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UNITED STATES DEPARTMENT OF AGRICULTURE
Economic Research Service

LONGER-RANGE PROSPECTS FOR DOMESTIC CONSUMPTION
OF CIGARETTE TOBACCO

Talk by Arthur G. Conover
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at the 46th National Agricultural Outlook Conference
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Cigarette manufacture in the United States absorbs over 57 percent of the tobacco grown in this country, exports account for about 31 percent, and other tobacco products take nearly 12 percent. For the leading cigarette tobaccos--flue-cured, burley and Maryland--their use in U.S. cigarettes accounts for about 55, 80, and 47 percent, respectively, of their total market.

Two major considerations are vitally important in assessing the longer-range prospects for domestic consumption of U.S. cigarette tobaccos:
(1) the prospective number of consumers and their rate of cigarette use, and
(2) the quantity of tobacco required to make the several sizes of cigarettes which go on the market and gain substantial acceptance.

Current and prospective cigarette
smokers and consumption

Available statistics can measure within narrow limits the number of cigarettes consumed in the United States in any given year. Administration of the Federal tax of 8 cents per package requires a count in order to assure the correct tax assessment. Also, all States except North Carolina tax cigarettes, and much sales data are generated from these sources.

In contrast to having a highly accurate count on total cigarettes consumed, the total number of cigarette smokers and average rates of consumption are not precisely known. As an indication, sample surveys can be used to produce estimates of cigarette consumption. But these estimates put consumption far below what is indicated by accurate data from tax sources. While survey data appear to reflect reasonable differentials in cigarette smoking between sexes and among age groups, under-reporting apparently occurs in estimates of the extent of smoking among some or all age-sex groups.

A projection of cigarette use in 1975

Several steps are needed for estimating and projecting the number of cigarette smokers and their consumption. Percentages of smokers and rates of smoking summarized from surveys must be adjusted upward to attain a reasonably accurate level of consumption. Such percentages then are applied to Census population data, taking account of consumption by the armed forces and institutional population (groups not covered in population samples surveyed).

An estimate for 1967 was derived in such a way. The number of cigarette smokers in the resident population 18 years and over was estimated at about 60 million. About 1-1/4 million men composed the U.S. overseas forces in 1967, and probably over 800,000 of them were cigarette smokers. Thus, of the total U.S. population 18 years and over, almost 61 million, about 48 percent were cigarette smokers in 1967.

There are indications that the percentages of cigarette smokers among the various age and sex subgroups of the population 18 years and over have declined some in the past few years. Smokers and potential smokers of cigarettes have seen substantial and increasing publicity on the smoking-health issue since the Surgeon General's report was published in January 1964. Many news stories, and expanding efforts by the U.S. Public Health Service and several voluntary health and other associations, have reported and dramatized smoking-health relationships. Also, the Federal Communications Commission has ruled that radio and television stations that carry cigarette advertising must devote a significant amount of broadcast time to publicity against cigarette smoking. This ruling was affirmed by a Federal appellate court in November 1968. On February 5, 1969, the FCC proposed to ban cigarette advertising (possibly excepting low-tar, low-nicotine cigarettes) from television and radio, but Congress can decide differently.

On the premise that such anti-cigarette efforts will continue in the next several years, a decline in the percentage of the population smoking cigarettes is projected to 1975. This illustrative projection, shown in the following table, assumes the share will decline in line with the rate of decline that seems indicated from available data.

The resident population 18 years and over will increase by nearly 12-1/2 percent by 1975. The projected decline in cigarette smokers as a share of this population is from 57 percent among males 18 and over in 1968 to near 50 percent in 1975. The comparable decline among females 18 and over is projected from about 36-1/2 percent in 1968 to near 33 percent in 1975. With these declining shares, an increasing population results in a very slight decrease in the number of cigarette smokers by 1975. Allowance has been made for a projected change in the age composition, whereby the heaviest smoking age-sex groups comprise a larger proportion of the total population in 1975, resulting in slightly increased average rates of consumption.

After taking account of other outlets for U.S. cigarettes, the projected total consumption of U.S. cigarettes in 1975 is about 580 billion, virtually unchanged from recent levels. This total includes cigarette exports.

18 years and over: U.S. population and cigarette smokers	Unit	1967	1968	1975	Change-- 1968 to 1975
					<u>Percent</u>
Resident population					
Males	Million	60.7	61.5	69.2	12.5
Females	do.	<u>66.4</u>	<u>67.5</u>	<u>75.8</u>	<u>12.3</u>
Both sexes	do.	127.1	129.0	145.0	12.4
Cigarette smokers as share of resident population					
Males	Percent	58.3	57.1	50.4	-11.7
Females	do.	<u>37.2</u>	<u>36.4</u>	<u>32.2</u>	<u>-11.5</u>
Both sexes	do.	47.3	46.3	40.9	-11.7
Cigarette smokers					
Males	Million	35.4	35.1	34.9	-0.6
Females	do.	<u>24.7</u>	<u>24.6</u>	<u>24.4</u>	<u>-0.8</u>
Both sexes	do.	60.1	59.7	59.3	-0.7
Resident cigarette consumption					
Males	Billion	330	327	328	0.3
Females	do.	<u>184</u>	<u>183</u>	<u>184</u>	<u>0.5</u>
Both sexes	do.	514	510	512	0.4
Other cigarette outlets					
Exports	do.	24	26	32	23.1
Other*	do.	<u>38</u>	<u>44</u>	<u>36</u>	<u>-18.2</u>
Total consumption of U.S. cigarettes	do.	576	#580	580	0.0

* Mainly includes shipments for overseas forces, to Puerto Rico and other U.S. possessions, and consumption by persons under 18 years.

Matches estimated output.

Another cigarette projection to 1975

Another approach to projecting cigarette consumption to 1975 can be based on States' tax-paid sales volume. The per capita taxed sales for each of the 49 taxing States (and District of Columbia) were calculated for fiscal years 1965/66, 1966/67, and 1967/68. From 1965/66 to 1967/68 in 28 States (also District of Columbia) retail prices of cigarettes increased an average 12 percent while per capita State-taxed cigarette sales fell 6 percent. In the other 21 States the average price increase was about 1 percent and per capita taxed cigarettes increased $3/4$ of 1 percent.

The recent 3-year trends in per capita sales data were extended to 1975 and multiplied by Census projections of State population in 1975 and aggregated. State-taxed sales of cigarettes do not cover cigarettes purchased on military bases. Also, the aggregated figure excluded cigarettes bought in North Carolina, where no tax is levied. Per capita data for individual States was computed by using the civilian population 18 years and over -- that is, excluding the armed forces stationed in the United States from total resident population. Projection for the 1975 civilian population 18 years and over was derived by assuming the 1964 level of resident armed forces and subtracting this figure from the Census projection of the 1975 total resident population 18 years and over in each State. The aggregated data for the 49 States (and D.C.) and the balancing items to match total cigarette output are as follows:

18 years and over: civilian population 49 States and D.C. and cigarette use	Unit	1966/67	1967/68	1975	Change -- 1967/68 to 1975 Percent
Civilian population	Million	120.9	122.7	139.4	13.6
Per capita: State- taxed cigarette sales	Number	3,954	3,847	3,529	-8.3
Total: State-taxed cigarette sales	Billion	478	472	492	4.2
Non-State-taxed cigarette sales*	do.	<u>47</u>	<u>50</u>	<u>53</u>	<u>6.0</u>
Total cigarette consumption in U.S.	do.	525	522	545	4.4
Other#		<u>48</u>	<u>49</u>	<u>50</u>	<u>2.0</u>
Total consumption of U.S. cigarettes	do.	573	571	595	4.2

* Includes cigarettes sold on military bases and in North Carolina.

Includes shipments to overseas military forces, to U.S. possessions, and exports.

According to this projection, per capita cigarette State-taxed sales would decline about 8 percent by 1975 if recent trends by States were to continue. The population increase, however, would tend to overcome this effect, implying a 4 percent increase in total cigarette consumption by 1975.

The quantity of tobacco required
for cigarettes

Since about the mid-1950's the average quantity of domestic tobacco used to make a thousand cigarettes has declined about 28 percent. The advent of manufactured tobacco sheet, the decrease in circumferences of cigarettes, the shortened tobacco column of the increasingly popular filter tip cigarettes, and the rising proportion of imported tobacco in cigarette blends -- all have contributed to the decline. Based on the experience of even the most recent years, a stable relationship between a given quantity of domestic tobacco and its manufacture into a thousand cigarettes is still not at hand.

Cigarette output in the United States fiscal year 1967/68 totaled 571 billion, 19 percent greater than in 1958/59. The quantity of domestic tobacco used for cigarettes in 1967/68 was about 1,145 million pounds (farm-sales weight), virtually the same as in 1958/59. (The comparison with 1958/59 was chosen because certain measurements of cigarettes were available for that period.) Changes in dimensions and composition of cigarettes and in the consumption pattern resulted in the reduction of about 215 million pounds from what would have been required if the 1958/59 relationships had held firm.

The accountability of factors giving rise to this substantial reduction in requirements can be approximated, as follows:

	<u>Farm-sales weight</u>	
	<u>Million Pounds</u>	<u>Percentage Contribution</u>
Increased use of imported tobacco	58	27
Increased use of sheet tobacco	47	22
Shift from nonfilter tips to filter tips	43	20
Reduction in cigarette circum- ferences	43	20
Lengthened cigarette filters	<u>24</u>	<u>11</u>
	215	100

Thus increased use of imported tobacco accounted for around a fourth of the reduction in domestic tobacco, while use of sheet tobacco, shift to filter tips and slimmer cigarettes each accounted for about a fifth of the reduction.

The question at this point is whether these factors have run their course or whether future modifications along these lines will further diminish the domestic tobaccos required per thousand cigarettes. To a considerable extent the answer will depend upon consumer response to the many types of cigarettes offered. If tar and nicotine ratings become an increasingly important consideration in the choice of cigarettes, most of these factors likely will be operative. Under present testing procedures, reduced quantities of tobacco are a means of attaining lower tar and nicotine ratings.

Projections involving complex combinations of the influences of such factors would just be conjectural. Instead, I will conclude with some comments that are relevant.

Use of imported tobaccos -- aromatic kinds from Turkey, Greece, Yugoslavia, and other countries -- rose sharply in 1966/67 and 1967/68. In the first half of 1968/69, however, use of these tobaccos leveled. These tobaccos are known for low nicotine content.

An estimated 94 percent of the whole tobacco leaf including midrib (stem) of domestic types is processed for use in cigarettes. This contrasts with about 77 percent 15 years ago. The technology of tobacco sheet components and manufacture, and other sources of tobacco materials, may make possible further savings.

From 1958/59 to 1967/68 the proportion of filter tip cigarettes rose from about 47 to 73 percent of the total output, while the proportion of nonfilter tips declined from 53 to about 27 percent. A continuation of past trends could result in 88 percent filter tips and 12 percent nonfilter tips by 1975. Most filter tip cigarettes require less tobacco than nonfilter tips.

Most cigarette filters are 20 millimeters in length but some are longer. Perhaps by 1975 most filters will be longer than 20 millimeters and will have displaced some more tobacco.

In the past year, new cigarettes with reduced circumferences have gone into national distribution. They require less tobacco than other cigarettes. What share of the market will they eventually attain?

Finally, while cigarettes made in this country will remain a large outlet for U.S. tobacco growers in the years ahead, the prospects are not very promising for much growth of this outlet. Of course, favorable developments from new knowledge or technology in the smoking-health area cannot be ruled out.

