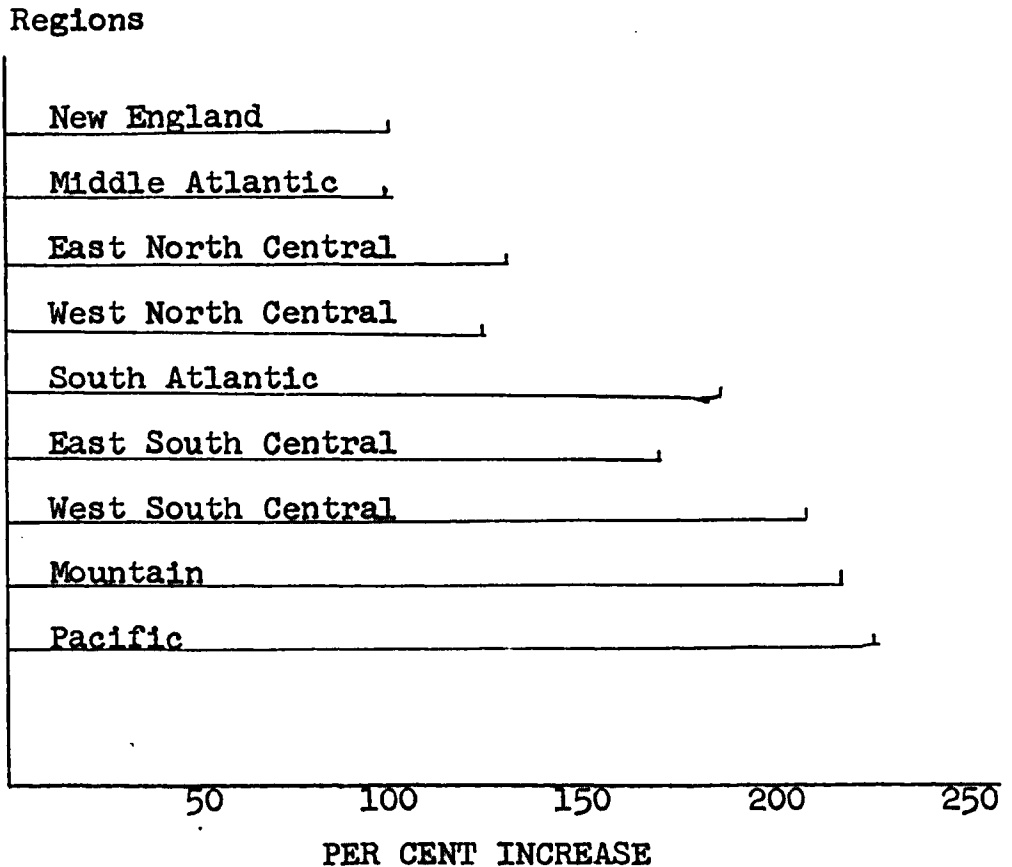
Year	Per Family
1930	\$2,800
1935	2,400
1940	2,700
1945	3,200
1950	4,600
-----	-----
1951	\$4,900
1952	5,300
1953	5,800
1954	6,300
1955	6,900
1956	7,600
1957	8,300

Source: Life Insurance Fact Book, 1959, p. 11.

Regional distribution of the growth of life insurance in force. - Now that the general upward trend of life insurance in force has been illustrated, it is vital for this study that the geographical components of this growth be described. Figure II-1 exhibits regional growth of life insurance in force in the United States.

FIGURE II-1

COMPARATIVE REGIONAL TRENDS OF PERCENTAGE INCREASES
IN LIFE INSURANCE IN FORCE IN THE UNITED STATES,
USING 1957 AS A PERCENTAGE OF 1947

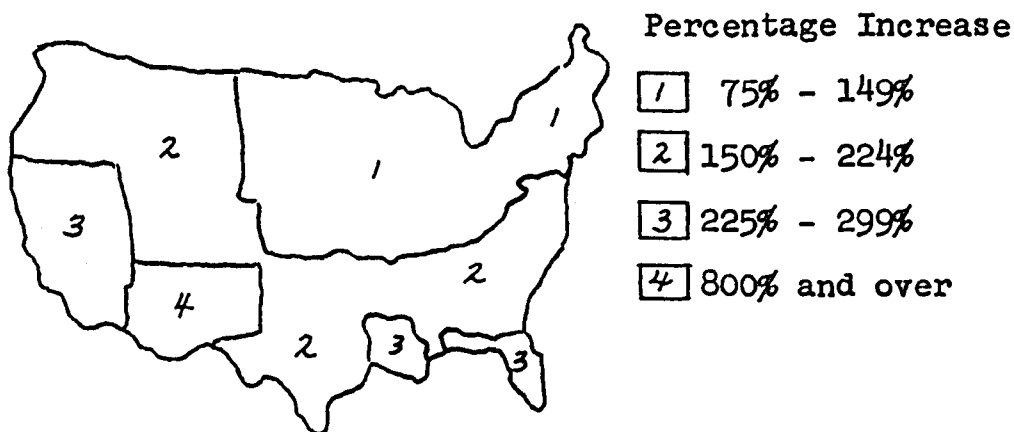


Source: Life Insurance Fact Book, 1958, (New York: Institute of Life Insurance, 1958), p. 9.

It is also interesting to note the geographical percentage increases by states in the United States. This is the purpose of Figure II-2. The reader should observe that there are only two states experiencing a percentage increase of 300 and over, Arizona and New Mexico.

FIGURE II-2

REGIONAL GROWTH OF LIFE INSURANCE
IN THE UNITED STATES, 1948 - 1957



Source: Life Insurance Fact Book, 1959, p. 9.

Life Insurance Sales by United States
Life Insurance Companies

The nature of life insurance sales. - Total life insurance sales are the sum of the face amounts of new life insurance policies issued and paid for during a given period. Dividend additions and additional payments under accidental death or other provisions are not included.⁶

As mentioned in the previous section, this particular discussion is primarily concerned with total life insurance statistics and with statistics dealing with ordinary life insurance.

⁶Ibid.

Amount of life insurance sales. - American families purchased a record amount of life insurance in 1957, both in total purchases and in the number of policies. These purchases were, at an annual rate, approximately twice as high as five years before, and were three times the purchases of life insurance ten years previous. These purchases also represented more life insurance protection bought in one year than the total amount of life insurance in force in this country in 1920.⁷

This growth, both in total sales and in sales of ordinary life insurance, in recent years is readily apparent in Table II-4. Life Insurance sales displayed a pronounced upward trend until the year 1930 at which time a sharp reversal in sales was initiated. In fact, a period of nearly sixteen years followed in which life insurance sales were less than the total in 1930. Since 1945, however, sales have been increasing at a very rapid rate.

Ordinary life insurance purchases alone have more than tripled in amount in ten years, but this increase has been partly a reflection of the steadily increasing average size of new policies purchased. The 1957 average size of the new ordinary policies purchased was \$5,200 as compared with \$2,820 in 1947.⁸

⁷Life Insurance Fact Book, 1959, op. cit., pp.18-19.

⁸Ibid., p. 19

TABLE II-4

LIFE INSURANCE SALES BY UNITED STATES LIFE INSURANCE
COMPANIES FOR SELECTED YEARS, 1915 - 1957

Year	Total (billions) -	Rate of Increase	Ordinary (billions) -	Rate of Increase
1915	\$ 3.3	—	\$ 2.4	—
1920	9.4	1.84	7.6	2.17
1925	14.3	.52	10.1	.33
1930	17.3	.21	11.9	.18
1935	12.3	-.28	7.6	-.36
1940	11.1	-.09	7.0	-.00
1945	15.4	.39	10.6	.51
1950	30.0	.95	18.3	.73
-----	-----	-----	-----	-----
1951	\$28.9	-.04	\$19.0	.04
1952	33.0	.15	21.6	.14
1953	38.1	.06	24.9	.11
1954	47.4	.24	26.8	.08
1955	50.2	.06	32.2	.20
1956	60.0	.19	38.9	.28
1957	71.7	.19	48.9	.26

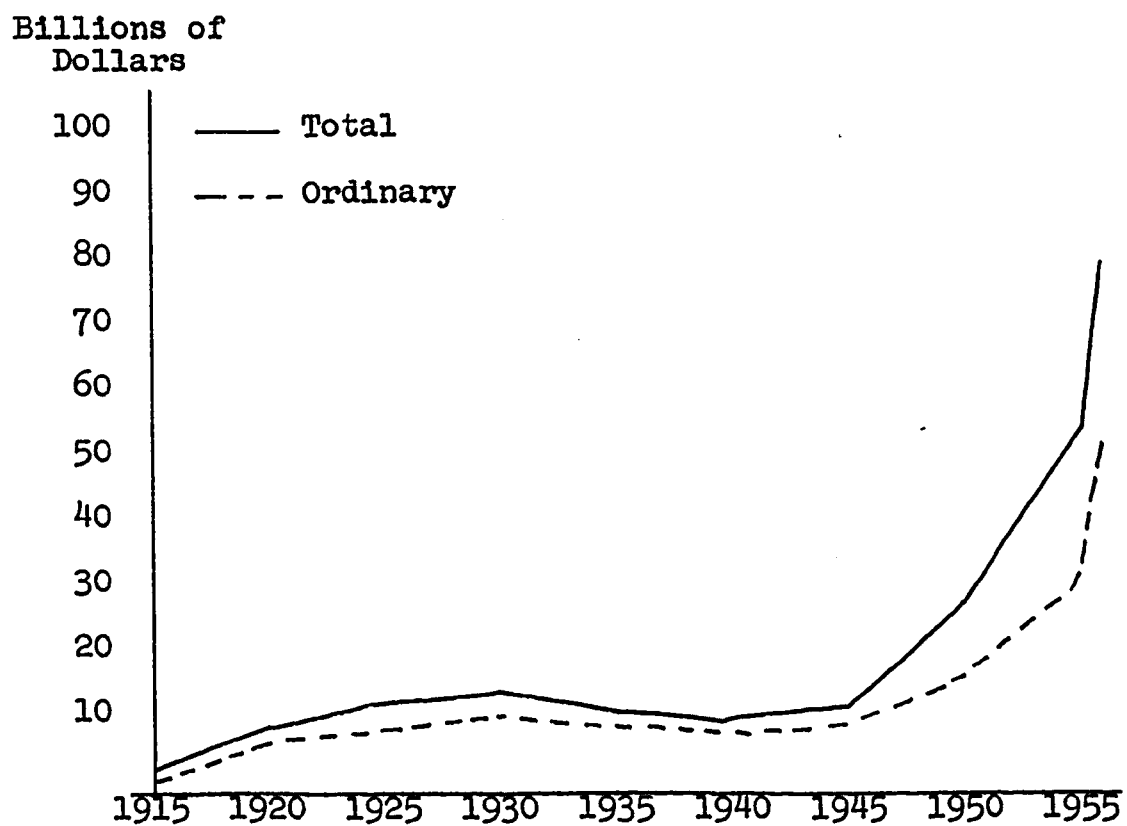
Source: Historical Statistics of Life Insurance,
March 1960, p. 6.

It is extremely important to note carefully the increases in both series of data between the years 1953 and 1957. The general growth pattern of life insurance sales, in graphical form, is presented in Figure II-3, which re-emphasizes the rapid increase in the past five years.

For purposes of general information, Figure II-4 illustrates the most common types of ordinary life insurance policies purchased in a typical year and the most used methods of premium payment.

FIGURE II-3

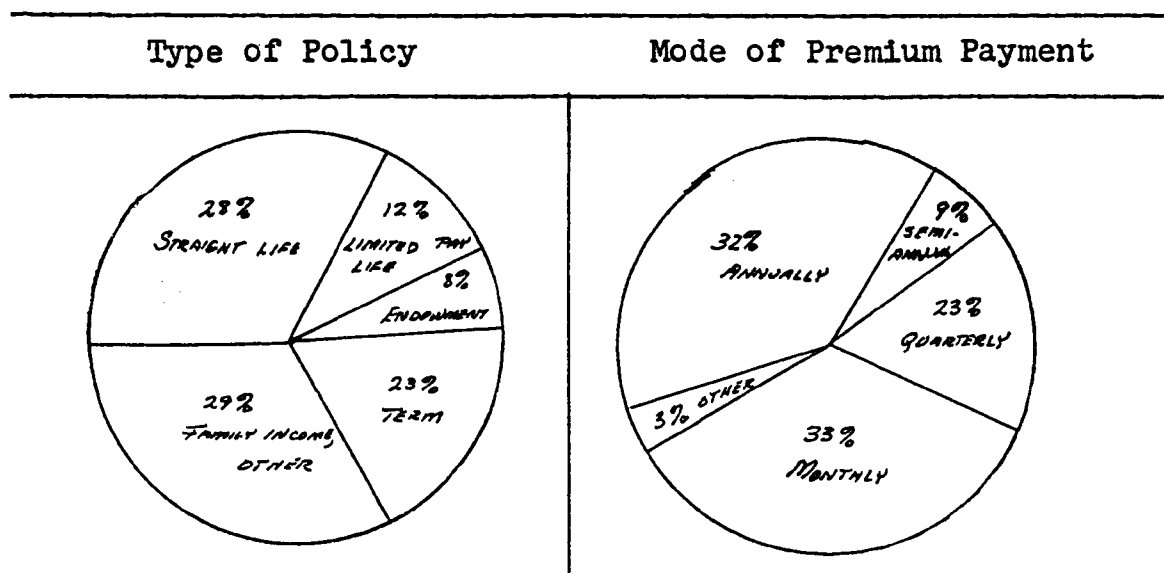
GROWTH OF LIFE INSURANCE SALES BY UNITED STATES
LIFE INSURANCE COMPANIES FOR SELECTED
YEARS, 1915 - 1957



Source: Figures in Table II-4, page 32.

FIGURE II-4

ORDINARY LIFE INSURANCE PURCHASED
IN THE UNITED STATES, 1956



Source: Life Insurance Fact Book, 1959, p. 22

Income of United States Life
Insurance Companies

Nature of income of United States life insurance

companies. - This income is derived chiefly from premiums and investment earnings. The continuing increase in life insurance ownership and the resulting increased volume of invested policy-holder funds are, of course, the major factors in income growth. This study, for purposes of comparison, is primarily interested in total income figures and premium income figures.

Size of income of United States life insurance companies. - The total income of United States life

insurance companies has more than doubled since 1947. As mentioned previously, this rapid growth is due, primarily, to increased life insurance ownership and increased volume of invested policy-holder funds.⁹

Table II-5 breaks the total income figures down into components of life insurance premiums, and investment and other income. An interesting observation concerning the depression effect on income of life insurance companies is made possible by careful study of the figures in Table II-5. Although all previous trends described have shown a pronounced drop during the depression, total income has continued upward during the period. Life insurance premium income falls, as expected, in the year 1935, but the trend quickly resumes its upward nature, climbing to a high of over \$10 billion in 1957.

Figure II-5 clearly illustrates the proportionally greater increase in premium income than in investment and other income during the period studied.

⁹Ibid., p. 52.

TABLE II-5

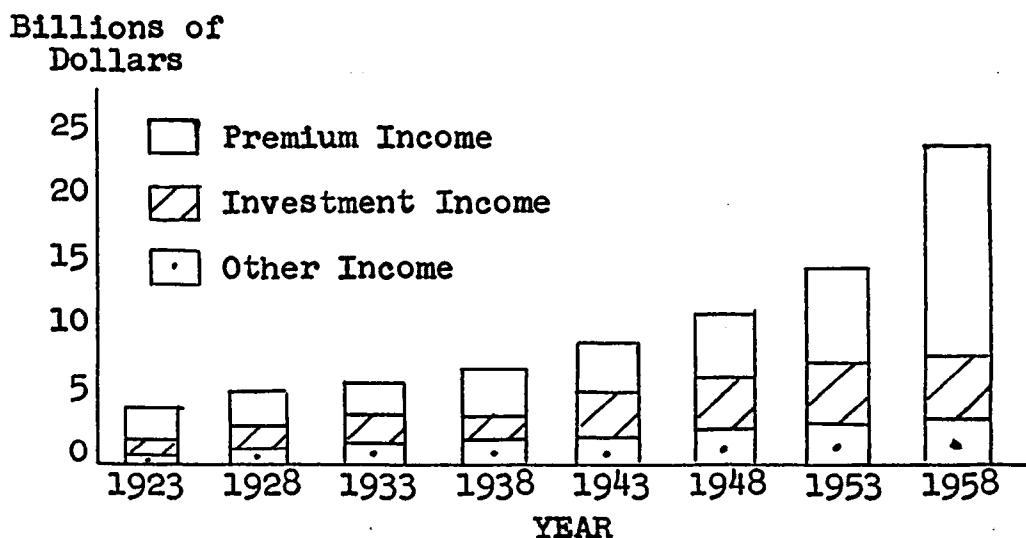
INCOME OF UNITED STATES LIFE INSURANCE
COMPANIES FOR SELECTED YEARS,
1915 - 1957
(billions)

Year	Total	Premium Income	Investment and Other Income
1915	\$ 1.0	\$.8	.2
1920	1.8	1.4	.4
1925	3.0	2.3	.7
1930	4.6	3.4	1.1
1935	5.1	3.2	1.4
1940	5.7	3.5	1.8
1945	7.7	4.6	2.5
1950	11.3	6.3	3.2
-----	-----	-----	---
1951	\$12.0	\$ 6.8	3.0
1952	13.1	7.2	3.2
1953	14.3	7.8	3.4
1954	15.3	8.2	3.7
1955	16.5	8.9	4.0
1956	17.9	9.6	4.3
1957	19.3	10.2	4.6

Source: The Historical Statistics of Life Insurance, March 1960, p. 11.

FIGURE II-5

PROPORTIONAL GROWTH OF COMPONENTS OF TOTAL
INCOME OF UNITED STATES LIFE INSURANCE
COMPANIES FOR SELECTED YEARS,
1923 - 1958
(billions)



Source: Life Insurance Fact Book, 1959, p. 52.

Assets and Earning Rate of United States
Life Insurance Companies

Assets. - Total assets of United States life insurance companies reached \$101.3 billion at the end of 1957, indicating nearly a 100 per cent increase over total assets in 1947. Life insurance assets, which are used, primarily, to meet obligations to policy-holders, have long been one of America's main sources of investment capital. The investment return on assets provides approximately one-fifth of the total income of life insurance companies in the United States. The large amount of investment income

is a major factor in the reduced rates on life insurance in recent years.¹⁰

Table II-6 shows that total assets of United States life insurance companies have increased steadily throughout the period studied; however, calculations of the rate of increase, for selected years, indicate that this growth has slowed down in recent years. Valuation adjustments must be taken into account in studying these figures. For example, in 1957 the asset increase of \$5.3 billion was after \$0.3 billion of valuation decreases.

It is also important to discuss what types of assets are included in the total figures. It is not necessary in this discussion to study each type of asset, year by year, but Figure II-6 is vital since it represents the most recent proportional breakdown. The large percentage in mortgages, and other private securities, indicates the shift in investments from government securities to private investment after the war.

¹⁰Ibid., p. 64.

TABLE II-6

ASSETS OF UNITED STATES LIFE INSURANCE
COMPANIES FOR SELECTED YEARS,
1915 - 1957

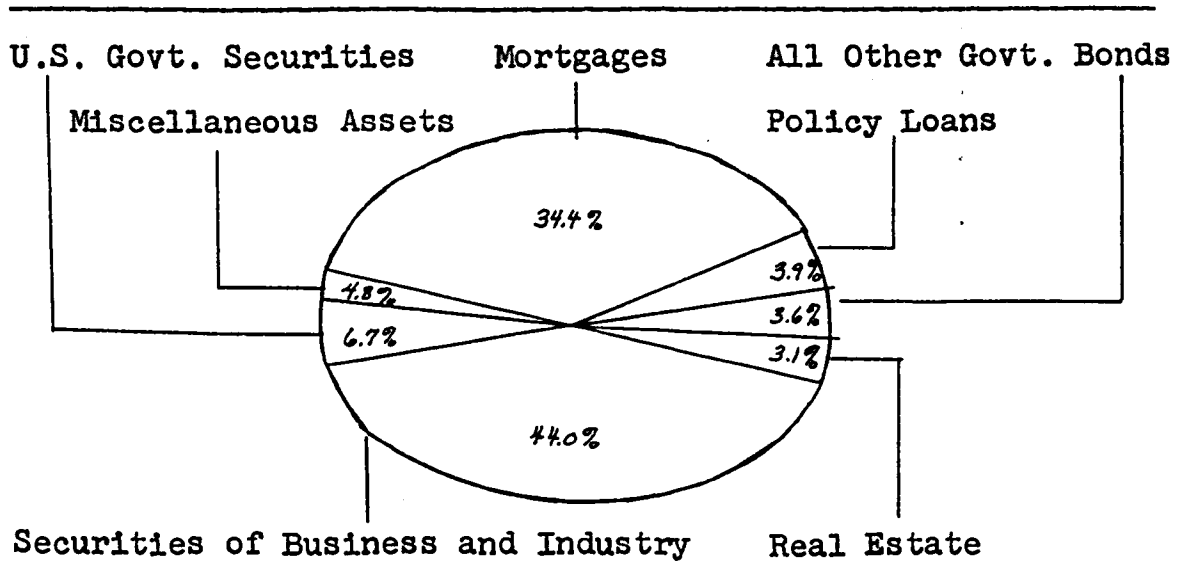
Year	Total Assets (billions)	Rate of Increase
1915	\$ 5.2	-----
1920	7.3	.40
1925	11.5	.58
1930	18.9	.64
1935	23.2	.23
1940	30.8	.31
1945	44.8	.45
1950	64.0	.43
-----	-----	-----
1951	\$ 68.3	.07
1952	73.4	.07
1953	78.5	.07
1954	84.5	.08
1955	90.4	.07
1956	96.0	.07
1957	101.3	.06

Source: The Historical Statistics of Life Insurance, March 1960, p. 9.

FIGURE II-6

COMPONENT PERCENTAGES OF TOTAL ASSETS OF
UNITED STATES LIFE INSURANCE
COMPANIES, 1957.

Total Assets
(\$107,580,000,000)



Source: Life Insurance Fact Book, 1959, p. 63.

Earning rate. - The net rate of interest earned, the ratio of the investment income for the year to the mean assets less one-half the investment income, of United States life insurance companies rose in 1957 to its highest level since the late 1930's, although it was still below the averages of the 1920's and the early 1930's. Of course, to compute this earning rate accurately, federal income taxes must be deducted. After deducting these taxes, the 1957 earning rate of 3.44 per cent compares favorably with a rate of 3.33 per cent in the previous year, and a rate

of 3.00 per cent in 1950. Due to the increase in federal income taxes, a before-tax earning rate increase of 20 per cent since 1950 becomes an after-tax increase of only 15 per cent.

The respective earning rates are listed in Table II-7, and a very irregular trend is readily apparent. During the earliest years studied the earning rate climbed upward to an average of over 5 per cent in the 1920's. This trend was then reversed and gradually declined to a low point of 2.88 per cent in 1947. Since 1947, the trend has once again been of an upward nature. The continued improvement in the earning rate has resulted partially from generally rising interest rates and partially from the placement of more funds in investments with higher yields.¹¹

The net rate of interest earned on invested funds of United States life insurance companies is a very important factor in determining the cost of life insurance. For this reason, Figure II-7 is included. The figures represented in this graph are taken from Table II-7.

¹¹Ibid. p. 59.

TABLE II-7

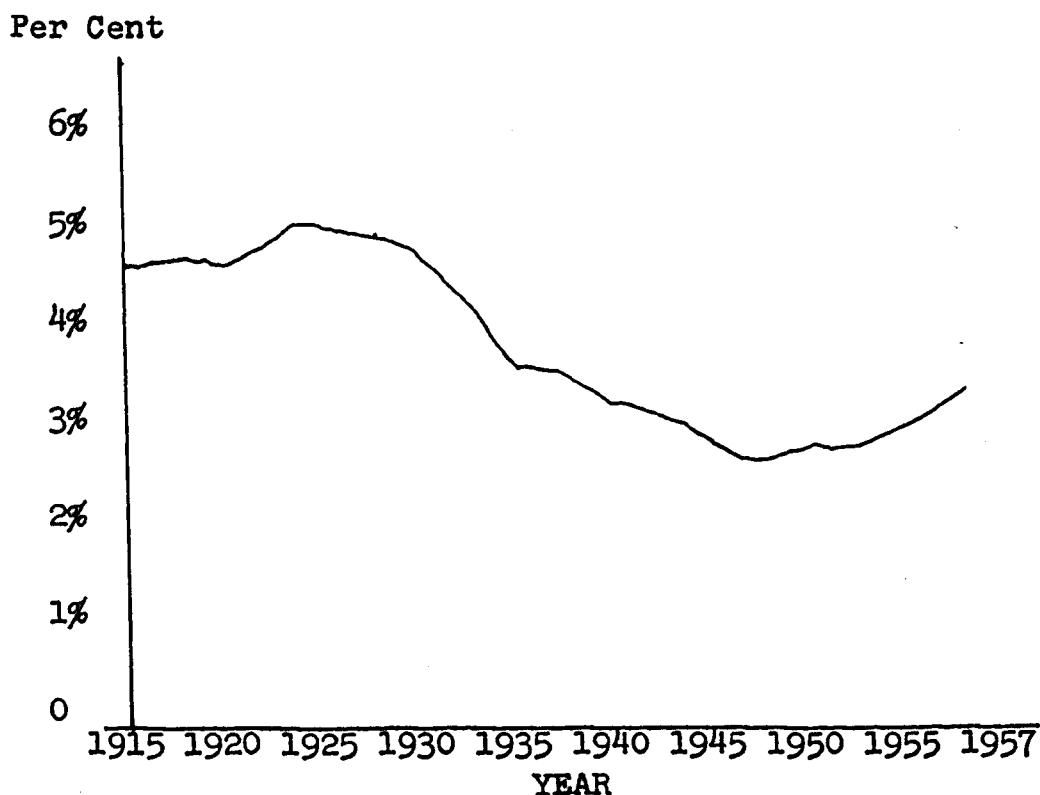
NET RATE OF INTEREST EARNED ON ASSETS BY UNITED
STATES LIFE INSURANCE COMPANIES FOR
SELECTED YEARS, 1915 - 1957

Year	Earning Rate	Rate of Increase
1915	4.8%	
1920	4.8	.00
1925	5.1	.06
1930	5.0	-.01
1935	3.7	-.26
1940	3.5	-.05
1945	3.0	-.14
1950	3.0	.00
-----	-----	-----
1951	2.9	-.03
1952	3.1	.07
1953	3.2	.03
1954	3.2	.00
1955	3.2	.00
1956	3.3	.03
1957	3.4	.03

Source: The Historical Statistics of Life Insurance, March 1960, p. 9.

FIGURE II-7

GROWTH PATTERN OF NET RATE OF INTEREST EARNED
ON ASSETS BY UNITED STATES LIFE INSURANCE
COMPANIES FOR SELECTED YEARS, 1915 - 1957



Source: Figures in Table II-7, p. 42.

Number of Life Insurance Companies
in the United States

Before describing the growth of the number of life insurance companies in the United States, it is necessary to define the requirements for a company to be included in the total figures. Only legal reserve life insurance companies are included in this study. A legal reserve life insurance company is any life insurance company operating

under insurance laws specifying the minimum basis for the reserves the company must maintain on its policies.¹² All companies not operating under these laws, certain societies and associations, are excluded.

The number of legal reserve life insurance companies in the United States was about 1,300 at the end of 1957. This total approximates a 91 per cent growth in the number of life insurance companies serving the American public in the period from 1950 to 1957. This growth is very evident in Table II-8. Of the 1,300 companies in the United States in 1957, 87 per cent were stock companies and 13 per cent were mutual companies. The main differences between these two types of companies are practices regarding ownership and participation in surplus earnings. A stock company is owned by stockholders who share in the surplus earnings, and the issued policies are generally, though not always, of a non-participating nature. A mutual life insurance company is owned and controlled by the policyholders, and the issued policies are always of a participating nature.¹³

¹²The Historical Statistics of Life Insurance, March 1960, op. cit., p. 22.

¹³Life Insurance Fact Book, 1958, op. cit., p. 119.

TABLE II-8

NUMBER OF LIFE INSURANCE COMPANIES IN THE UNITED
STATES FOR SELECTED YEARS, 1915 - 1957

Year	Number of Life Insurance Companies
1915	295
1920	335
1925	379
1930	438
1935	373
1940	444
1945	473
1950	650
-----	---
1951	680
1952	731
1953	833
1954	917
1955	1,107
1956	1,189
1957	1,271

Source: The Historical Statistics of Life Insurance, March 1960, p. 5.

It is also important to describe the number of life insurance companies in the United States by region and by state. Every state had at least one life insurance company in 1957, and many cities had over 25 home offices in 1957. Table II-9 shows the growth in the number of life insurance companies, for selected states, since 1950. Table II-10 presents a list of the cities in which 25 or more life insurance company home offices were located in 1957. Figure II-8, which illustrates the regional distribution of life insurance companies, is especially important due to the rate

of growth evidenced in the West South Central Region, of which Arizona is a part.

TABLE II-9

NUMBER OF LIFE INSURANCE COMPANIES IN THE UNITED
STATES FOR SELECTED STATES, 1950 - 1957

State ^a	1950	1957	Rate of Increase
Alabama	14	45	2.21
Arizona	3	54	17.00
Arkansas	8	29	2.63
California	15	22	.47
Colorado	10	22	1.20
Delaware	7	19	1.71
Dist. of Columbia	12	15	.25
Florida	17	29	.71
Georgia	17	33	.99
Illinois	31	39	.26
Indiana	20	42	1.10
Iowa	15	15	.00
Kansas	11	12	.09
Kentucky	8	13	.63
Louisiana	77	112	.46
Maryland	11	15	.36
Massachusetts	10	11	.10
Michigan	5	11	1.20
Minnesota	9	13	.44
Mississippi	9	20	1.22
Missouri	13	22	.69
Nebraska	17	20	.18
New York	22	29	.32
North Carolina	13	24	.85
Ohio	12	13	.08
Oklahoma	10	27	1.70
Pennsylvania	26	29	.12
South Carolina	27	48	.79
Tennessee	11	19	.73
Texas	118	338	1.87
Utah	4	13	2.25
Virginia	13	19	.46
Washington	11	15	.36

^aOnly states with 10 or more companies in 1957 are included.

Source: Life Insurance Fact Book, 1959, p. 97.

It is important to note that Arizona not only ranked third in number of insurance companies, but also that it ranked first by a large amount in rate of increase since 1950.

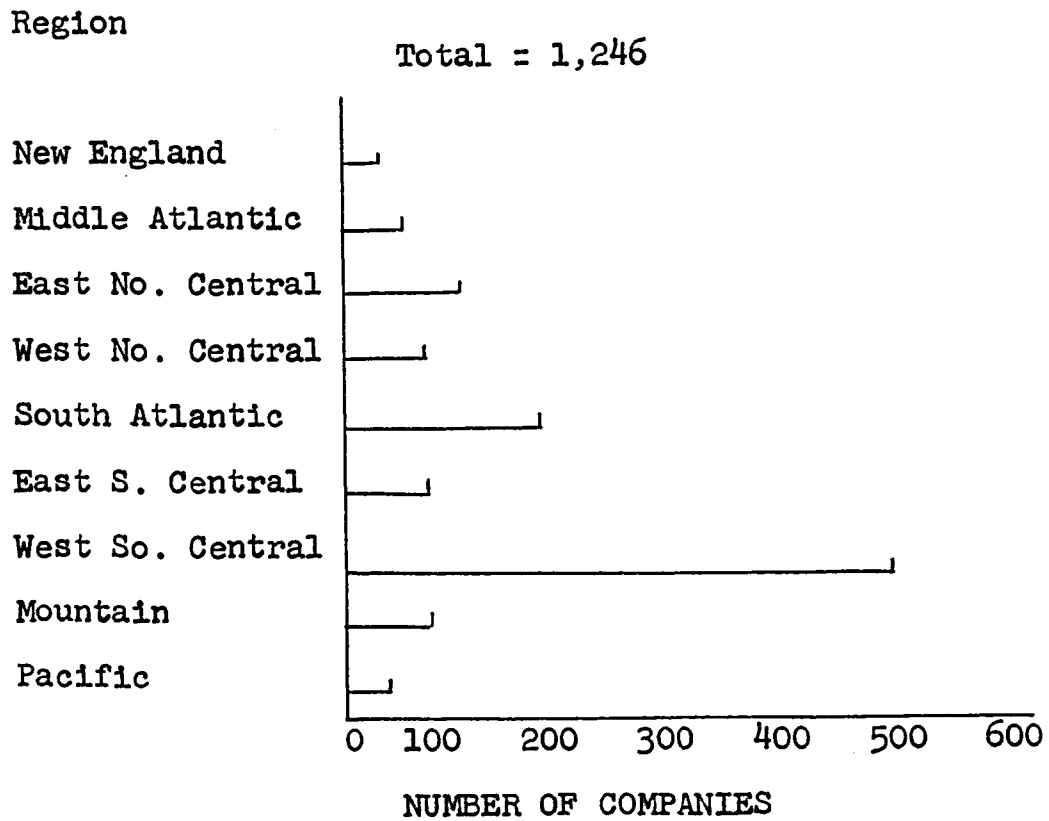
TABLE II-10

CITIES IN THE UNITED STATES WITH TWENTY-FIVE OR MORE LIFE INSURANCE HOME OFFICES, 1957

Cities	Number of Companies
Dallas, Texas	135
Fort Worth, Texas	39
New Orleans, Louisiana	39
Indianapolis, Indiana	25
Houston, Texas	64
Atlanta, Georgia	25
Chicago, Illinois	26
Philadelphia, Pennsylvania	26
<u>Phoenix, Arizona</u>	<u>25</u>

Source: Life Insurance Fact Book, 1958, p. 98.

FIGURE II-8

LIFE INSURANCE COMPANIES IN THE
UNITED STATES BY REGION, 1957

Source: Life Insurance Fact Book, 1958, p. 98.

CHAPTER III

COMPARISON OF ECONOMIC INDICATORS AND LIFE INSURANCE INDICATORS

Life Insurance Per Family to Disposable Income Per Family

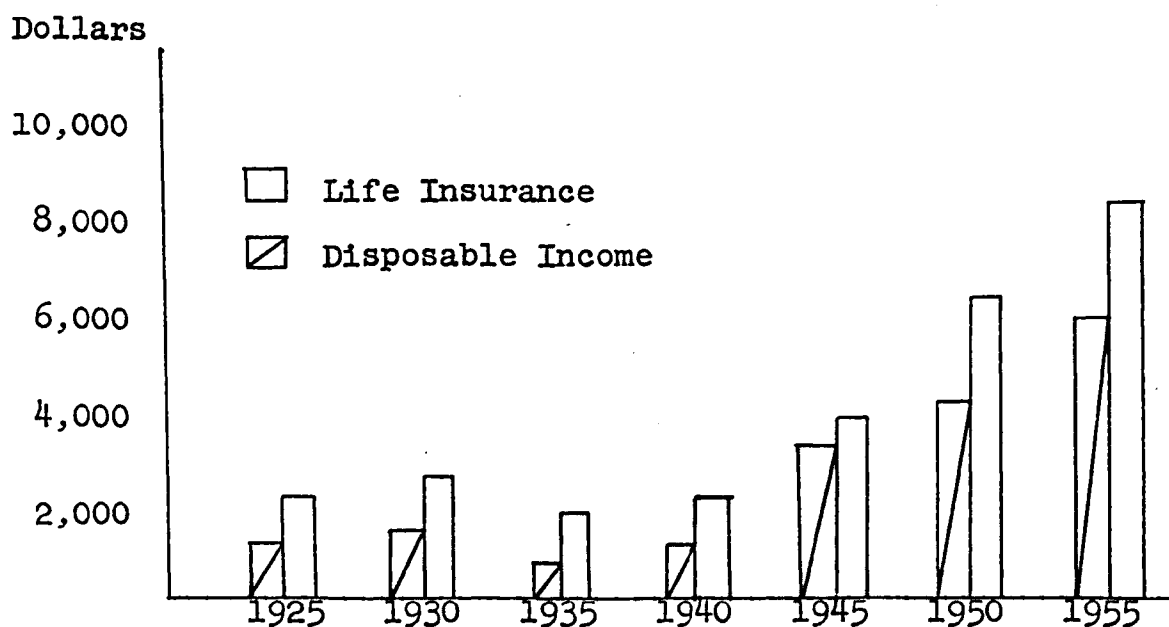
Possibly the most logical comparison to make concerning the growth of life insurance is disposable income per family and life insurance per family. Disposable income is especially useful for this comparison due to its nature of being available to individuals to use as they wish. The reason for using these values on a per family basis is mentioned in previous discussion concerning life insurance purchasing practices.

Table I-7, found on page 14 , contains the values for selected years, of disposable income per family. As mentioned earlier in the description of Table I-7, there is a pronounced upward trend in disposable income. Table II-3, found on page 28 , consists of the amounts of life insurance per family in the United States for selected years. This series of data also exhibits a definite upward trend. A comparison of these two upward trends helps in determining whether life insurance has grown more or less rapidly throughout the period studied than has disposable income.

Figure III-1 relates per family life insurance to per family disposable income. Since the year 1945 there has been a much more pronounced upward trend in life insurance per family than in disposable income per family. This upward trend reached a maximum point in 1957, an average of \$8,300 life insurance per family.

FIGURE III-1

COMPARISON OF THE GROWTH OF LIFE INSURANCE PER FAMILY AND DISPOSABLE INCOME PER FAMILY FOR SELECTED YEARS, 1925-1955



Source: Figures from Table I-8, page 15 ; Table II-3, page 28 .

Although Figure III-1 shows that life insurance per family in 1957 was about twice the average family protection

ten years earlier, this total is still equivalent to only eighteen months of the average of disposable income per family, indicating that there is still room for growth in the use of life insurance for financial protection.¹⁴

Life Insurance Sales to the Industrial Production Index

As mentioned previously, the industrial production index is a very sensitive indicator of economic conditions. Since this measurement is designed to relate each year's index to a certain base period, it is necessary to adjust the figures for life insurance sales to the same base period in order to have a meaningful comparison.

Table III-1 presents the indices obtained by adjusting total life insurance sales for selected years between 1915 and 1957 to the same base period, 1947-1949 = 100, used in establishing the index for industrial production.

¹⁴Ibid., p. 9.

TABLE III-1

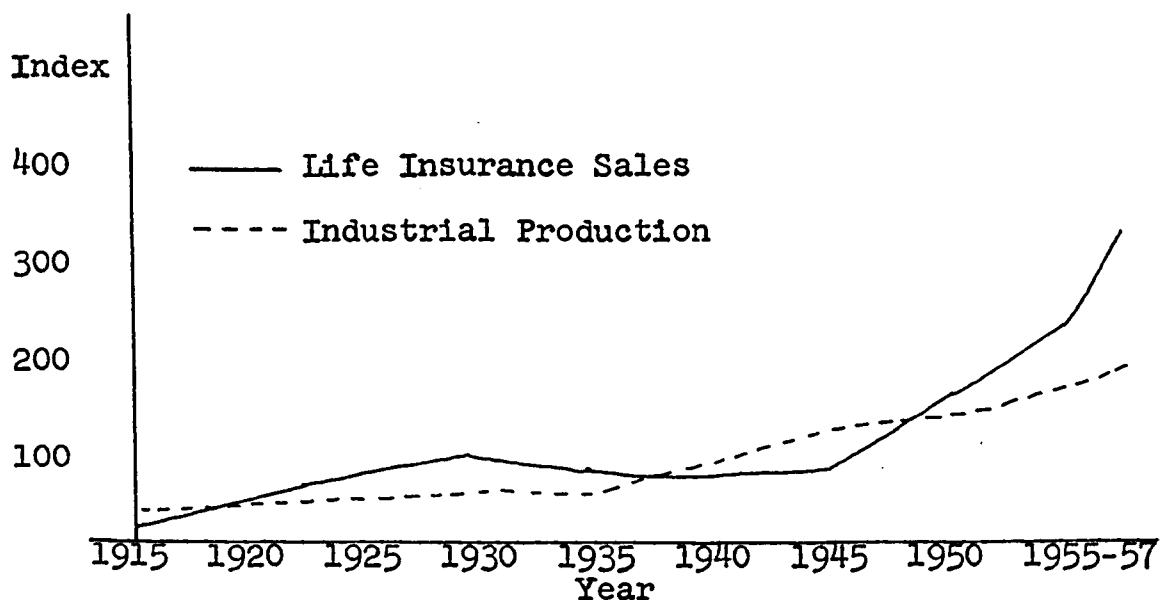
COMPARISON OF THE INDEX OF LIFE INSURANCE SALES
AND THE INDEX OF INDUSTRIAL PRODUCTION FOR
SELECTED YEARS, 1915-1957, (1947-1949=100)

<u>Year</u>	<u>Life Insurance Sales</u>	<u>Industrial Production</u>
1915	10	NA
1920	40	40
1925	61	48
1930	73	48
1935	52	46
1940	47	66
1945	65	106
1950	127	113
- - -	- - -	- - -
1951	119	123
1952	141	127
1953	161	128
1954	201	130
1955	213	146
1956	254	151
1957	304	152

Source: Figures in Table I-9, page 17; Table II-4, page 32 .

FIGURE III-2

COMPARATIVE GROWTH PATTERNS OF LIFE INSURANCE
SALES AND INDUSTRIAL PRODUCTION FOR
SELECTED YEARS, 1915-1957



Source: Figures in Table III-1.

Life Insurance Sales to Gross
National Product

Another method of comparing over-all economic growth with the growth of life insurance is by discussion of the relationship between gross national product and life insurance sales. Table III-2 consists of the data necessary for description of this relationship. Study of the amounts in Table III-2 once again results in the conclusion that the sales of life insurance have been increasing to a more rapid rate in recent years than the growth pattern of the economy in general. These two growth trends are also illustrated in Figure III-3.

TABLE III-2

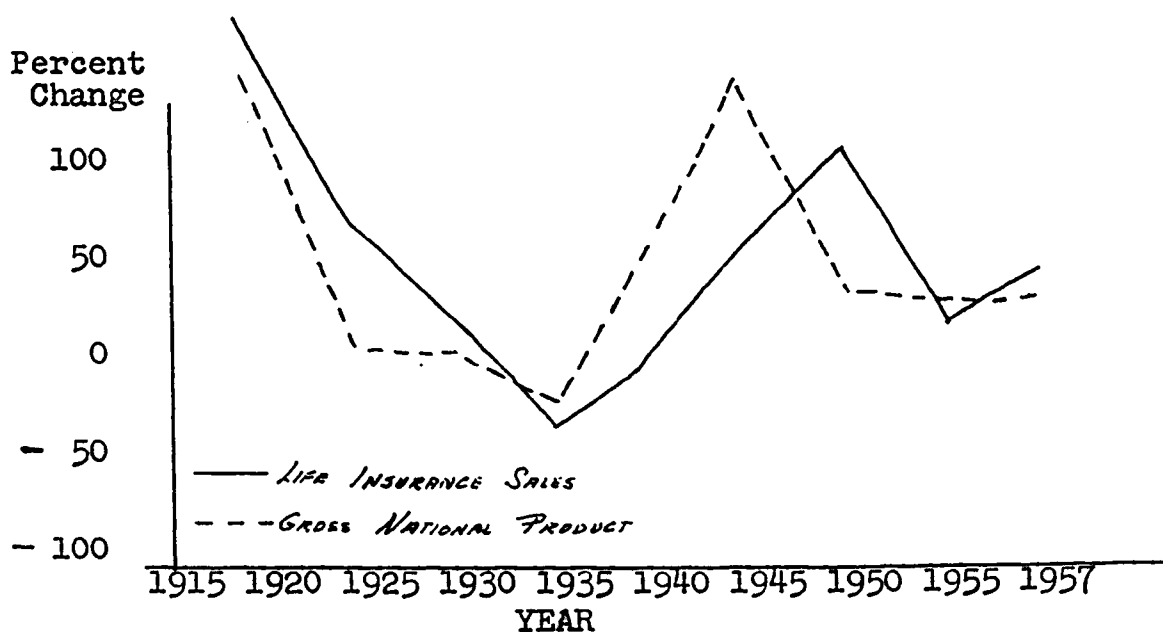
COMPARISON OF LIFE INSURANCE SALES AND GROSS
NATIONAL PRODUCT IN CURRENT DOLLARS FOR
SELECTED YEARS, 1915 - 1957

Year	Life Insurance Sales (billions)	Rate of Increase	Gross National Product (billions)	Rate of Increase
1915	\$ 3.3	—	\$42.1	—
1920	9.4	1.84	86.2	1.04
1925	14.3	.52	90.1	.05
1930	17.3	.21	91.1	.01
1935	12.3	-.28	72.5	-.20
1940	11.1	-.09	100.6	.37
1945	15.4	.39	213.6	1.12
1950	30.0	.95	284.6	.33
-----	-----	-----	-----	-----
1951	\$28.9	-.04	\$329.0	.16
1952	33.0	.15	347.0	.06
1953	38.1	.06	365.4	.05
1954	47.4	.24	363.1	-.01
1955	50.2	.06	397.5	.09
1956	60.0	.19	419.2	.06
1957	71.7	.19	442.5	.06

Source: Figures from Table I-1, page 6; Table II-4, page 32.

FIGURE III-3

COMPARISON OF THE GROWTH TRENDS OF LIFE
INSURANCE SALES AND GROSS NATIONAL
PRODUCT IN CURRENT DOLLARS FOR
SELECTED YEARS, 1915 - 1957



Source: Figures in Table III-2, page 55.

Life Insurance To Other Forms Of Long-Term
Saving in the United States

There is little need for additional discussion concerning the comparison of the different forms of long-term saving in the United States except to re-emphasize the findings discussed on page 19 and the illustration on page 24. Figure I-5, page 24, shows that savings in the form of life insurance have experienced a much more rapid growth than have savings in the form of United States Savings Bonds or in the form of savings accounts.

Life Insurance in Force to Population and Employment

The final comparison made in this chapter is between trends in life insurance in force and trends in population and employment. The purpose of this section is to compare population growth and increased employment with the growth of life insurance in force in the United States.

Table III-3 consists of the figures necessary to make such a comparison. Although no direct relationship is observed from the values in Table III-3, each of these trends has a very important effect on the growth of life insurance. Table III-4 provides a more useful tool for studying the effects of increased employment on life insurance.

TABLE III-3
RELATIONSHIP OF LIFE INSURANCE IN FORCE
TO POPULATION AND EMPLOYMENT FOR
SELECTED YEARS, 1915 - 1957

Year	Life Insurance in Force (billions)	Population	Employment
1915	\$ 21.3	.101	NA
1920	40.5	.107	.043
1925	69.5	.116	.046
1930	106.4	.123	.046
1935	98.5	.127	.042
1940	115.5	.132	.048
1945	151.7	.140	.053
1950	234.2	.152	.060
-----	-----	-----	-----
1951	\$ 253.1	.154	.061
1952	276.6	.157	.061
1953	304.3	.160	.062
1954	333.7	.162	.061
1955	372.3	.165	.063
1956	412.6	.168	.065
1957	458.4	.171	.065

Source: Figures in Table I-10, p. 18; Table I-11, p. 19; Table II-1, p. 26.

TABLE III-4

RELATIONSHIP OF LIFE INSURANCE IN FORCE TO THE LEVEL
OF EMPLOYMENT, IN PERCENTAGES, FOR SELECTED
YEARS, 1930 - 1957

Year	Rate of Increase of Life Insurance in Force	Employment Level
1930	.53	.91
1935	-.08	.80
1940	.18	.86
1945	.31	.96
1950	.54	.96
1951	.08	.96
-----	---	---
1952	.09	.97
1953	.10	.97
1954	.09	.95
1955	.12	.96
1956	.11	.97
1957	.11	.98

Source: Rate of increase figures calculated from figures in Table II-1, p.22. Employment figures calculated from Table I-11, p. 17, by using level as a percentage of labor force.

PART II. DESCRIPTION OF ECONOMIC CONDITIONS AND
LIFE INSURANCE GROWTH PATTERNS EXISTING
IN ARIZONA FROM 1915 THROUGH 1957

Chapter	Page
IV. INDICATORS OF ECONOMIC CONDITIONS EXISTING DURING THE PERIOD	61
Economic Activity in General Personal Income Disposable Personal Income Population and Employment Industrial Production Income Personal Savings	
V. INDICATORS OF LIFE INSURANCE GROWTH DURING THE PERIOD	79
Life Insurance in Force Life Insurance Sales Premium Income from Life Insurance Number of Life Insurance Companies	
VI. COMPARISON OF ECONOMIC INDICATORS AND LIFE INSURANCE INDICATORS.	100
Per Capita Relationships Life Insurance in Force to Business Activity Life Insurance in Force to Industrial Production Premium Income to Personal Income Life Insurance in Force to Population and Employment	

CHAPTER IV

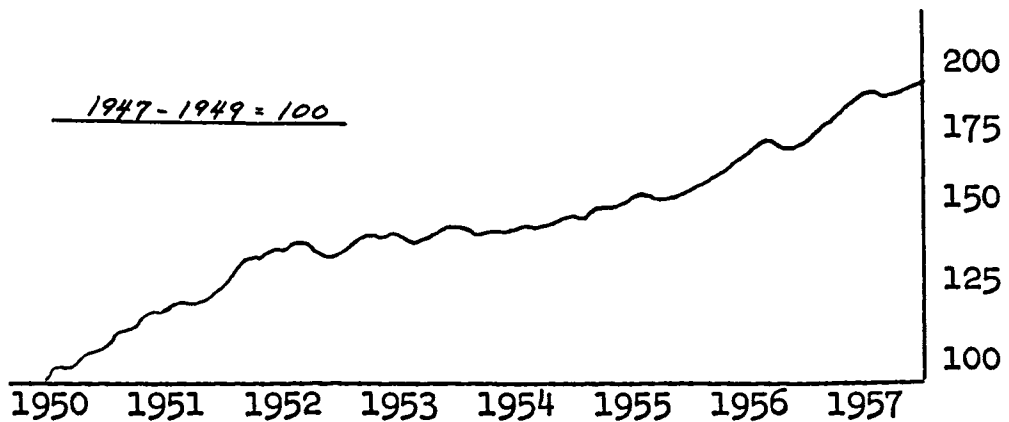
INDICATORS OF ECONOMIC CONDITIONS EXISTING DURING THE PERIOD

Economic Activity in General

The continuously expanding economy of the United States has been described in Part I, and it is the purpose of this section to discuss the economy of Arizona. Since the number of economic indicators is limited in this discussion, it is believed that a brief summary of general economic conditions is useful at this point.

In describing the economy of Arizona, there is one prevailing tendency that has dominated the scene - GROWTH. This continuous expansion has occurred in all segments of Arizona's dynamic economy. Figure IV-1, shows this rapid growth, in graphical form, in recent years. The trend values in Figure IV-1 have been adjusted to the base period of 1947-1949=100, which facilitates comparison with the growth index of the United States in Chapter VII. The values in Figure IV-1 consist of the combined totals of income of all segments of Arizona's economy, the major sources being manufacturing, mining, crops, tourists, and livestock.

FIGURE IV-1
ADJUSTED INDEX OF ARIZONA BUSINESS,
1950 - 1957



Source: Arizona Statistical Review, 1959,
(Phoenix, Arizona: Valley National Bank, October 1959),
p. 3.

Personal Income

Personal income in the state of Arizona has shown a very interesting growth pattern. Throughout the period studied, Arizona per capita personal income has remained below per capita income in the United States, but study of comparative increases in per capita personal income reveals that Arizona's average is increasing more rapidly than the national average. Table IV-1 lists personal income in Arizona both on a basis of total amounts and on a per capita basis. Arizona's trend of per capita income is compared with the trend in the United States by graphical measurement in Figure IV-2. This illustration clearly portrays the rapid increase in Arizona.

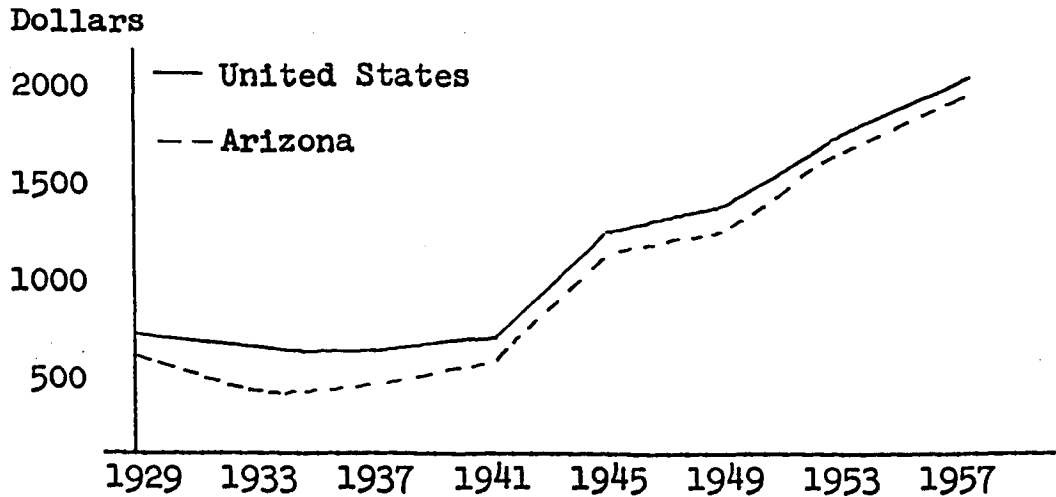
TABLE IV-1
 TOTAL AND PER CAPITA PERSONAL INCOME IN ARIZONA
 FOR SELECTED YEARS, 1929 - 1957

Year	Total (millions)	Per Capita (dollars)
1929	\$ 254	\$ 591
1931	182	424
1933	128	300
1935	176	406
1937	223	492
1939	231	477
1941	309	628
1943	652	986
1945	654	1107
1947	749	1149
1949	889	1245
1951	1227	1551
1953	1441	1610
1955	1633	1584
1957	1988	1750

Source: U. S. Income and Output, November 1958,
 pp. 156-159.

FIGURE IV-2

PER CAPITA PERSONAL INCOME IN THE UNITED STATES
AND IN ARIZONA, FOR SELECTED YEARS,
1929 - 1957



Source: Curves calculated from figures in Table I-5, p. 11; Table IV-1, p. 63.

Another method of studying the growth of personal income in Arizona is by the rate of income growth. Table IV-2 shows that Arizona ranks second among the forty-eight states in rate of personal income growth since 1948. Arizona's increase, 157.1 per cent, is exceeded only by Florida's 173 per cent.

TABLE IV-2

TEN STATES SHOWING GREATEST RATE OF
INCOME GROWTH, 1948 - 1958
(billions)

Rank	State	1948	1958	Per Cent Gain
1.	Florida	\$ 3.1	\$ 8.3	173.0%
2.	Arizona	.8	2.2	157.1
3.	Nevada	.3	.7	151.3
4.	New Mexico	.6	1.5	138.5
5.	Delaware	.6	1.3	127.8
6.	California	17.6	36.7	108.4
7.	Colorado	1.8	3.5	99.0
8.	Maryland	3.3	6.5	98.4
9.	Utah	.8	1.5	90.5
10.	Louisiana	2.6	4.9	88.4

Source: Arizona Statistical Review, 1959, p. 5.

Disposable Personal Income

Disposable personal income gives a more direct measure of income available for spending, since it approximates take-home income, than does personal income. Table IV-3 lists disposable income for selected years in Arizona, both on a total and a per capita basis.

TABLE IV-3

DISPOSABLE PERSONAL INCOME IN ARIZONA ON A
TOTAL AND ON A PER CAPITA BASIS FOR
SELECTED YEARS, 1929 - 1955

Year	Total (millions)	Per Capita (dollars)
1929	\$ 247	\$ 574
1940	240	481
1946	605	979
1950	900	1,192
1953	1,285	1,436
1955	1,465	1,521

Source: U. S. Income and Output, 1958, p. 160.

It is sufficient to state, at this point, that Arizona has experienced an upward trend in disposable personal income. This growth pattern has been an important factor in the growth of life insurance in force, which is discussed in detail in Chapter V.

Population and Employment

Population. - The following quotation from an article written by Edward L. Ullman does much to explain Arizona's growth in population.

For the first time in the world's history, pleasant living conditions - - amenities - - instead of more narrowly defined economic advantages, are becoming the sparks that generate significant population increases, particularly in the United States.¹

¹Ullman, Edward L. "Amenities As a Factor in Regional Growth," Arizona Business and Economic Review, April 1954, p. 1.

Table IV-4 shows that Arizona has experienced a population gain in each of the selected years studied. This continuous gain in population exceeds the upward trend in the United States, and is clearly illustrated in Table IV-4.

TABLE IV-4
COMPARATIVE POPULATION INCREASES IN THE UNITED STATES AND IN ARIZONA FOR SELECTED YEARS, 1900 - 1957

Year	Arizona (Thousands)	Rate of Increase	United States (Thousands)	Rate of Increase
1900	122.9	-	76,100	-
1920	334.1	.49	106,500	.39
1940	499.3	.49	131,900	.24
1950	749.6	.51	151,200	.15
1953	930.0 ^a	.26 ^a	158,300 ^a	.05 ^a
1957	1,100.0 ^b	.18 ^b	171,200 ^b	.08 ^b

^aIncrease based on only two years.

^bIncrease based on only four years.

Source: 1900 - 1950 population data: U. S. Department of Commerce, 1950 United States Census of Population, Vol. II, Part 3, p. 21. 1953 - 1957 population data: U. S. Department of Commerce, Business Statistics, 1959, p. 59.

Another means of studying Arizona's population growth pattern is by comparison with other rapidly growing states in the United States. Table IV-5 shows that only Florida and Nevada have led Arizona in the rate of population growth since 1948.

TABLE IV-5

COMPARATIVE STATE POPULATION GROWTH IN TEN
LEADING STATES, 1948 - 1958
(millions)

Rank	State	1948	1958	Per Cent Gain
1.	Florida	2.60	4.44	72.3
2.	Nevada	.16	.27	71.2
3.	Arizona	.69	1.14	65.2
4.	Delaware	.31	.45	45.5
5.	California	10.06	14.34	42.5
6.	New Mexico	.60	.84	39.4
7.	Colorado	1.26	1.71	35.5
8.	Utah	.65	.86	32.5
9.	Maryland	2.27	2.96	30.2
10.	Montana	.54	.69	26.9

Source: Arizona Statistical Review, 1959, p. 5.

A final method of illustrating Arizona's growth is based on projections of estimated population for 1960. Table IV-6 displays that only Nevada is expected to increase its population at a greater rate than Arizona.

TABLE IV-6
 ARIZONA RANKS SECOND IN PROJECTED GROWTH
 OF POPULATION, 1950 - 1960
 (millions)

State	Population 1950 Census	Estimated 1960 Population	Per Cent Increase
Nevada	.16	.27	70.5
Arizona	.75	1.21	61.7
Florida	2.77	4.28	54.4
California	10.59	15.41	45.6
New Mexico	.68	.90	32.6
Delaware	.32	.42	31.4
Oregon	1.52	1.98	30.3
Maryland	2.34	2.99	27.5
Utah	.69	.87	26.4
Michigan	6.37	7.99	25.5

Source: Arizona Progress (March 1955), Table I-1, based on U. S. Department of Commerce projections for 1960.

Employment. - Arizona's rate of employment has also been increasing at an increasing rate during the period studied. In fact, Arizona leads the nation in rate of employment growth. This extremely high rate of growth is a very important factor in Arizona's economy, especially due to the necessity of supporting the increased population described in the previous section. Table IV-7 compares Arizona's growth rate of employment in recent years with other leading states.

TABLE IV-7

COMPARISON OF THE RATE OF EMPLOYMENT GROWTH IN
SELECTED STATES, 1948 - 1958
(millions)

Rank	State	1948	1958	Per Cent Gain
1.	Arizona	.15	.28	81.2
2.	Florida	.65	1.17	80.9
3.	Nevada	.05	.08	65.2
4.	New Mexico	.13	.21	63.4
5.	California	3.16	4.45	40.7
6.	Colorado	.34	.46	35.0
7.	Texas	1.84	2.46	33.7
8.	Utah	.18	.24	31.7
9.	Georgia	.76	.95	24.7
10.	Kansas	.44	.54	22.6

Source: Arizona Statistical Review, 1959, p. 4.

Although it is not the purpose of this study to discuss how Arizona's total employment figures have been distributed among industry, it is interesting to note that the most stable industry category between 1950 and 1955 was finance-insurance-real estate, which at no time dropped below a percentage gain of 8.7 per cent, while other industries were experiencing appreciable fluctuations.²

Another good indication of recent growth of employment in Arizona is presented in Table IV-8, which shows that Arizona ranks first in the rate of growth of manufacturing employment, 1948-1958. Reference is also made to

²For exact figures, by industry, see: Arizona's Current Employment Developments (Phoenix: Employment Security Commission of Arizona, May 15 issues for 1951 through 1955).

Table IV-8 in the following section, which deals with the rapid increase of manufacturing as a major source of Arizona income in recent years.

TABLE IV-8

COMPARATIVE GROWTH OF MANUFACTURING EMPLOYMENT IN
LEADING STATES, 1948 - 1958
(thousands)

Rank		1948	1958	Per Cent Gain
1.	Arizona	15.4	39.2	154.5%
2.	Florida	94.9	177.6	87.1
3.	California	734.2	1,176.9	60.3
4.	Nevada	3.3	5.1	54.5
5.	New Mexico	9.9	15.3	54.5
6.	Utah	27.5	39.0	41.8
7.	Kansas	84.3	115.4	36.9
8.	Texas	339.6	460.7	35.7
9.	Washington	174.5	218.6	25.3
10.	Colorado	57.6	71.6	24.3

Source: Arizona Statistical Review, 1959, p. 4.

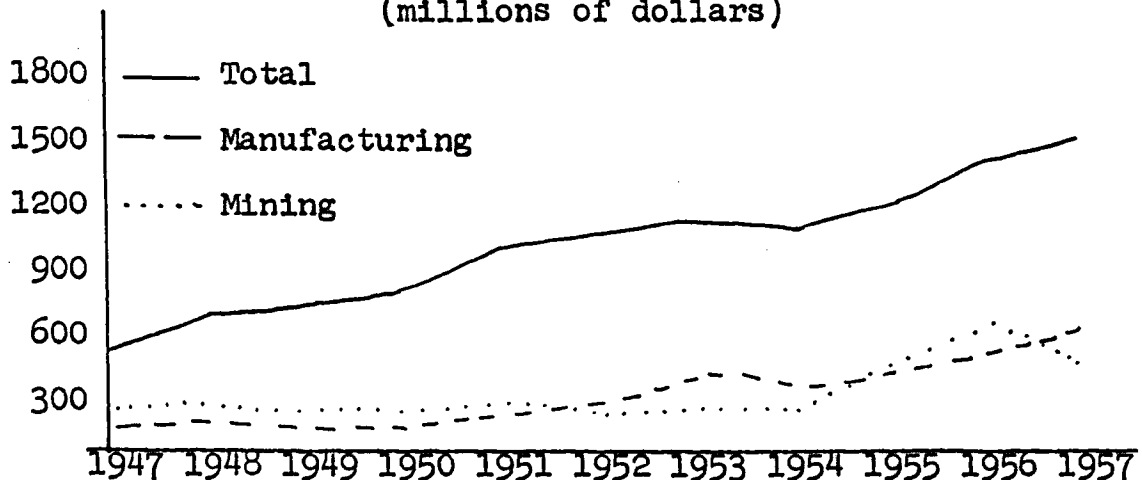
Income from Industrial
Production

Since one of the major economic indicators discussed in Part I is the Industrial Production Index of the United States, a similar description of industrial production in Arizona is necessary. Income figures, instead of output, are used due to the absence of a common unit upon which to base an output index. The result is that the Arizona Index is extremely over-stated; however, it is believed that the figures discussed in this section are useful in showing Arizona's comparative growth.

Manufacturing. - The manufacturing sector of Arizona's economy has made considerable progress in recent years. It has already been mentioned that Arizona led the nation in the rate of growth of manufacturing employment, 1948-1958. This growth, plus the rapid increase of manufacturing as a major source of Arizona income in recent years, emphasizes the importance of manufacturing in Arizona's economy. This high rate of growth as a source of income is graphically illustrated in Figure IV-3.

FIGURE IV-3

THE IMPORTANCE OF MANUFACTURING AND MINING AS SOURCES OF INCOME IN ARIZONA, 1947 - 1957
(millions of dollars)



Source: Curves calculated from figures in the Arizona Statistical Review, 1959, p. 3.

Mining. - Mining is a basic industry in Arizona, and copper is by far the most important ore mined. The following statement clearly illustrates Arizona's leadership position in copper mining in the United States.

In 1954 Arizona remained the largest copper-producing state in the United States, with a 44 per cent margin over Utah, the second largest producer, and ranked second in asbestos, fourth in silver, sixth in gold, seventh in lead, and tenth in zinc.³

The growth of mining as a source of income in Arizona is illustrated, along with manufacturing, in Figure IV-3. This growth has resulted in a leadership position in mining in the United States. Table IV-9 shows that Arizona ranks first in the nation in non-ferrous mineral production.

TABLE IV-9

COMPARISON OF THE LEADING PRODUCERS
OF NON-FERROUS MINERALS, 1957
(millions of dollars)

Rank	State	Amount
1.	Arizona	\$332.1
2.	Utah	179.1
3.	Montana	75.1
4.	Idaho	52.6
5.	Nevada	52.3
6.	New Mexico	47.9
7.	Missouri	38.8
8.	Colorado	25.5
9.	South Dakota	20.0
10.	Tennessee	19.0

Source: Arizona Statistical Review, 1959, p. 4.

Although the separate growth patterns of manufacturing and mining are important in any study concerning Arizona, the combined trend in recent years is best for

³"Mineral Production in Arizona in 1954", Mineral Industry Surveys (Washington: U.S. Department of the Interior, Bureau of Mines, December 23, 1954), p. 1

purposes of comparison in this study. Table IV-10 compares income from industrial production in Arizona, 1947-1957, with industrial production in the United States, 1947-1957. Both series of data have been adjusted to the base of 1947 - 1949 = 100.

TABLE IV-10

COMPARISON OF INDUSTRIAL PRODUCTION IN ARIZONA AND
IN THE UNITED STATES, 1947 - 1957
(1947 - 1949 = 100)

Year	United States	Arizona
1947	100	100
1948	104	111
1949	97	102
1950	112	115
1951	120	149
1952	124	165
1953	134	188
1954	125	180
1955	139	234
1956	143	291
1957	143	279

Sources: United States figures: Business Statistics, June 1959, p. 8. Arizona figures: Calculated from Arizona Statistical Review, 1959, p. 3.

Arizona's extensive economic growth in recent years is very evident in Table IV-10. The only index reductions in Arizona occurred in the years 1949 and 1954, which correspond to general recession in business activity in the United States during these years. Arizona's extremely high indices in 1956 and 1957 are indications of what the future

should bring. The reader should remember that Arizona's more than equal rate of growth is highly over-stated due to dollar measurement.

Personal Savings

The excess of disposable personal income over personal consumption expenditures measures personal savings. The most important of the more common forms of personal savings are bank deposits, security holdings, and life insurance. Along with the expansion in Arizona's economy, there has been a corresponding increase in personal savings, but it is important that this discussion compare the trends among the more common forms of personal savings. This section deals with these trends, except for the growth of life insurance in force, which is discussed in detail in Chapter V.

Table IV-11 lists total bank deposits, for selected years, in the state of Arizona. Study of this table leads to the conclusion that total bank deposits have followed a pronounced upward trend, except for one sharp drop during the depression period. This upward trend is clearly illustrated by an increase of over 100 per cent during the period from 1949 through 1957.

TABLE IV-11

TOTAL BANK DEPOSITS IN ARIZONA IN CURRENT DOLLARS
FOR SELECTED YEARS, 1913 - 1957

Year	Total Deposits (millions)	Rate of Increase
1913	\$ 32.9	—
1917	60.8	.85
1921	64.1	.05
1925	70.2	.09
1929	92.9	.39
1933	45.3	-.41
1937	84.0	.85
1941	112.4	.34
1945	369.5	2.29
1949	417.5	.10
1953	641.8	.54
1957	911.1	.42

Sources: Arizona Statistical Review, 1946, p. 7.
Arizona Statistical Review, 1959, p. 20.

Another clear indication of the growth in bank deposits in Arizona is found in Table IV-12, which compares Arizona's growth with other leading states. Of the forty-eight states, Arizona ranks second in the rate of growth of bank deposits, with only the state of Florida experiencing a greater percentage increase.

TABLE IV-12

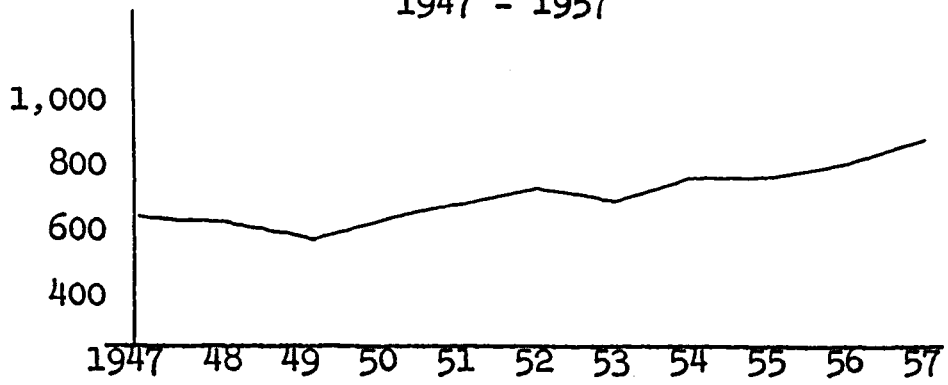
COMPARISON OF BANK DEPOSIT GROWTH RATES IN LEADING
STATES IN THE UNITED STATES, 1948 - 1958
(billions of dollars)

Rank	State	1948	1958	Per Cent Gain
1.	Florida	\$ 1.65	\$ 4.27	157.9%
2.	Arizona	.42	1.05	148.0
3.	Nevada	.16	.38	128.7
4.	New Mexico	.30	.67	117.5
5.	Colorado	1.02	1.87	83.9
6.	Texas	6.35	11.58	82.5
7.	California	13.29	23.46	76.5
8.	Virginia	1.82	3.15	72.7
9.	Connecticut	2.77	4.72	70.5
10.	North Carolina	1.83	3.05	66.7

Source: Arizona Statistical Review, 1959, p. 5.

Figure IV-4 converts the total amounts presented in Table IV-11 to per capita figures for the period 1947 - 1957. This trend in bank deposits is also shown in Figure VI-1, page 101, in a graphical comparison with the growth of life insurance in force.

FIGURE IV-4

PER CAPITA BANK DEPOSITS IN ARIZONA
1947 - 1957

Source: Arizona Statistical Review, 1959, p. 13.

CHAPTER V

INDICATORS OF LIFE INSURANCE GROWTH DURING THE PERIOD

Life Insurance in Force

Its Nature. - Life insurance in force is the sum of the face amounts, plus dividend additions, of life insurance policies outstanding at a given time.⁴ For purposes of this study, total life insurance in force in Arizona is divided into two separate classes - life insurance in force in domestic companies and life insurance in force in foreign companies. The term domestic company refers to any company domiciled in Arizona, while the term foreign company refers to companies of other states that are licensed to do business in Arizona.

The sources used for the data discussed in this section are the annual insurance reports of the Insurance Department of Arizona. Inconsistency in the listing of data in these reports is due to the frequent changes in the administration of this department.

Domestic life insurance companies. - Chapter II points out that since 1950, Arizona has ranked first in the

⁴Historical Statistics of Life Insurance, 1960,
op. cit., p. 22.

nation in percentage increase in the number of domestic life insurance companies. Prior to 1950, Arizona's life insurance industry was dominated almost entirely by foreign companies. Table V-1 shows the total life insurance in force in domestic companies for selected years, 1915 - 1957. The small amount of \$800 thousand in 1930 represents the first domestic company's unsuccessful attempt to enter the market in 1920. In 1930 another attempt was made by a domestic company, but this attempt also resulted in failure. Only after 1945 did Arizona life insurance companies begin making inroads into the total amount of life insurance in force in Arizona. The first successful company, a mutual firm, attained a comparatively high total of life insurance in force in the year 1945. This amount, nearly \$7 million, has been increased to a total of over \$500 million in 1957. This growth resulted in an increase in number of domestic companies, which is discussed in detail later in this chapter. Of course, Arizona's insurance laws have also influenced the growth in the number of life insurance companies.

TABLE V-1

LIFE INSURANCE IN FORCE IN ARIZONA IN
DOMESTIC LIFE INSURANCE COMPANIES FOR
SELECTED YEARS, 1915 - 1957

Year	Total Life Insurance in Force (millions)	Rate of Increase
1915	_____	_____
1920	_____	_____
1925	_____	_____
1930	\$.8	_____
1935	_____	_____
1940	_____	_____
1945	6.8	_____
1950	39.3	4.78
-----	-----	-----
1951	\$ 40.9	.04
1952	52.6	.29
1953	86.9	.66
1954	115.8	.33
1955	223.5	.93
1956	325.7	.45
1957	505.1	.55

Source: Annual Insurance Report of the Insurance Department of Arizona (Phoenix: Insurance Department Printing Office, 1914 - 1957) Reports 1 - 46.

The amounts recorded in Table V-1 include only legal reserve life insurance companies. Fraternal associations and benefit societies are not included due to qualifications applied to national figures in Chapter II.

Foreign life insurance companies. - In 1957, foreign life insurance companies accounted for approximately \$2 billion of life insurance in force in the state of Arizona. This total is over four times the amount of life insurance

in force only ten years earlier. Of course, as in the case of domestic companies, this growth results partially from the increased number of foreign companies operating in Arizona and partially from increases in population and other economic factors. In the next section, dealing with total life insurance in force in Arizona, both foreign and domestic, this increase is compared with other states in the United States.

Table V-2 presents the amounts of life insurance in force in foreign companies for selected years, 1915 - 1957. An attempt has been made to break the total amounts down to provide a separate listing of ordinary life insurance in force, but, due to previously mentioned inconsistencies in the annual reports, this is only possible for the years 1945 through 1957. Prior to the year 1945, the only figures listed in the reports are business written during the year and premiums secured, except for the years 1925 and 1940 when insurance in force is also given.

TABLE V-2

LIFE INSURANCE IN FORCE IN ARIZONA IN
FOREIGN LIFE INSURANCE COMPANIES FOR
SELECTED YEARS, 1915 - 1957

Year	Total Life Insurance in Force (millions)	Rate of Increase	Ordinary Life Insurance in Force (millions)	Rate of Increase
1915	NA	NA	NA	NA
1920	NA	NA	NA	NA
1925	\$ 110.7	NA	NA	NA
1930	141.1 ^a	.27	NA	NA
1935	162.3 ^a	.14	NA	NA
1940	203.6	.25	NA	NA
1945	334.2 ^b	.64	\$257.4 ^b	NA
1950	664.3 ^b	.99	494.5 ^b	.92
-----	-----	-----	-----	-----
1951	\$ 765.2 ^b	.15	\$550.3 ^b	.11
1952	857.4	.12	599.7	.09
1953	967.1	.13	678.5	.13
1954	1,133.1	.17	748.9	.11
1955	1,375.7	.21	886.2	.18
1956	1,632.2	.19	1,047.7	.19
1957	1,988.2	.22	1,242.9	.09

^a Approximate values calculated by use of new business written less terminations plus insurance in force previously.

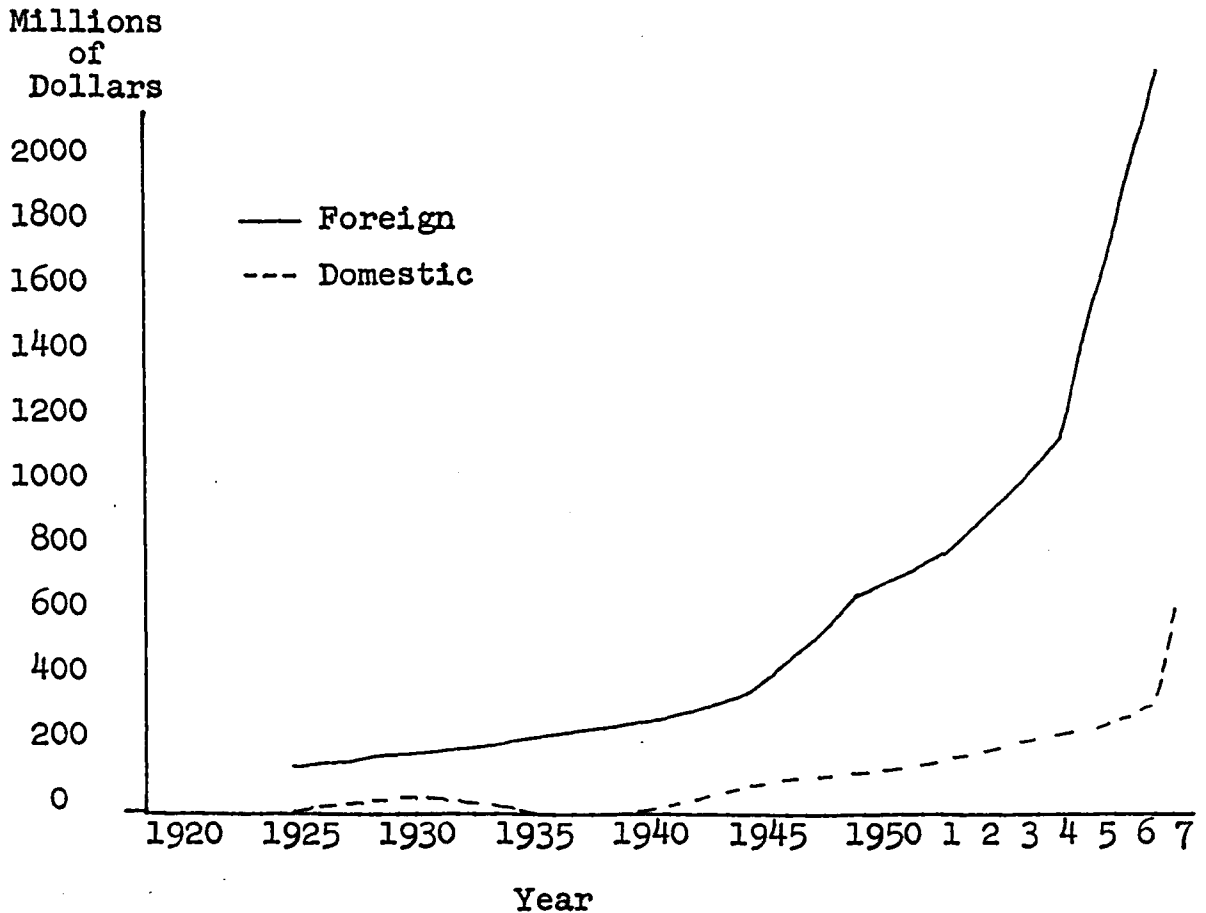
^b These figures include domestic totals also for this period.

Source: Annual Insurance Report of the Insurance Department of Arizona, Reports 1 - 46.

Figure V-1 presents, graphically, the upward trends of life insurance in force for foreign and domestic companies. Both trends have been increasing, especially in the years since 1950.

FIGURE V-1

GROWTH OF LIFE INSURANCE IN FORCE IN
ARIZONA IN FOREIGN AND DOMESTIC
COMPANIES FOR SELECTED YEARS,
1915 - 1957



Source: Figures in Table V-1, p. 81 ; Table V-2, p. 83.

Total life insurance in force in Arizona. - During the period 1948 through 1958 Arizona ranked second of the forty-eight states in the rate of growth of life insurance in force. Table V-3 shows this relationship, which places only New Mexico ahead of Arizona in the percentage growth of life insurance in force.

TABLE V-3

STATES SHOWING THE GREATEST RATE OF
GROWTH OF LIFE INSURANCE IN FORCE,
1948-1958
(billions)

Rank	State	1948	1958	Per Cent Gain
1.	New Mexico	\$.37	1.80	381.6%
2.	Arizona	.55 ^a	2.49 ^a	353.6
3.	Florida	2.71	10.84	300.7
4.	Nevada	.15	.57	279.2
5.	Louisiana	2.06	7.04	242.4
6.	California	13.04	43.78	235.6
7.	Texas	7.45	23.88	220.4
8.	Georgia	3.21	9.66	201.4
9.	Mississippi	.91	2.66	192.3
10.	Alabama	2.33	6.73	189.3

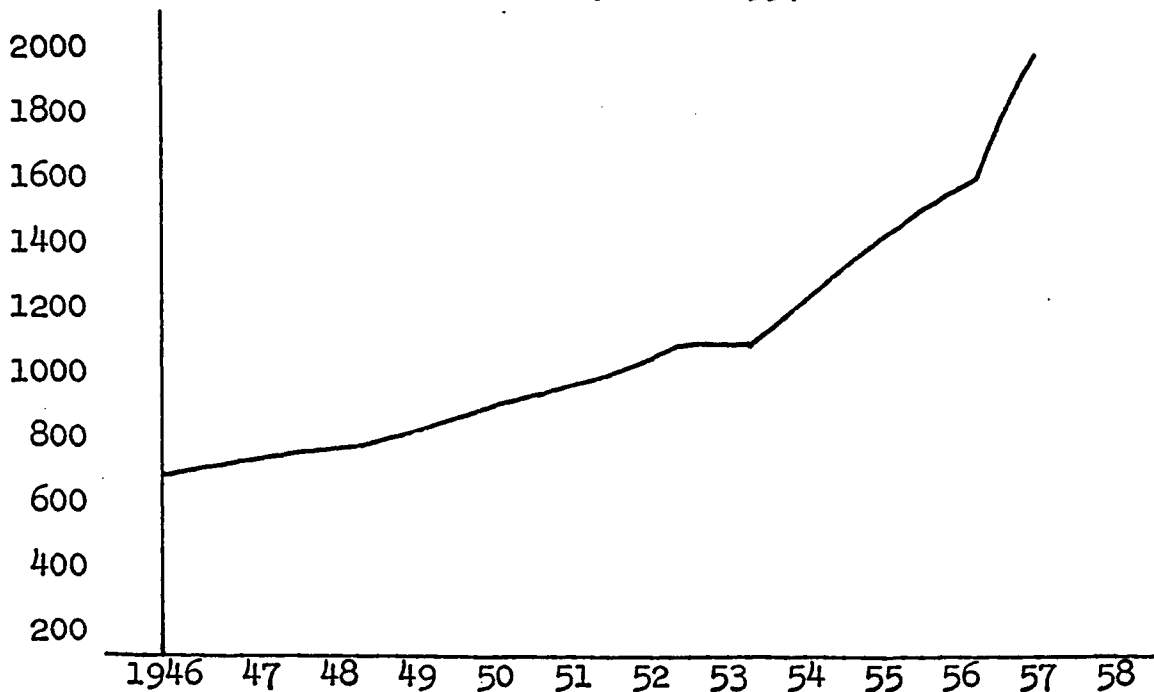
^a The reason for the difference between these figures and previous figures on life insurance in force in Arizona is the inclusion of associations and societies.

Source: Arizona Statistical Review, 1959, p. 5.

Another clear indication of the growth of life insurance in force in recent years is provided by stating the figures on a per capita basis. This is done in Figure V-2, and the upward trend is again very pronounced.

FIGURE V-2

THE GROWTH OF PER CAPITA LIFE INSURANCE
IN FORCE IN ARIZONA, 1947-1957



Source: Arizona Statistical Review, 1959, p. 13.

Life Insurance Sales

Its nature. - Total life insurance sales consist of the sum of the face amounts of new life insurance policies issued and paid for during a given period.⁵ For purposes of this study, total life insurance sales are broken down into separate classes - life insurance sales by domestic companies and life insurance sales by foreign companies. The differences between these two types of companies have

⁵Ibid.

already been discussed on page 79.

Domestic life insurance companies. - The only available figures for life insurance sales by domestic life insurance companies are the differences between life insurance in force at the beginning of the year and life insurance at the end of the year, with an adjustment being made for paid claims during the year. All of these values are not available in the annual reports, but Table V-4 lists the estimates for the selected years during which the totals are listed. Before 1945 there were no accurate estimates of life insurance in force, which makes the calculation of new business written during the period impossible. From 1945 to 1957 the figures listed are the best estimates possible. As in the case of life insurance in force, there has been a definite upward trend of life insurance sales in Arizona by domestic life insurance companies.

TABLE V-4

LIFE INSURANCE SALES, OR NEW BUSINESS
WRITTEN, BY DOMESTIC LIFE INSURANCE
COMPANIES IN ARIZONA FOR SELECTED
YEARS, 1915 - 1957

Year	New Business ^a (Millions)	Rate of Increase
1915	NA	---
1920	NA	---
1925	NA	---
1930	NA	---
1935	NA	---
1940	NA	---
1945	\$ 6.8	---
1950	32.5	3.78
----	----	----
1951	1.6	-.95
1952	11.7	6.31
1953	34.3	1.92
1954	28.9	-.16
1955	107.7	2.74
1956	98.2	-.09
1957	179.4	.82

^a Figures estimated from total life insurance in force with adjustment for paid claims.

Source: Annual Insurance Report of the Insurance Department of Arizona, Reports 1 - 46.

Although the trend in new business written by domestic life insurance companies has been generally upward throughout the period studied, the rate of increase has fluctuated a great deal. This is very evident in Table V-4.

Foreign life insurance companies. - The available data for new business written by foreign life insurance companies is much more complete than that available for

domestic companies. In fact, in the majority of the annual reports, this series of data, plus premium income, is the most common method of listing company activity during the period. The total amount of new business written in 1957 by foreign companies was over four times the amount written in 1950.

Table V-5 presents the amounts of new business written by foreign companies for selected years, 1915 - 1957; however, these figures are not available until 1925 in the annual reports of the insurance department. Table V-5 not only includes total values, but also the selected year values for ordinary life insurance. The purpose of this separate listing is for comparison with United States figures in Part III. This division is possible only for years following 1945 due to the department's reporting methods.

TABLE V-5

NEW BUSINESS WRITTEN IN ARIZONA BY
FOREIGN LIFE INSURANCE COMPANIES
FOR SELECTED YEARS,
1915 - 1957

Year	Total New Business Written (millions)	Rate of Increase	Ordinary Life Business Written (millions)	Rate of Increase
1915	NA	---	NA	---
1920	NA	---	NA	---
1925	\$ 22.3	---	NA	---
1930	30.4	.36	NA	---
1935	21.2	-.30	NA	---
1940	30.9	.46	NA	---
1945	74.8 ^a	1.42	\$ 42.0 ^a	---
1950	130.6 ^a	.74	91.4 ^a	1.18
----	----	----	----	----
1951	146.8 ^a	.12	93.8 ^a	.03
1952	193.3	.32	116.2	.24
1953	196.7	.02	131.9	.13
1954	265.5	.35	150.0	.14
1955	330.6	.28	199.9	.33
1956	624.4	.89	264.1	.32
1957	468.1	-.25	305.2	.15

^a These figures include domestic totals for this period also.

Source: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1 - 46.

Total life insurance sales in Arizona. - For purposes of comparison with life insurance sales in the United States in Part III, the figures of Table V-4 and Table V-5 are combined in Table V-6. These figures show the new business written in Arizona by foreign and domestic life insurance companies.

TABLE V-6

TOTAL LIFE INSURANCE SALES, OR NEW BUSINESS
WRITTEN, IN ARIZONA FOR SELECTED YEARS,
1915 - 1957

Year	New Business (millions)	Rate of Increase
1915	NA	—
1920	NA	—
1925	\$ 22.3	—
1930	30.4	.36
1935	21.2	-.30
1940	30.9	.46
1945	74.8	1.42
1950	130.6	.74
-----	-----	-----
1951	146.8	.12
1952	205.0	.39
1953	231.0	.13
1954	294.4	.28
1955	438.3	.49
1956	712.6	.63
1957	647.5	-.09

Source: Figures in Table V-4, p. 88; Table V-5, p. 90.

Income of Life Insurance Companies

Its nature. - The figures discussed in this section dealing with income of life insurance companies in Arizona consist, primarily, of premium income. The reason for this is that the other components of income of life insurance companies are not directly connected with any particular state, but are national in scope, i.e., investment income, etc.

Premium income of domestic life insurance companies. - Since domestic life insurance companies did not

account for any appreciable percentage of business done in Arizona until the early 1940's, there is little record of any income in the early years of this study. Table V-7 does show that in 1935 there was an amount of \$30,000 listed as premium income for domestic companies, but due to failures in the following years, no income is listed again until 1945. After 1945, the trend in premium income for domestic life insurance companies has been upward, reaching a high of over \$14 million in 1957.

TABLE V-7

PREMIUM INCOME OF DOMESTIC LIFE INSURANCE
COMPANIES IN ARIZONA FOR SELECTED
YEARS, 1915 - 1957

Year	Income (millions)	Rate of Increase
1915	—	—
1920	—	—
1925	—	—
1930	—	—
1935	\$.03	—
1940	—	—
1945	.25	—
1950	3.50	13.00
-----	-----	-----
1951	1.80	-.49
1952	1.90	.06
1953	3.20	.68
1954	3.70	.16
1955	7.10	.92
1956	9.80	.39
1957	14.50	.48

Source: Annual Insurance Reports of the
Insurance Department of Arizona. Reports 1 - 46.

The clearly evident upward trend presented in Table V-7 supports the previous findings that domestic companies have been growing rapidly in importance in the field of life insurance in Arizona.

Premium income of foreign life insurance companies. - The most complete series of data contained in the annual reports is premium income. In fact, in the very earliest reports, this is the only measurement of life insurance activity listed by the insurance department. This study is interested only in premium income of foreign companies since this is their only real connection with the state of Arizona. One difficulty in studying these income figures is that for some years the totals listed include domestic companies, and in other years domestic company income is deleted. This discussion has attempted to adjust for these inconsistencies. Another difficulty is the separation of total figures from the totals for ordinary life insurance, which is possible only after the year 1945.

Table V-8 shows the amount of premium income of foreign life insurance companies for selected years, 1915 - 1957. Study of the totals results in the conclusion that income of foreign life insurance companies has increased steadily throughout the period studied, except for a temporary reduction from 1930 to 1935, which was expected

due to general economic conditions. This upward trend reached a peak of over \$43 million in 1957.

TABLE V-8

PREMIUM INCOME OF FOREIGN LIFE INSURANCE
COMPANIES IN ARIZONA FOR SELECTED
YEARS, 1915 - 1957

Year	Total Premium Income (millions)	Rate of Increase	Ordinary Premium Income (millions)	Rate of Increase
1915	\$ 1.1	—	NA	—
1920	2.2	1.00	NA	—
1925	2.9	.32	NA	—
1930	4.5	.55	NA	—
1935	3.6	-.20	NA	—
1940	5.8	.61	NA	—
1945	10.1	.78	\$ 8.1	—
1950	17.0 ^a	.68	14.2 ^a	.75
-----	-----	-----	-----	-----
1951	19.4 ^a	.14	16.1 ^a	.14
1952	22.3	.15	17.5	.09
1953	24.8	.11	20.2	.15
1954	29.9	.21	22.2	.09
1955	33.8	.13	24.5	.10
1956	36.8	.09	27.1	.11
1957	43.3	.18	30.8	.14

^a These figures include domestic totals for this period.

Source: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1 - 46.

Total premium income in Arizona. - For purposes of comparison with income of United States life insurance companies in Part III, the figures in Table V-7 and Table V-8 are combined in Table V-9. These figures show the total premium income in Arizona for all companies for

selected years, 1915 - 1957.

TABLE V-9
TOTAL PREMIUM INCOME IN ARIZONA FOR
SELECTED YEARS, 1915 - 1957

Year	Premium Income (millions)	Rate of Increase
1915	\$ 1.1	_____
1920	2.2	1.00
1925	2.9	.32
1930	4.5	.55
1935	3.6	-.20
1940	5.8	.61
1945	10.1	.78
1950	17.0	.68
-----	-----	-----
1951	19.4	.14
1952	24.2	.25
1953	28.0	.16
1954	33.6	.20
1955	40.9	.22
1956	46.6	.14
1957	57.8	.24

Source: Figures from Table V-7, p. 92;
Table V-8, p. 94.

Number of Life Insurance Companies

Arizona's growth in recent years of domestic life insurance companies has been briefly discussed in Chapter II. Also, the previous discussion regarding life insurance in force, new business written, and income of life insurance companies is a clear indication of the increased number of life insurance companies, both foreign and domestic, operating in Arizona. It is believed that in addition to these indirect indications, it is important

that the detailed growth of foreign and domestic life insurance companies be studied. This information proves very useful in comparison with national trends in Part III.

Number of domestic life insurance companies. - In early years, the life insurance market in Arizona was almost entirely dominated by foreign life insurance companies. Before 1940, repeated attempts of Arizona life insurance companies ended unsuccessfully. Table V-10 traces these attempts, the first coming in 1920. Although domestic companies had a difficult time becoming established in the market, they have been very successful in recent years. The total of three domestic life insurance companies in 1950 increased to over sixty in 1957, the greatest percentage increase in the United States. Once again, it must be pointed out that these figures include only legal reserve life insurance companies, not fraternal associations or benefit societies. These legal reserve life insurance companies consist of stock companies or mutual companies, the difference having been explained in Chapter II.

TABLE V-10

NUMBER OF DOMESTIC LIFE INSURANCE COMPANIES IN
ARIZONA FOR SELECTED YEARS, 1915 - 1957

Year	Domestic Companies	Rate of Increase
1915	0	---
1920	1	1.00
1925	0	-1.00
1930	1	1.00
1935	2	1.00
1940	0	-1.00
1945	1	1.00
1950	3	2.00
----	----	----
1951	4	.33
1952	9	1.25
1953	10	.11
1954	25	1.50
1955	34	.36
1956	53	.56
1957	64	.21

Source: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1 - 46.

Number of foreign life insurance companies. -

Foreign life insurance companies have been increasing in number in Arizona throughout the period studied. Table V-11 shows that only in the period from 1930 to 1935 was there a reduction in the number of licensed foreign companies operating in Arizona. The number of foreign life insurance companies has more than doubled since 1950, reaching a peak of 199 in the year 1957. Of course, this rapid increase in the number of companies is a result of many factors. One very important reason for this increase is the overall

expansion in the economy of Arizona, which has made necessary more protection in the form of life insurance. Another contributing factor has been the rapid increase in the number of United States life insurance companies, which have also more than doubled since 1950.

TABLE V-11

NUMBER OF FOREIGN LIFE INSURANCE COMPANIES IN
ARIZONA FOR SELECTED YEARS, 1915 - 1957

Year	Foreign Companies	Rate of Increase
1915	30	—
1920	32	.07
1925	35	.09
1930	55	.57
1935	41	-.25
1940	37	-.09
1945	52	.41
1950	95	.83
----	----	----
1951	98	.03
1952	106	.08
1953	110	.04
1954	124	.13
1955	142	.15
1956	156	.09
1957	199	.28

Source: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1 - 46.

Total number of life insurance companies operating in Arizona. - Table V-12 lists the total number of life insurance companies operating in Arizona. This table combines the figures found in Table V-10 and V-11.

TABLE V-12

TOTAL NUMBER OF LIFE INSURANCE COMPANIES OPERATING
IN ARIZONA FOR SELECTED YEARS, 1915 - 1957

Year	All Life Insurance Companies	Rate of Increase
1915	30	—
1920	33	.10
1925	35	.06
1930	56	.60
1935	43	-.23
1940	37	-.14
1945	53	.43
1950	98	.85
-----	-----	-----
1951	102	.04
1952	115	.13
1953	120	.04
1954	149	.24
1955	176	.18
1956	209	.19
1957	263	.26

Source: Annual Insurance Reports of the Insurance
Department of Arizona, Reports 1 - 46.

CHAPTER VI

COMPARISON OF ECONOMIC INDICATORS AND LIFE INSURANCE INDICATORS

General Per Capita Relationships

A very rapid expansion in the economy of Arizona is clearly evident, especially in recent years, from the indicators studied in Chapter IV. Life insurance has also experienced an increasing growth rate, which has been described in Chapter V. Next it is important that the relationships existing between these two pronounced upward trends be examined.

Table VI-1 and Figure VI-1 illustrate the recent per capita growth patterns in certain sectors of Arizona's economy. Although each of the indicators presented has experienced an upward trend in recent years, per capita life insurance in force has recorded the most rapid increase, reaching a peak of nearly \$1,900 in 1957.

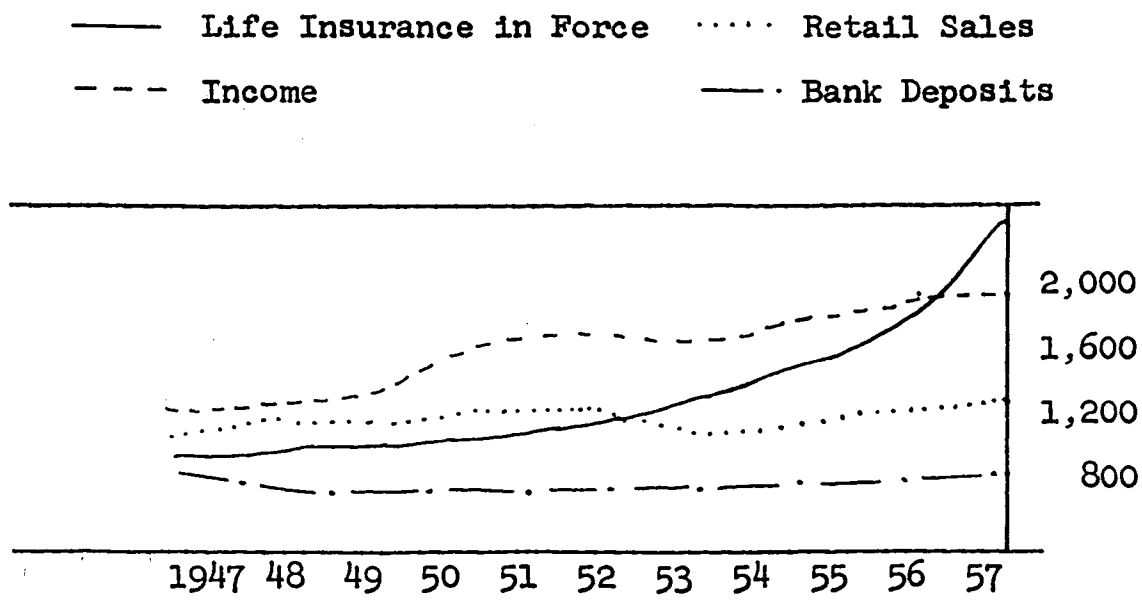
TABLE VI-1

FINANCIAL STATISTICS CONVERTED TO A PER CAPITA
BASIS, 1947 - 1957

Year	Per Capita Income	Per Capita Retail Sales	Per Capita Ins. in Force	Per Cap. Bank Deposits
1947	\$1,149	\$ 994	\$ 691	\$633
1948	1,242	1,066	796	616
1949	1,245	978	835	585
1950	1,297	1,030	883	626
1951	1,551	1,137	961	673
1952	1,647	1,150	1,009	710
1953	1,610	1,131	1,081	690
1954	1,611	1,104	1,304	732
1955	1,705	1,174	1,449	735
1956	1,825	1,229	1,652	791
1957	1,873	1,297	1,883	802

Source: Arizona Statistical Review, 1959, p. 13.

FIGURE VI-1

PER CAPITA FINANCIAL STATISTICS OF ARIZONANS,
1947 - 1957

Source: Arizona Statistical Review, 1959, p. 13

Life Insurance in Force to
Arizona Business Index

Another method of comparing economic growth with the growth of life insurance is by conversion of the data to a mutual base period. This is done in Table VI-2 and in Figure VI-2 for the totals of life insurance in force and for the general index of business activity in Arizona, 1950-1957. It is very evident that of the two increasing growth patterns presented, life insurance in force has been increasing at a faster rate.

TABLE VI-2

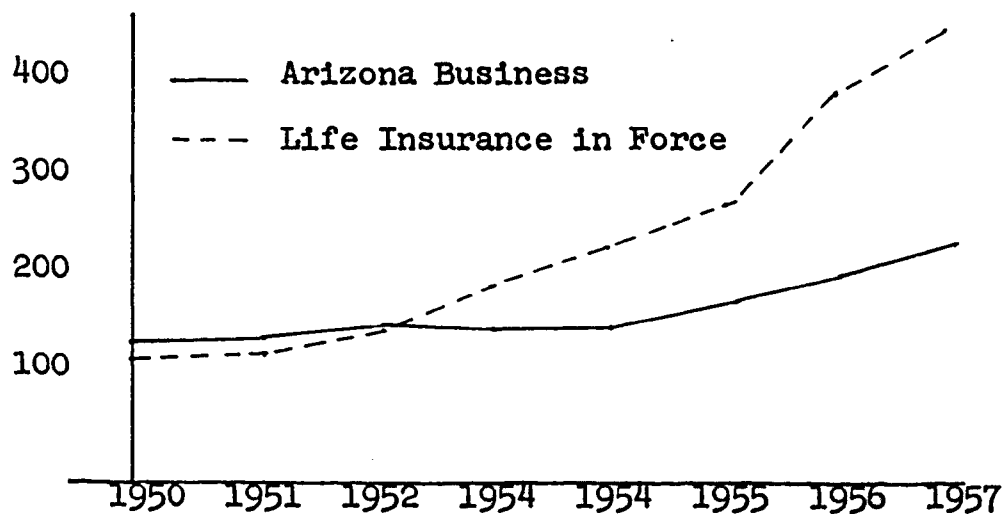
INDEX VALUES FOR ARIZONA BUSINESS AND FOR
LIFE INSURANCE IN FORCE, 1950 - 1957
(1947 - 1949 = 100)

Year	Arizona Business	Life Insurance in Force
1950	125	111
1951	140	128
1952	150	151
1953	153	176
1954	152	208
1955	165	266
1956	180	351
1957	200	415

Sources: Arizona business: Arizona Statistical Review, 1959, p. 3. Life insurance in force: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1-46.

FIGURE VI-2

ADJUSTED INDICES OF ARIZONA BUSINESS AND LIFE
INSURANCE IN FORCE, 1950 - 1957
(1947 - 1949 = 100)



Source: Figures from Table VI-2, p. 102.

Life Insurance in Force to Income
from Industrial Production

Another means of showing the comparatively greater increase in the rate of growth of life insurance in Arizona than in the over-all economy is the relationship to income from industrial production, using 1947 - 1949 = 100 as the base period. The reason for using life insurance in force for this comparison instead of life insurance sales or life insurance premium income is that it provides the most conservative growth trend of the three. Table VI-3 and Figure VI-3 clearly reveal the more than equal rate of growth of life insurance in force, 1950 - 1957.

TABLE VI-3

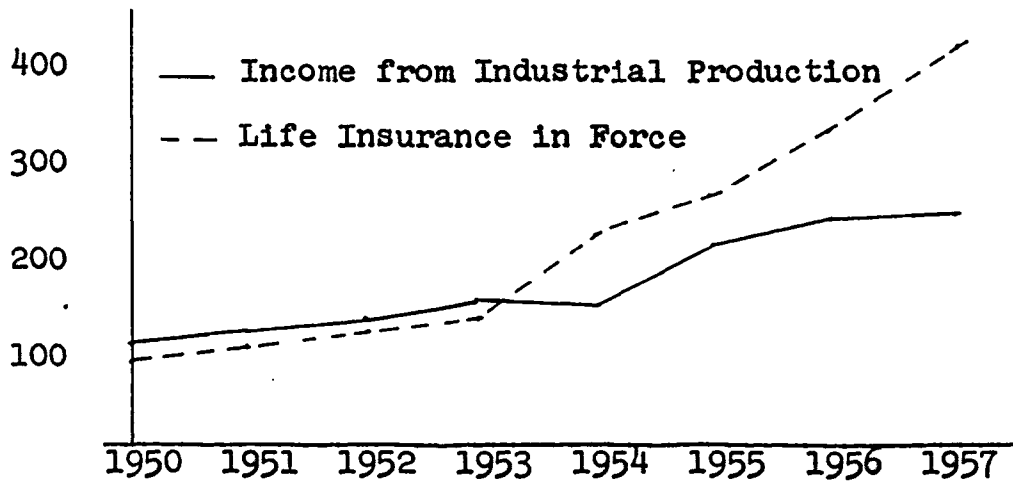
INDEX VALUES FOR INCOME FROM INDUSTRIAL PRODUCTION
AND FOR LIFE INSURANCE IN FORCE IN
ARIZONA, 1950 - 1957
(1947 - 1949 = 100)

Year	Income From Industrial Production	Life Insurance in Force
1950	115	111
1951	149	128
1952	165	151
1953	188	176
1954	180	208
1955	234	266
1956	291	351
1957	279	415

Sources: Industrial production figures calculated from values in Arizona Statistical Review, 1959, p. 3. Life insurance in force calculated from Annual Insurance Reports of the Insurance Department of Arizona, Reports 1-46.

FIGURE VI-3

ADJUSTED INDICES OF INCOME FROM INDUSTRIAL PRODUCTION
IN ARIZONA AND LIFE INSURANCE IN FORCE IN
ARIZONA, 1950 - 1957
(1947 - 1949 = 100)



Source: Figures in Table VI-3, p. 107.

Premium Income to
Personal Income

It is also possible to study the comparative trends of the economy in general and of life insurance by comparing income. The most meaningful way of accomplishing this is by adjusting each series of data to the same base period. This has been done in Table VI-4 and in Figure VI-4, with 1947 - 1949 = 100 used as the base period.

TABLE VI-4

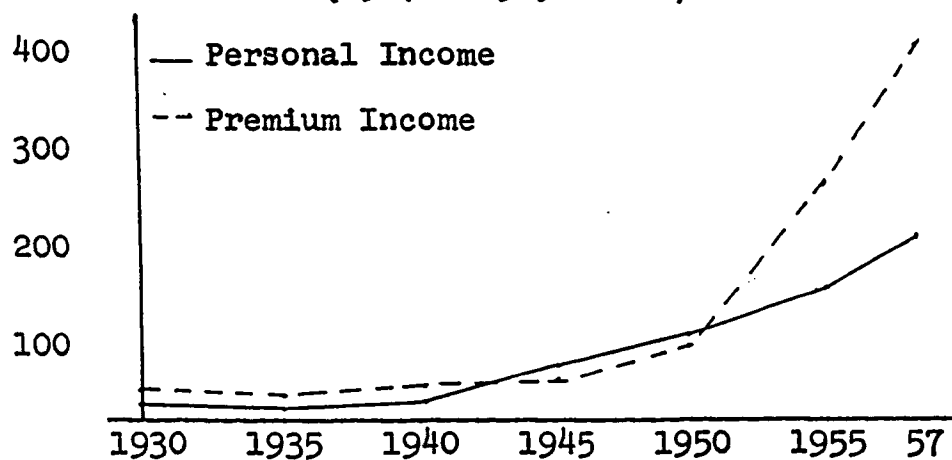
INDEX VALUES FOR PREMIUM INCOME FOR LIFE INSURANCE
COMPANIES IN ARIZONA AND FOR PERSONAL INCOME
IN ARIZONA FOR SELECTED YEARS, 1930 - 1957
(1947 - 1949 = 100)

Year	Personal Income	Premium Income
1930	25	29
1935	19	23
1940	30	38
1945	73	66
1950	113	111
1955	183	267
1957	224	369

Sources: Personal income index calculated from figures in U. S. Income and Output, November, 1958, pp. 156-159. Premium income index calculated from figures in the Annual Insurance Reports of the Insurance Department of Arizona, Reports 1-46.

FIGURE VI-4

ADJUSTED INDICES OF PERSONAL INCOME IN ARIZONA
AND PREMIUM INCOME OF LIFE INSURANCE COMPANIES
IN ARIZONA FOR SELECTED YEARS, 1930 - 1957
(1947 - 1949 = 100)



Source: Figures in Table VI-4.

Table VI-4 and Figure VI-4 indicate, once again, that in the very rapidly growing state of Arizona, life insurance, as an industry, has experienced a more rapid upward trend than the economy in general.

Life Insurance in Force to
Population and Employment

The final relationships studied in this comparison of Arizona's expanding economy and the growth of life insurance are population and employment trends. Population and employment are important factors in the purchase of life insurance, due to its very nature.

Population. - Table VI-5 lists the total Arizona population figures for selected years, 1920 - 1957, and the amount of life insurance in force for the same years.

TABLE VI-5

POPULATION AND LIFE INSURANCE IN FORCE IN ARIZONA
FOR SELECTED YEARS, 1920 - 1957

Year	Population (millions)	Rate of Increase	Life Insurance in Force (millions)	Rate of Increase
1920	.33		NA	---
1925	.38	.15	\$ 110.7	---
1930	.43	.14	141.3	.27
1935	.43	.00	162.3	.14
1940	.50	.14	203.6	.25
1945	.59	.18	334.2	.64
1950	.76	.29	664.3	.99
1955	1.00	.32	1,375.7	1.07
----	----	---	-----	----
1957	1.10	.10	\$1,988.2	.45

Sources: Population figures: 1920 - 1930: Arizona Statistical Review, 1946, p. 3. 1930 - 1955: Personal Income by States, 1956, p. 144. 1957: Arizona Statistical Review, 1959, p. 6. Life insurance in force: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1-46.

The increase columns in Table VI-5 reveal a relationship between population increase and the increase of life insurance in force. The large population increase from 1950 to 1955 was undoubtedly a major factor in the large increase in life insurance in force.

Employment. - Table VI-6 shows figures for total non-agricultural employment in Arizona for selected years, and life insurance in force for the same selected years, 1940 - 1957.

TABLE VI-6

EMPLOYMENT AND LIFE INSURANCE IN FORCE IN ARIZONA
FOR SELECTED YEARS, 1940 - 1957

Year	Employment (millions)	Rate of Increase	Life Insurance in Force (millions)	Rate of Increase
1940	.10	—	\$ 203.6	.25
1945	.14	.40	334.2	.64
1950	.15	.07	664.3	.99
-----	---	---	-----	---
1951	.18	.20	\$ 765.2	.15
1952	.19	.06	910.0	.19
1953	.20	.05	1,054.3	.16
1954	.20	.00	1,248.9	.19
1955	.22	.10	1,599.2	.28
1956	.25	.14	1,957.9	.22
1957	.27	.08	2,493.3	.27

Sources: Employment figures: Arizona Statistical Review, 1959, p. 10. Life insurance in force figures: Annual Insurance Reports of the Insurance Department of Arizona, Reports 1-46.

Table VI-6 does not reveal any statistical relationship between the two series of data except that both trends are upward in nature, with life insurance in force climbing more rapidly. The rate of increase of life insurance in force has been especially rapid in 1955, 1956, and 1957.

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CHAPTER VII

COMPARISON OF ECONOMIC GROWTH IN THE UNITED STATES WITH ECONOMIC GROWTH IN ARIZONA

Economic Activity in General

Previous discussion concerning the United States, Chapter I, and discussion concerning Arizona, Chapter IV, indicates that a pronounced upward trend has been dominant throughout the period studied. It is important that Arizona's expanding economy be compared, as to rate of increase, with the expanding economy of the United States. This chapter re-emphasizes the fact that Arizona has been one of the most rapidly growing states in the country, especially in recent years.

One method of describing economic conditions is by construction of a business index, using a certain year as the base period. This is done in Table VII-1, with 1947-1949 = 100 used as the base period. The figures representing economic conditions existing in the United States equal gross national product during the years selected. It is very evident that Arizona business, in comparison to business in the United States, has been increasing at a faster rate in recent years. This observation is

especially valid in the years 1956 and 1957. This relationship is presented graphically in Figure VII-1, and again, Arizona's more than proportional growth is very pronounced.

For a more meaningful comparison, the reader should compare the findings of Table VII-1 and Figure VII-1 with the comparison of industrial production found on page 74 and on page 114.

TABLE VII-1
COMPARATIVE BUSINESS INDEX VALUES FOR THE
UNITED STATES AND ARIZONA, 1950-1957
(1947-1949 = 100)

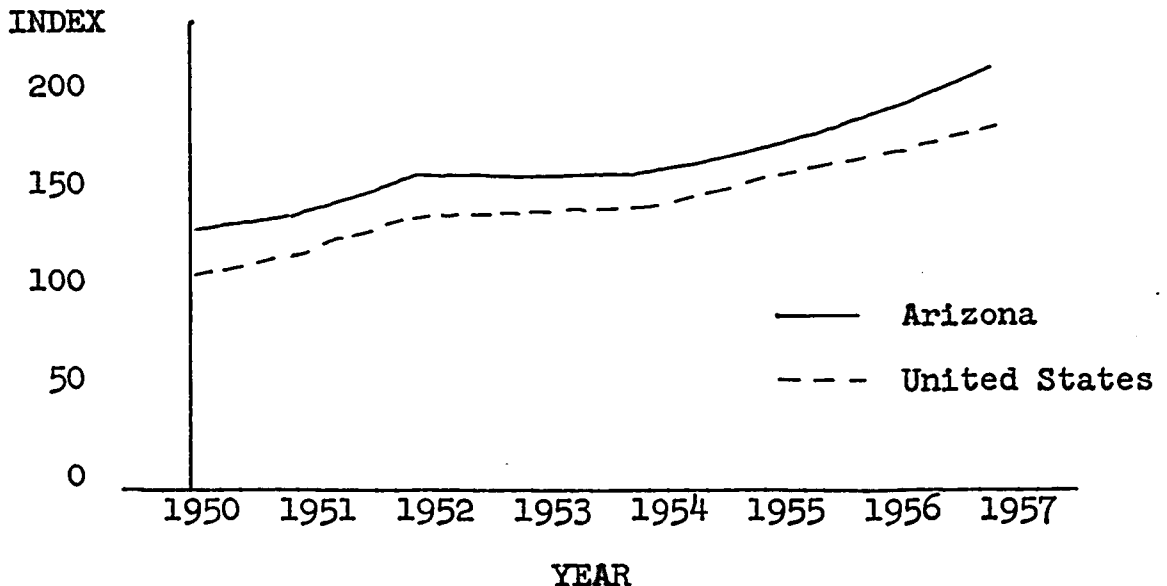
Year	United States Index	Arizona Index
1950	110	125
1951	128	140
1952	134	150
1953	141	153
1954	140	152
1955	152	165
1956	161	180
1957	172	200

Sources: United States figures calculated from data in Table I-1, page 6. Arizona figures calculated from Figure IV-1, page 62.

A very good indication of the effect of business activity in the United States on business activity in Arizona is seen in the year 1954, during which both indices in Table VII-1 decreased. Also, a good indication of Arizona's future is found in the twenty point increase in 1957, which was the largest increase of any year studied.

FIGURE VII-1

COMPARATIVE TRENDS OF BUSINESS ACTIVITY IN THE
 UNITED STATES AND IN ARIZONA, 1950-1957
 (1947-1949 = 100)



Source: Figures in Table VII-1, page 112.

Income

There is little need for further discussion of the growth of total and per capita income in the United States and in Arizona due to the comparisons made earlier on pages 64 and 65. The reason for discussing this relationship in Chapter IV was for the purpose of facilitating the description of income growth in Arizona at that time. The reader should direct his attention, primarily, to Figure IV-2 found on page 64 and Table IV-2 on page 65. The main point of interest to be gained from the comparison is that Arizona is rapidly catching up with the United States in

per capita income. In fact, since 1947, Arizona has ranked second in the nation in rate of income growth.

Population and Employment

Population. - This relationship was also discussed in detail in Chapter IV for the same reasons pointed out above for earlier discussion of income. Table IV-4, found on page 67 and Table IV-5, found on page 68 definitely emphasize the fact that Arizona's population has been increasing at an increasing rate. Table IV-6, page 69 indicates that this increase should continue in future years.

Employment. - Table IV-7, found on page 70 shows that Arizona led the nation in the rate of employment growth, 1948-1958. This increase resulted in nearly twice as many persons employed at the end of the ten year period. Arizona also led the nation in the rate of employment growth in the field of manufacturing, experiencing a gain of over 154 per cent in the ten-year period. This percentage was nearly 70 per cent higher than the second ranked state, Florida.

Industrial Production

As defined in previous discussion, the industrial production index is the combined output of manufacturing utilities, and mining, adjusted to a base period for purposes of comparison. The base period used in this discussion, and in most studies concerning industrial production, is 1947 - 1949 = 100. Table IV-10, found on page 74 consists of the

index values for the United States and Arizona from 1947 through 1957. Both series have experienced a definite upward trend during the period studied, with an apparent similarity in the years of increase and decrease. For example, both series of data indicate a slight drop in the years 1949 and 1954, while large increases are noticeable in the years 1953 and 1955. Arizona's index increased at a much faster rate than did the index of the United States. It is possible to say, after studying the values in Table IV-10, that industrial production in Arizona has outgained, proportionately, industrial production in the United States; however, it must be remembered that the dollar measurement in Arizona, due to lack of available output figures, results in extreme overstatement.

Savings

The final comparison made in this chapter is between the growth of savings in the United States and the growth of savings in Arizona. For this discussion it is not necessary that this point be described in great detail. For this reason, Table IV-12, found on page 77, is satisfactory as an indicator of the growth in savings. Bank deposits in Arizona have increased by 148 per cent since 1948, ranking second in the nation in the rate of growth. These figures again indicate that Arizona is not only benefiting from

growth in the United States, but that Arizona is also acting in the role of a leader in this national growth.

CHAPTER VIII

COMPARISON OF THE GROWTH OF LIFE INSURANCE IN THE UNITED STATES WITH LIFE INSURANCE GROWTH IN ARIZONA

Life Insurance in Force

Chapter II, dealing with the growth of life insurance in the United States, and Chapter V, dealing with the growth of life insurance in Arizona, have already pointed out that life insurance in force has been increasing rapidly during the period studied. It is now important that a comparison be made of the rate of growth in the United States and the rate of growth in Arizona. The most meaningful way of accomplishing this is by adjusting each series of data to the same base period, and constructing a growth index to measure the comparative trends. This adjustment has been made in the values found in Table VIII-1, and in the figures used in drawing Figure VIII-1.

TABLE VIII-1

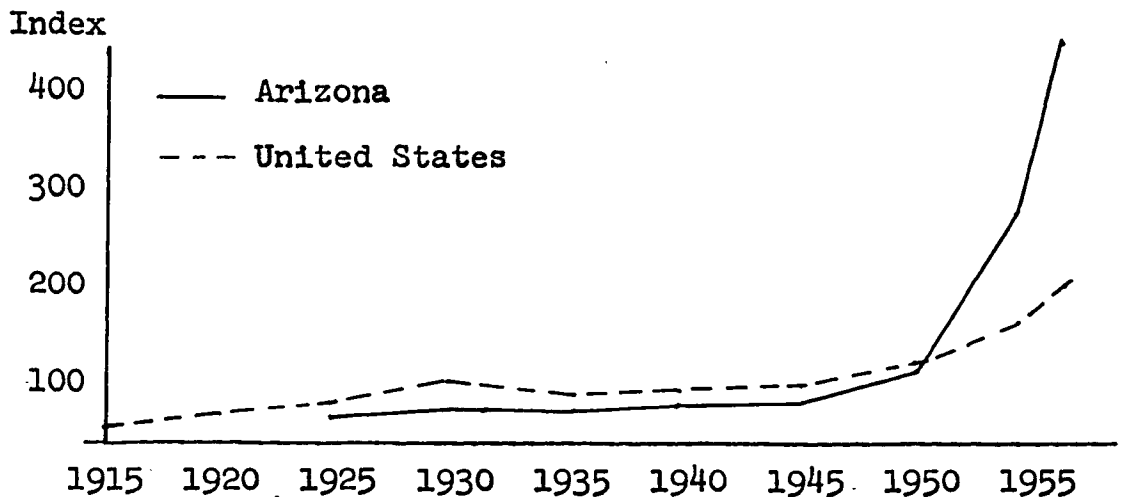
COMPARATIVE INDEX VALUES FOR THE UNITED STATES AND
ARIZONA OF LIFE INSURANCE IN FORCE FOR
SELECTED YEARS, 1915 - 1957
(1947 - 1949= 100)

Year	Life Insurance in Force Index for the United States	Life Insurance in Force Index for Arizona
1915	10	NA
1920	19	NA
1925	33	19
1930	49	24
1935	46	27
1940	53	34
1945	71	56
1950	109	111
- - -	- - -	- - -
1951	119	128
1952	132	151
1953	158	176
1954	158	208
1955	176	266
1956	196	351
1957	237	415

Sources: Figures for United States calculated from values found in Table II-1, found on p. 26. Figures for Arizona calculated from values in Table V-2, found on page 83.

FIGURE VIII-1

INDEX GROWTH TRENDS OF LIFE INSURANCE IN FORCE
IN THE UNITED STATES AND IN ARIZONA FOR
SELECTED YEARS, 1915 - 1957
(1947 - 1949 = 100)



Source: Figures in Table VIII-1, p. 118.

It is obvious, after studying Table VIII-1, and Figure VIII-1, that the rate of growth of life insurance in force in Arizona has been much more rapid than the rate of growth of life insurance in force in the United States since 1945. It is also readily apparent that during the period 1915 through 1945 the growth trend in the United States was greater than that in Arizona.

Another way of illustrating Arizona's more than proportional growth of life insurance in force is found in Table V-3, located on page 85. This table shows that since 1948 Arizona has not only experienced a greater growth than the United States total, but has ranked second of the

forty-eight states in the rate of growth of life insurance in force.

Life Insurance Sales

The growth of life insurance in Arizona in recent years is also very pronounced in life insurance sales, or new business written. The United States totals have increased steadily throughout the period studied, but this rate of increase since 1950 has been far below the rate of increase in Arizona. These relationships are most easily discernable in the form of an adjusted index, using the period 1947 - 1949= 100 as the base. Table VIII-2 and Figure VIII-2 present the comparative growth patterns of life insurance sales in the United States and in Arizona. Arizona's growth is even more pronounced in this discussion than in the previous section dealing with life insurance in force.

TABLE VIII-2

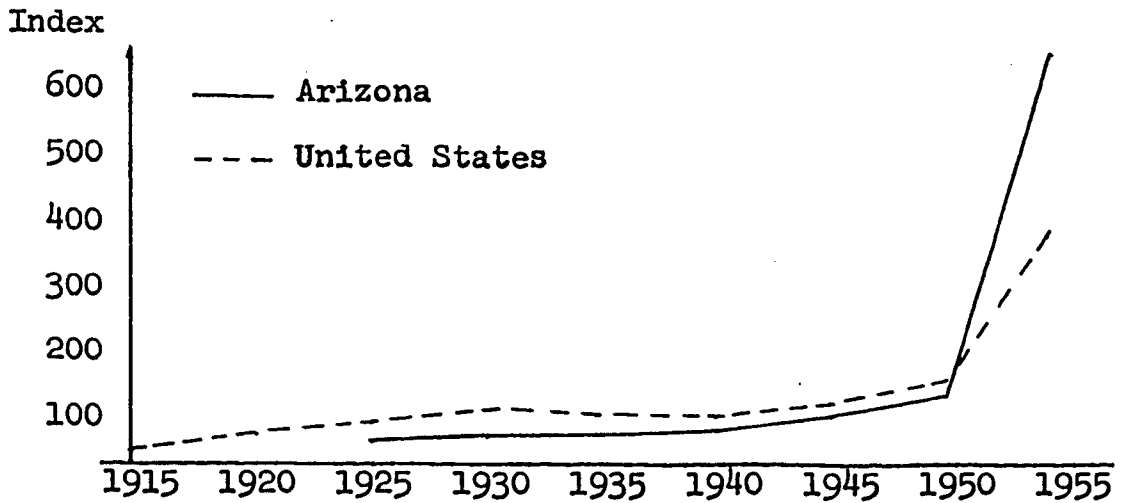
COMPARATIVE INDEX VALUES FOR THE UNITED STATES AND ARIZONA
 FOR LIFE INSURANCE SALES FOR SELECTED YEARS, 1915 - 1957
 (1947 - 1949 = 100)

Year	Life Insurance Sales Index for the United States	Life Insurance Sales Index for Arizona
1915	10	NA
1920	40	NA
1925	61	19
1930	73	25
1935	52	18
1940	47	26
1945	65	63
1950	127	109
-----	---	---
1951	119	123
1952	141	172
1953	161	193
1954	201	246
1955	213	367
1956	254	596
1957	304	542

Sources: Figures for the United States calculated from values in Table II-4, found on page 32. Figures for Arizona calculated from values in Table V-6, found on p. 91.

FIGURE VIII-2

INDEX GROWTH TRENDS OF LIFE INSURANCE SALES IN THE UNITED STATES AND IN ARIZONA FOR SELECTED YEARS, 1915 - 1957
(1947 - 1949 = 100)



Source: Figures in Table VIII-2, p. 121.

Premium Income

Premium income, not total income, should be used in comparing the rate of growth of life insurance in the United States with the rate of growth of life insurance in Arizona for the reason that total income includes components not connected with the state of Arizona in many instances. Once again the trend in the United States has been upward throughout the period studied, except for the period from 1930 through 1935. Arizona has also experienced an upward trend, except for the period from 1930 through 1935, and in all years following 1945. Arizona's rate of growth in premium income has far exceeded the rate of growth in the

United States. Since 1947, premium income in Arizona has increased at a rate of nearly 500 per cent, while the United States, during the same period, experienced a growth of under 200 per cent. Table VIII-3 and Figure VIII-3 present these comparative trends in premium income in the United States and in Arizona.

TABLE VIII-3

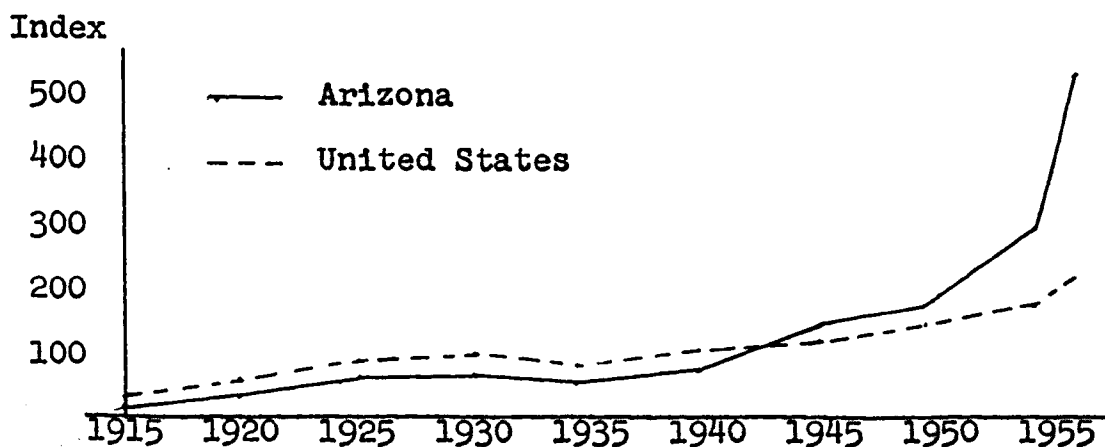
COMPARATIVE INDEX VALUES FOR THE UNITED STATES AND ARIZONA
FOR PREMIUM INCOME FOR SELECTED YEARS, 1915 - 1957
(1947 - 1949 = 100)

Year	Premium Income Index for the United States	Premium Income Index for Arizona
1915	14	9
1920	24	19
1925	39	25
1930	57	38
1935	54	31
1940	59	49
1945	76	86
1950	105	145
-----	---	---
1951	115	166
1952	122	207
1953	132	248
1954	139	287
1955	151	349
1956	163	399
1957	171	494

Sources: Figures for the United States calculated from values in Table II-5, found on p. 36. Figures for Arizona calculated from values in Table V-9, found on p. 95.

FIGURE VIII-3

INDEX GROWTH TRENDS OF PREMIUM INCOME FROM LIFE INSURANCE
IN THE UNITED STATES AND IN ARIZONA FOR SELECTED
YEARS, 1915 - 1957
(1947 - 1949 = 100)



Source: Figures in Table VIII-3, found on p. 123.

Number of Life Insurance
Companies

The final indicator of life insurance growth necessary for comparison of United States trends and trends in Arizona is the number of life insurance companies located in the respective area. Arizona's tremendous growth can best be illustrated by exhibiting not only total figures, but also the individual growth patterns of domestic companies and foreign companies. Table VIII-4 consists of the number of life insurance companies located in the United States and in Arizona for selected years, 1915 - 1957.

TABLE VIII-4

NUMBER OF LIFE INSURANCE COMPANIES LOCATED IN THE UNITED STATES AND ARIZONA FOR SELECTED YEARS, 1915 - 1957

Year	United States	Total	Arizona	
			Foreign	Domestic
1915	295	30	30	0
1920	335	33	32	1
1925	379	35	35	0
1930	438	56	55	1
1935	373	43	41	2
1940	444	37	37	0
1945	473	53	52	1
1950	650	98	95	3
----	----	---	---	---
1951	680	102	98	4
1952	731	115	106	9
1953	833	120	110	10
1954	917	149	124	25
1955	1,107	176	142	34
1956	1,189	209	156	53
1957	1,271	253	199	54

Sources: Figures for the United States calculated from figures in Table II-8, found on p. 45. Figures for Arizona calculated from Table V-10, p. 72; Table V-11, p.73; and Table V-12, found on p. 99.

The most pronounced growth pattern found on Table VIII-4 is the extremely rapid increase in the number of domestic life insurance companies in Arizona in the 1950's.

Another means of showing the effect of domestic life insurance companies on the growth of life insurance in Arizona is by adjusting the number of life insurance companies in the United States and in Arizona to a base period for purposes of growth comparison. This is done in Table VIII-5 and in Figure VIII-4, using 1947 - 1949 = 100 as

the base period. Both trends are upward in nature during the period studied, and follow the same approximate rate of climb until the year 1951, during which, as described in Table VIII-4, domestic life insurance companies began to make definite inroads into the life insurance market in Arizona.

TABLE VIII-5

COMPARATIVE INDEX VALUES FOR THE UNITED STATES AND ARIZONA
FOR NUMBER OF LIFE INSURANCE COMPANIES FOR
SELECTED YEARS, 1915 - 1957
(1947 - 1949 = 100)

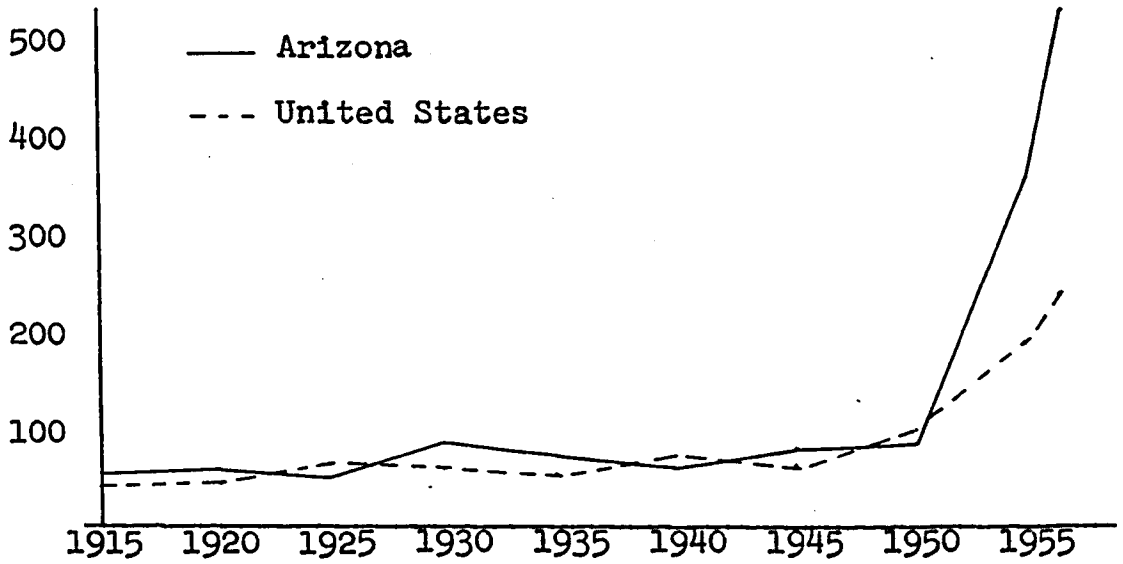
Year	Number of Companies Index for the United States	Number of Companies Index for Arizona
1915	48	53
1920	53	58
1925	62	61
1930	71	98
1935	61	75
1940	73	65
1945	77	93
1950	106	104
----	---	---
1951	111	179
1952	119	202
1953	134	211
1954	149	261
1955	182	309
1956	194	367
1957	208	461

Sources: Figures for the United States calculated from values in Table II-8, found on p. 45. Arizona figures calculated from Table V-12, found on p. 99.

FIGURE VIII-4

INDEX GROWTH TRENDS OF THE NUMBER OF LIFE INSURANCE COMPANIES IN THE UNITED STATES AND IN ARIZONA FOR SELECTED YEARS, 1915 - 1957 (1947 - 1949 = 100)

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CHAPTER IX

CONCLUSIONS

Throughout this discussion, growth, both in regard to economic conditions and in regard to life insurance, has dominated the indicators that have been discussed. This growth has been slowed down only once, in the majority of the indicators studied, during the depression period in the early 1930's. The greatest rate of growth has been experienced in the 1950's, and the data in recent years indicates that this upward trend will become even more pronounced in future years.

Although this upward trend is continuous both in the United States and in Arizona, it is extremely important that the degree of growth experienced during the period be studied. Chapter VII clearly illustrates that Arizona has been a growth leader in the United States, especially since 1945. Comparative business indices for the United States and Arizona, constructed in Table VII-1 on page 112, show that Arizona's growth since 1950 has been more rapid than growth in the United States during the same period. The reasons for Arizona's growth are many. A favorable climate, probably Arizona's greatest natural asset, has been

instrumental in building a very successful tourist industry. The climate factor has also been extremely important from a health standpoint, which has added to the rapid population increase. This climate, combined with many natural physical assets, has also influenced Arizona in becoming a more industrialized state, resulting in a great increase in the amount of income funneled into Arizona. This industrial growth has naturally increased the number of employment opportunities existing in Arizona, which, in turn, has had an important impact on the population increase in Arizona in recent years. The above-mentioned factors, plus the conquering of vast areas of desert land for agriculture by the construction of irrigation systems for these areas, have all played an important part in the economic expansion in the state of Arizona.

With this record of economic growth in mind, it is important to discuss how the growth of life insurance in Arizona has fared in comparison with other segments of business activity. Chapter VIII clearly illustrates that Arizona has increased more rapidly than the United States in the rate of growth of life insurance in recent years. This outstanding growth of life insurance in Arizona has been even more pronounced than the growth of any of the economic indicators discussed. Of course, there are many factors that are responsible for the growth of life insurance in

Arizona. National factors such as increased gross national product, the rise of personal income and disposable personal income, population and employment increases, the growth of industrial production, changes in the manner of saving, and many other factors have increased the demand for life insurance. This increased demand has resulted in the growth of life insurance in force, life insurance sales, income of life insurance companies, and the number of life insurance companies. To these national factors influencing the growth of life insurance in Arizona must be added the economic factors, discussed previously, that have been most instrumental in Arizona's over-all economic growth during the period studied. The combined impact of these many influencing factors has made the life insurance industry one of the most rapidly growing industries in Arizona.

Each of the index values constructed in Chapter VIII shows that this growth of life insurance in Arizona has been most rapid in recent years. Projection of the trends relating to life insurance growth indicates that Arizona's present leadership position should be even more pronounced in future years. An example of this fact is found in comparative rate of growth in the number of domestic life insurance companies, by states, presented in Table II-9, found on page 47. Since 1950, the number of life insurance companies domiciled in Arizona has increased by 1700 per cent.

Utah, ranked second in the United States, has experienced a growth of 225 per cent, nearly 1500 per cent lower than the increase in Arizona. Another optimistic indication of Arizona's future growth is found in comparison of increases of life insurance in force in the United States and in Arizona. Since 1950, the United States total has increased approximately 200 per cent, while during the same period Arizona has experienced an increase of approximately 400 per cent. In fact, all life insurance indicators in Arizona have increased at a more rapid rate than the United States totals. Life insurance sales in Arizona have increased by 500 per cent since 1950, while life insurance sales in the United States have increased by 300 per cent during the same period. From 1947 to 1957, premium income in Arizona has increased at a rate of nearly 500 per cent, while the United States, during the same period, experienced a growth rate of under 200 per cent. Therefore, it can be said that Arizona has been, in all respects, one of the most dynamic and growing states in the nation in the life insurance industry, and that from all indications, this tremendous growth should continue in future years.

APPENDIX: DEFINITIONS OF IMPORTANT TERMS USED IN THIS STUDY

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APPENDIX A

DEFINITIONS OF IMPORTANT TERMS USED IN THIS STUDY

A. Economic Terms:

1. Disposable Personal Income. - The sum that is available to individuals to use as they wish. In other words, this sum equals personal income less direct tax payments.
2. Gross National Product. - The total market value of the goods (commodities and services) produced by a nation's economy during a given period (usually a year).
3. Industrial Production Index. - An adjusted measure of the physical volume of the output of manufacturing, utilities, and mining.
4. Labor Force. - All persons, 14 years or over, who, during the census enumeration week, are employed or seeking work, including proprietors, the self employed, the estimated number of people in the armed forces, and excluding all persons engaged in only incidental unpaid family work and exclusive housework in their own homes or attending school.

5. National Income. - That portion of gross national product that flows to the several factors of production.
6. Nonagricultural Employment. - All employed persons other than those engaged in agriculture.
7. Personal Income. - The current income received by natural persons from all sources. In other words, this sum equals national income less undistributed corporate profits, corporate taxes, and contributions for social security.

B. Life Insurance Terms:

1. Domestic Life Insurance Company. - Life insurance company domiciled within a certain state.
2. Face Amount. - The amount stated on the face of the policy that will be paid in case of death or maturity.
3. Foreign Life Insurance Company. - A life insurance company of one state licensed also to do business in the other.
4. Group Life Insurance. - Life insurance issued, usually without medical examination, on a group of persons under a master policy.
5. Industrial Life Insurance. - Life insurance issued in small amounts, usually not over \$500.

6. Legal Reserve Life Insurance Company. - A life insurance company operating under insurance laws specifying the minimum basis for the reserves the company must maintain on its policies.
7. Life Insurance in Force. - The sum of the face amounts, plus dividend additions, of life insurance policies outstanding at a given time.
8. Life Insurance Sales. - The sum of the face amounts of new life insurance policies issued and paid for during a given period.
9. Ordinary Life Insurance. - Life insurance usually issued in amounts of \$1,000 or more with premiums payable on an annual, semi-annual, quarterly or monthly basis.
10. Policy. - The printed document issued to the insured by the company stating the terms of the insurance contract.
11. Premium. - The payment or one of the regular periodical payments a policy-holder is required to make for an insurance policy.

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