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Economic Intelligence Report

LIGHT INDUSTRY IN THE USSR
1950–65

CIA/RR ER 61-40

September 1961

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

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FOREWORD

The purpose of this report is to evaluate the performance of Soviet light industry during 1950-60, to study the goals set for light industry for the Seven Year Plan (1959-65), and to make judgments about the progress of the industry toward reaching these goals in 1965.

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LIGHT INDUSTRY IN THE USSR*
1950-65

Summary and Conclusions

Light industry** in the USSR has been notably backward by comparison with its counterparts in many Western countries. In the allocation of the nation's resources, state planners traditionally have limited light industry in its share of capital funds, skilled labor, developmental research, and the like. As a result of gradual modifications since 1959 of the earlier system of priorities, a more favorable climate has developed for increasing production of goods for personal consumption in spite of the fact that planned rates of growth are below those achieved earlier in the 1950's. Khrushchev's decision to expand production of consumer goods appears to have been motivated in part by the need to stimulate workers by greater incentives in order to achieve increases in the productivity of the Soviet labor force. Indeed, Khrushchev's plan to catch up with and surpass the US in important items of industrial production requires such increases in productivity. Increases in production of consumer goods are needed also because higher personal incomes have considerably improved the consumer's ability to pay and thus created greater demand.

Growth of light industry during 1955-60 was slow compared with growth of total industry and that of producers equipment. During this period it is estimated that production of light industry increased by 36 percent, whereas total industrial production increased by 49 percent and producers equipment by 87 percent. Earlier in the 1950's, light industry, while still in the period of postwar recovery from a low base, grew at a faster rate than that for producers equipment and almost as fast as that for total industry.

Between 1950 and 1960, supplies of consumer goods were low compared with those in the US and many countries of Western Europe. Production of cotton fabric had increased by about 65 percent, and production of ready-made clothing and leather footwear had more than doubled. Although supplies were becoming more adequate in relation to demand, improvements in

* The estimates and conclusions in this report represent the best judgment of this Office as of 15 July 1961.

** The term light industry as used in this report covers production of textiles, clothing, and footwear. The term consumer goods refers to production of light and food industries and includes also consumer durables and other goods for personal consumption.

quality failed to keep pace with the over-all progress of the industry as plant managers pressed hard to meet their goals for quantity. As a result, the retail stores by 1960 were plagued with accumulations of unwanted or unsalable merchandise, but the demand for more goods of better quality increased.

Any direct improvements in light industry that may have resulted from the decentralization of industrial administration in 1957 have been obscured by the generally improved status of light industry -- a situation that has evolved since the late 1950's. However, for the most part, plans have been fulfilled or exceeded, indicating that, under the administration of the sovnarkhozes, management of light industry has been reasonably effective. Major problems still to be solved relate mainly to the quality and design of products and to their distribution.

By comparison with the US, Soviet production of even the most basic items of textiles, clothing, and footwear is low, as shown by the following data per capita for 1960.

Commodity	Unit	USSR	US
Cotton fabric	Square meters	23	52
Silklike fabric	Square meters	3.2	15.4
Wool fabric	Square meters	2.1	2.3
Hosiery	Pairs	4.5	10.1
Leather footwear	Pairs	2.0	3.4

At the same time, prices paid for such goods in the USSR are exceedingly high by comparison. For example, the average Soviet worker earning 800 rubles* a month paid more than 200 rubles, or one-fourth of his earnings for the month, for a pair of shoes that in the US would cost about $10.

In spite of the current emphasis on production of consumer goods, it is estimated that light industry in the USSR during the Seven Year Plan (1959-65) is scheduled to grow at an average annual rate of only 6.3 percent, or below the estimated rate of 7.3 percent achieved during the preceding 7-year period (1952-58). The relatively higher levels of production that had been achieved by the beginning of the Seven Year Plan make annual increases in percentage more difficult to achieve. The growth of light industry, furthermore, is tied closely to the Soviet

* Unless otherwise indicated, ruble values in this report are given in current old (pre-1961) rubles and may be converted to US dollars at a rate of exchange of 4 rubles to US $1. This rate does not necessarily reflect the value of the ruble in terms of dollars.

capacity to produce agricultural raw materials, and planned rates of growth in these areas are relatively low. Chemical fibers, now in use in light industry as supplementary fibers, will be utilized more extensively in the future to support the expanding production of light industry. Production in physical units of cotton fabric during the Seven Year Plan is scheduled to increase by 33 percent; silklike fabric, by 76 percent; wool fabric, by 65 percent; and leather footwear, by 45 percent. Achievement of these goals, which is quite feasible, should provide the Soviet consumer with considerable increases in supplies of textiles and footwear. The consumer will be introduced to a number of new products, such as the various fabrics of synthetic fibers and blends, and will find noticeable improvement in the supplies of factory-made clothing and knitwear.

Because of Khrushchev's promise ultimately to surpass the US in production of consumer goods, Soviet light industry in the years ahead faces its greatest challenge and compared with the past will receive a considerably greater part of the nation's scarce economic and technical resources. But fulfillment even of the Seven Year Plan for light industry depends on the ability of the industry to solve a number of major problems, such as the modernization of plants, the improvement of industrial processes, and the introduction of new commodities, and also depends on the success of other industries, particularly for raw materials. Soviet agriculture will be hard pressed to provide increasingly greater quantities of natural fiber, and the overburdened chemical industry is charged with supplying rayon and synthetic fibers in substantially greater quantities than it has supplied in the past. Shortfalls in production of textile fibers, however, could be offset by increased imports in order not to jeopardize the program for production of consumer goods. Thus, given a continuation of the favorable climate for growth that now prevails, light industry may still be able, in spite of the sizable problems that it faces, to reach the goals that are planned for 1965.

I. Introduction

Production of goods for personal consumption has been one of the areas most neglected in the Soviet economy. Primary emphasis on heavy industry has exacted great sacrifices in the comfort and well-being of the people of the USSR for more than 40 years. Seldom has this sacrifice been admitted officially and never more pointedly than when Khrushchev, in a speech in January 1961, 1/* stated, "Neglect for the material requirements of the working people and the concentration of emphasis on ... social and moral forms of incentive and reward has retarded development of production and the raising of the living standards of the working people."

Under the Soviet system, supplies of light industry goods have been characterized by continual shortages of many items and by quality which is low even by the standards of the Soviet consumer. In an economy where production increases are stressed but where consumer preferences are scarcely reflected, improvements in quality are effected very slowly and changes in style or model are adopted reluctantly. As a result of such conditions within the industry, the Soviet people generally appear rather shabbily dressed in spite of exceedingly high prices paid for clothing.

Historically, Soviet leaders stress the backwardness of Russian industry before the revolution of 1917, but Russian light industry in fact had become relatively advanced. Light industrial production began on a large-factory basis in the 18th century, when the old handicraft industries based on serf labor began to give way to the factory system using hired labor. Under the reign of Peter the First, a number of textile plants were built and equipped with imported British machinery, and thus the first impact of the industrial revolution on Russia was through the introduction of textile manufacturing. Russia's economy for some time was largely agricultural, and these early industries supplied only a small part of the basic needs for textiles, clothing, and footwear. Other branches -- notably knitting, garment making, and shoe manufacture -- were not organized on a factory basis until much later.

The early textile plants sprang up in areas where labor supplies were greatest rather than in agricultural areas where the raw fibers were grown and easily available. This development gave rise to the present pattern of concentrations of light industry at Moscow, Leningrad, Kalinin, and other highly populated areas. Although modified to some extent over time, the old geographical pattern remains predominant (see the maps, Figures 2 through 6**).

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** Following p. 18, below. For detailed information on the geographical location of Soviet light industry, see Appendix A.

Soviet light industry under Stalin's leadership endured many years of austerity extending to the early 1950's. For a brief period of time following Stalin's death, light industry in 1953-54 realized sizable increases in production under the leadership of Malenkov and his policy of more goods for consumers. Khrushchev, in his first days of policymaking, reestablished the old priority system, and once again light industry, along with other consumer industries, was relegated to its traditional subordinate position in the Soviet economy.

In spite of the renewed emphasis on growth of heavy industry during the early years of Khrushchev's leadership, considerable increases in production of consumer goods were achieved, raising the prospect that the emphasis given consumer goods under Malenkov had left its mark and prevented a complete reversion to the earlier neglect of consumer goods under Stalin. Even limited increases in supplies of goods tended to foster among the population the hope for an increasing number of amenities in the future and to intensify further the desire for goods that they realized were readily available in the US and most of the countries of Western Europe.

By the late 1950's the consumer sector was being looked on with renewed favor. Khrushchev, following his first visit to the US in 1959, intensified the program for consumer goods by a series of administrative actions designed to increase production of consumer goods and to improve the consumer's status generally. Moreover, in an apparent about-face of his position in 1954, he simultaneously launched his propaganda drive to surpass the US in production of consumer goods.

Other things being equal, a significant increase in the flow of goods to consumption may be expected to promote greater satisfaction among the people, augment the popularity and stability of the regime, and raise industrial productivity. It is assumed that Soviet policymakers are aware of these factors and also appreciate the propaganda advantage of being able to proclaim to the world that their system has been able to make rapid gains in national strength while providing at the same time for a high level of living.

II. Development During 1950-60

A. Production and Growth

Reflecting the decisions of Soviet planners rather than the demands of consumers, light industry during the period 1950 through 1960 grew less rapidly than Soviet industry as a whole and much less rapidly than heavy industry, according to estimates of this Office. The relatively low position of light industry on the scale of priorities in the Soviet economy is traditional. By 1960 the estimated output of light industry was 1.8 times the 1951 level, but total industry had grown to 2.2 times the 1951 level and producers equipment to 3.0 times, as shown in Table 1.

Table 1

USSR: Indexes of Production of Light Industry, Producers Equipment, and Total Industry a/
1950-60

1951 = 100

Year	Light Industry b/	Producers Equipment c/	Total Industry d/
1950	84	101	88
1951	100	100	100
1952	105	101	106
1953	115	115	117
1954	128	133	132
1955	135	158	148
1956	143	188	160
1957	152	216	173
1958	163	239	185
1959	174	272	202
1960	183	295	220

a. Indexes, computed by this Office, were weighted by 1955 prices. The base year, 1951, is used instead of 1950 because it represents the point at which production of light industry regained the pre-World War II (1940) level.
b. For detail on the construction of this index, see p. 33, below, and the methodology, Appendix E.
c. 2/
d. 3/

The early 1950's constituted a period in which light industry was expanding to the extent that the index for light industry almost kept pace with the indexes for producers equipment and for total industry. During 1955-60, however, light industry, although still increasing at a substantial rate, began to lag further behind, as shown by the indexes in Table 1* and the data in the Chart, Figure 1.** During this period, production of light industry increased by 36 percent, whereas the total industrial production increased by 49 percent and producers equipment by 87 percent.

These measurements in growth only partly indicate the real gap between the consumer industries and the high-priority industries, inasmuch as they ignore relative sizes of the industries in the base year of the index. In that year, 1951, light industry, having just recovered its prewar level of production, was capable of producing far fewer goods than were required to fill even the basic needs of a large Soviet population. But the industries producing machinery and heavy equipment, having exceeded by 1950 the prewar production levels by a substantial margin, began their expansion from a much larger base.

Although consumer gains since 1950 have been gradual by Western standards, basic necessities in clothing and footwear were fairly well provided for by 1960. The physical production of the major commodities of light industry for selected years since 1950 is shown in Table 2.

Table 2

USSR: Production of Light Industry
Selected Years, 1950-60

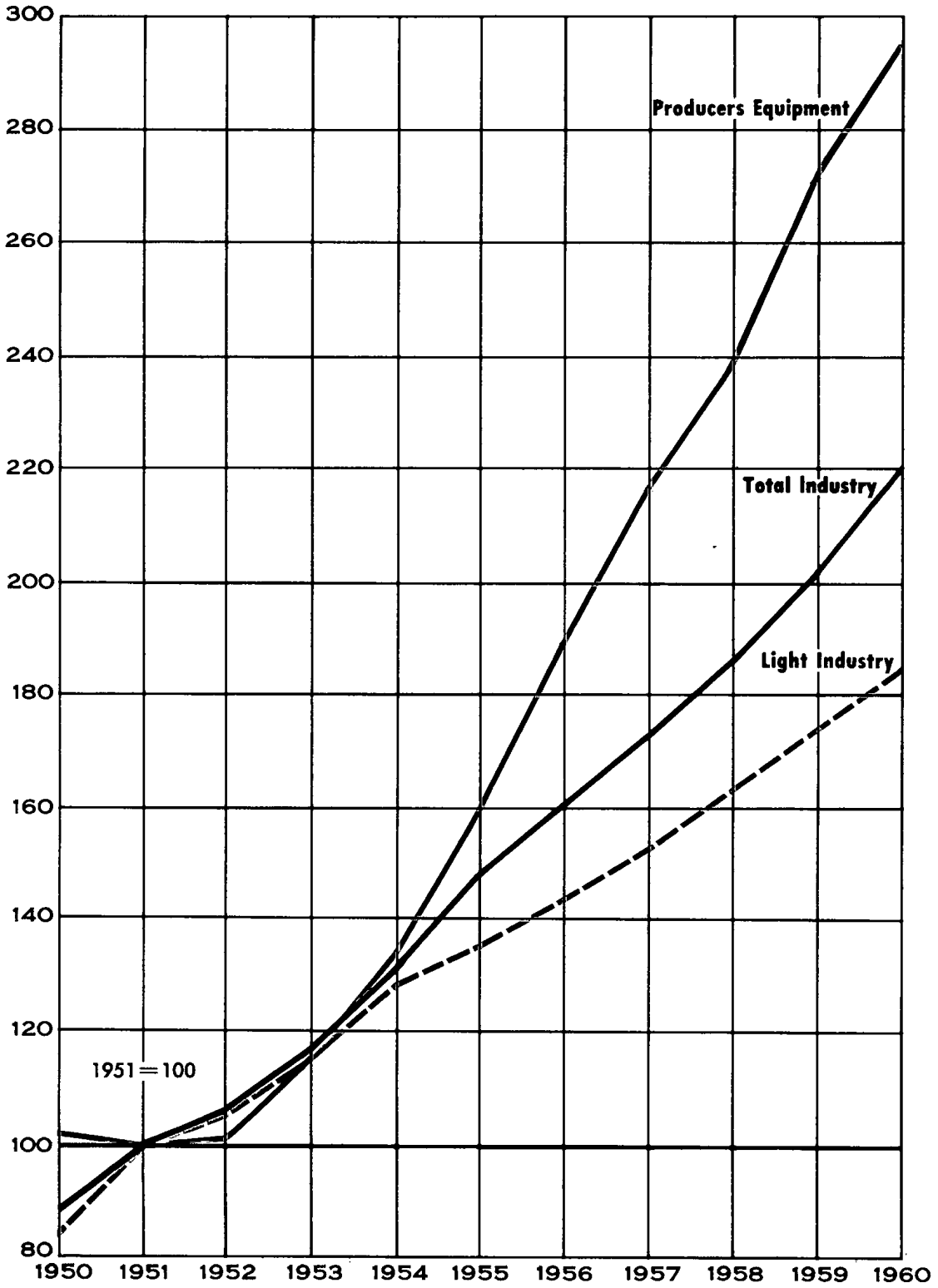
Commodity	Unit	1950 a/	1955 a/	1960
Cotton fabric	Million linear meters	3,899	5,905	6,387 b/
Silklike fabric	Million linear meters	130	526	810 b/
Wool fabric	Million linear meters	155	252	342 b/
Linen fabric	Million linear meters	282	306	559 b/
Sewn garments c/	Million 1955 rubles (value added)	4,585	8,620	12,400 d/
Knit outerwear	Million pieces	47	85	111 b/
Knit underwear	Million pieces	150	346	471 b/
Hosiery	Million pairs	473	772	964 b/
Leather footwear	Million pairs	203	271	418 b/

a. 4/
b. 5/
c. For the methodology, see Appendix E.
d. Estimate based on plans.

* P. 7, above.
** Following p. 8.

50X1

USSR: Indexes of Production of Light Industry, Producers Equipment, and Total Industry*, 1950-60



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*Indexes computed by this Office.

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Figure 1

Among the various branches of light industry, economic growth measured in constant rubles during the 1950's was uneven. Cotton fabric, the major textile and the most important single commodity of light industry, showed the smallest growth, whereas the silklike fabrics, produced in small quantities in 1950, showed a rapid growth as the new synthetic fibers were added to an expanding production of rayon (see Table 3*). Rates of growth during this period for the clothing and footwear industries were midway between these extremes, resulting on the whole in more than doubling production of these items for 1950. During the 10-year period (1951-60) the average annual rate of increase** in production of all light industry was 8.2 percent, and for the major commodities of light industry the individual rates, in percent, were as follows:

Commodity	Average Annual Rate of Increase 1951-60
Cotton fabric	5.2
Silklike fabric	20.2
Wool fabric	8.4
Linen fabric	7.1
Sewn garments	10.4
Knit outerwear	9.0
Knit underwear	12.1
Hosiery	7.4
Leather footwear	7.5

Since 1950, marked shifts have occurred in the distribution of textiles according to type. Cotton fabric, which comprised 87 percent of physical production in 1950, declined sharply in its share of total fabric during the 10-year period because of gains in other natural fibers and in rayon and synthetic fibers. The silklike fabrics, comprising a small share in 1950, made the greatest gain by 1960, and wool and linen made nominal gains, as shown in the following tabulation:

* Table 3 follows on p. 11.

** Average annual rates of increase are computed at the compound rate for the stated period, including the terminal years.

Type of Fabric	1950*	1960**
Cotton	87.3	79.0
Silklike	2.9	10.0
Wool	3.5	4.2
Linen	6.3	6.8
Total	100.0	100.0

The relative importance of fabrics in terms of value differs markedly from their importance in terms of physical production. Because the prices of fabrics vary widely -- from 8.32 rubles per meter for cotton to 116.10 rubles per meter for wool (average retail prices in 1955) -- production measured on the basis of value gives wool and the silklike fabrics greater shares in the total. The following tabulation shows the percentage distribution of fabrics in terms of estimated value of production:

Type of Fabric	1950***	1960***
Cotton	55.9	42.4
Silklike	7.1	20.4
Wool	31.0	31.7
Linen	6.0	5.5
Total	100.0	100.0

B. Factor of Quality

Products of Soviet light industry generally are low in quality, a fact that continues to evoke complaints from consumers. Although unaccustomed to textiles and clothing of high quality, consumers nevertheless are sensitive about the high prices that they are required to pay for such goods and expect in turn at least durability if not fine quality or style. Even durability, however, is often sacrificed in striving to meet goals for production.

Some of the factors that contribute heavily to the poor quality of consumer goods can be enumerated. Textiles generally are lighter in weight and narrower in width than those produced in the US and many countries of Western Europe. Thread counts are lower, and yarns receive less twist. Irregularities in yarns and fabrics, which are prevalent, result

* 6/
** 7/
*** Computed from data in Appendix B.

Table 3

USSR: Indexes of Production of Light Industry a/
1950-60

1950 = 100

Commodity	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Cotton fabric	100	122	129	136	143	151	140	143	148	158	164
Silklike fabric	100	134	173	308	398	405	578	619	650	616	623
Wool fabric	100	114	123	135	157	163	173	183	195	210	221
Linen fabric	100	111	91	102	102	108	136	150	171	187	198
Sewn garments	100	114	128	143	170	188	207	209	229	253	270
Knit outerwear	100	126	136	140	162	181	181	191	206	221	236
Knit underwear	100	132	157	183	218	231	232	249	266	293	314
Hosiery	100	126	124	129	143	163	170	179	188	196	204
Leather footwear	100	118	117	117	126	133	141	156	175	192	206

a. Computed from value data in Appendix B.

from the use of raw materials of low quality and from a lack of precision in the spinning and weaving processes. A group of US specialists who visited the Soviet cotton textile industry in 1959 reported the attitude of the industry on quality as follows 8/:

> Mills are somewhat concerned about the quality of the raw cotton they get, but they have to use what is furnished and turn out as good a product in maximum quantity as they can. Since they have little responsibility for the product after it leaves the plant, they have no strong incentive to be concerned about anything more than meeting minimum standards.

Such a lack of concern for quality is equally evident throughout the textile industry and in production of garments and knitwear as well. Soviet clothing, for the most part, is extremely shoddy, ill-fitting, and unattractive. Until recently the lack of interest in fashion, the inexperience of the so-called fashion designers, and the poor quality of textiles going into clothing were largely responsible for these backward conditions in clothing manufacture. According to the criticism by the industry itself, designing centers tend to create styles suitable for custom tailoring but hardly adaptable for large-scale production. Consequently, styles with which plants are already familiar contribute most to the fulfillment of quotas and through use attain a certain permanence. Little attention is paid to special-purpose clothing, such as that designed for work, home, office, sports, dress occasions, and the like, so that choice in apparel is extremely limited. Another major fault is recognized to be that of sizes. Currently, garment sizes are based on crude averages of popular measurements, with a few standard sizes produced in great numbers without regard for consumer needs. Soviet hosiery is largely a cheap cotton product, of not very durable quality and of unattractive appearance, typical of US hosiery of perhaps 30 to 40 years ago. As late as 1955, almost 80 percent of Soviet hosiery was cotton.

Quality of materials and workmanship also is lacking in footwear. In order to meet production quotas, footwear manufacturers, like clothing manufacturers, continue year after year to produce somewhat standardized models in a narrow range of sizes as a means of achieving production goals. Customer complaints concern shortages of extra large and small sizes in adult shoes, shortages of all kinds of children's shoes, and the generally cheap quality that means ultimately a lack of durability. Reports show that as much as 10 percent of a year's output of footwear from a given factory has been returned as defective. 9/

Shoes made from materials of good quality and of good construction are available, but exceedingly high prices restrict such purchases to upper income groups. Artificial suede and other simulated leathers, which are used to extend the supplies of genuine leather, are far less durable materials for making shoes, although composition soles, which are used extensively, probably are an acceptable substitute for leather. Neither pigskin nor goatskin is as durable by comparison, yet these materials are used widely throughout the industry, especially for children's shoes. A further lack of durability results from construction methods that often either are outmoded or are geared to maximum output rather than to producing a high-quality product. Many of the Soviet plants producing footwear are poorly equipped, and some are merely consolidations of small handicraft enterprises, where hand labor is still used extensively.

C. Consumer Supplies and Prices

1. Supplies in General

That the Soviet consumer is better off today than he was in 1950 is indicated by the fact that by 1960 almost 50 percent more cotton fabric and nearly twice as many pairs of leather shoes per capita were produced. In addition, although consumer prices are still high, the price trend has been downward during the 1950's. Although the Soviet consumer may realize that his situation does not compare favorably with that of his counterpart in the US or other Western countries, comparisons with his own past experience are of first importance, and, in this regard, times are better. The Soviet definition of a high standard of living differs markedly from that established in the West in that it includes meeting basic requirements but does not include catering to the desire for luxuries. Thus the higher standard of living limits rather stringently the pattern of Soviet consumption. Most light industry goods are included in the "necessary requirements" prescribed by the Soviet officials, although the tendency will be to produce the utilitarian types of commodities rather than the luxury items.

Consumption per capita of textiles, clothing, and footwear based on total supplies of these commodities is still far below that of the US in spite of sizable increases in production of consumer goods during the 1950's. Soviet consumption per capita of the major commodities of light industry compared with consumption of those produced in the US in 1959 is as follows*:

* Products of light industry in general are neither increased appreciably by imports of manufactures from abroad nor decreased by Soviet exports of these goods. Consumer goods from factories abroad are, nevertheless, to be found in urban markets -- fabrics, readymade clothing, shoes, and various other commodities produced largely in the countries of Europe, both Eastern and Western, and in China.

Commodity	Unit	USSR	US
Cotton fabric	Square meters	21	52
Silklike fabric	Square meters	3.3	15.1
Wool fabric	Square meters	2.1	2.7
Hosiery	Pairs	4.4	10.6
Leather footwear	Pairs	2.0	3.6

Levels of consumption also are low by comparison with standards set by the Soviet government in 1958 as "scientific" consumption norms. 10/ These norms call for 58 square meters of textiles per person compared with consumption in 1959 of only about 29 square meters. The norms call for 3.5 pairs of leather footwear per person, but in 1959 only 2 pairs per person were available.

Recent developments in the consumer situation have stimulated Soviet officials to revaluate the factor of demand. Supplies of consumer goods have increased to the point where some of the major scarcities have been eliminated, and disposable incomes have increased as a result of wage increases, pension increases, tax reductions, and the like. Thus whereas consumers in periods of scarcity bought whatever was available to fill a particular need, now buyers are able to exercise choice in making purchases or may choose not to buy at all in the hope that more desirable goods will be forthcoming. As a result of these changes, troublesome imbalances have developed at the retail level where goods of substandard quality or undesirable design accumulate. It is recognized, moreover, that as the availability of goods increases, the more important becomes the effect of price on demand. 11/ The fact that demand can be manipulated by regulation of prices is looked on as a factor that will become increasingly useful to the Soviet government in maintaining the needed balance in consumer supplies.

Recognizing the increasing seriousness of the present supply problems, the Soviet government proposes to resolve the imbalances by attempting first of all to measure consumer demand and translate these results into detailed planning for production of light industry. Unlike planning in the past, Soviet officials now proclaim that public demand will be the basis for planning production. The burden of responsibility will rest with the republic ministries of trade both for measuring the demand and for placing production orders which accurately reflect that demand. Such a responsibility includes the serious tasks of eliminating shortages, promoting the distribution of new commodities, eliminating production of goods of undesirable quality or design, and creating reserve stocks in order to stabilize supplies. The proposed basis for estimating demand involves statistical measurement at the retail level,

where studies of data and estimates will be made by the trade organizations for use in establishing detailed plans. Changes in the structure of demand that occur because of further growth in personal incomes supposedly would be estimated from the analysis of family budgets of various segments of the population. 12/

2. Prices

Although sizable reductions in prices were made in the USSR during the early 1950's* (reductions in price since 1955 are comparatively negligible), prices of consumer goods in relation to wages are notoriously higher than comparable relationships in the US. Recognizing that comparisons in the costs of living for the two countries involve many complex relationships, certain comparisons can be made that strongly suggest degrees of difference in costs to consumers. The average earnings of workers and employees in the US amounted to about $400 a month in 1959, whereas those of the Soviet workers and employees were about 800 rubles, or a ratio of 2 rubles for each dollar.** A ruble, however, will buy only 2 to 8 percent as much clothing or footwear as a dollar will buy for the US consumer. In the USSR, almost half a month's pay is required to buy a woman's rayon dress and at least 2 months' pay to buy a man's topcoat (see Table 4***).

The setting of prices of consumer goods by the Soviet government is directed toward achieving definite economic ends. Through the regulation of prices, the state is able (a) to stimulate on the one hand the consumption of goods in ample supply and on the other to curtail consumption of goods that are in short supply and (b) to accumulate in the process a sizable part of its budget income. For example, shoes with soles of synthetic materials may cost the Soviet consumer half as much as shoes with leather soles, even though the cost of production of the two may not differ greatly. Such pricing techniques are extended also to include most of the so-called luxury items or any commodity the consumption of which the state wishes to curtail.

Retail prices reflect not only the cost of producing the commodity but also the profits of the producing plant, marketing costs, and the turnover tax, which is that part paid directly to the state budget fund. This arbitrary markup of retail prices by the state accounts in large part for the high consumer prices. The turnover tax on products of light industry may account for as much as 50 percent of the retail price of a given item and in some cases even more.

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* In 1950, prices of a wide range of commodities in textiles, clothing, and footwear were reduced by 10 to 25 percent in comparison with the levels of 1949. Again in 1953, prices of a number of these items were reduced by an additional 8 to 20 percent.

** For the methodology, see Appendix E.

*** Table 4 follows on p. 16.

Table 4

USSR and US: Prices of Selected Consumer Goods and Dollar-Ruble Ratios a/
1955

Commodity	Unit	1955 Prices: Ruble Price	1955 Prices: Dollar Price	1955 Prices: Dollar-Ruble Ratio (Purchasing Power of the Ruble)
Textiles				
Cotton dress print	Square meter	15.80	0.40	0.03
Woolen (all wool)	Square meter	85.94	2.10	0.02
Rayon (spun)	Square meter	51.37	1.20	0.02
Sewn garments				
Men's topcoats	Each	2,093	47.30	0.02
Women's topcoats	Each	637	19.10	0.03
Workshirt and trousers	Set	128	6.30	0.05
Children's coveralls	Each	77.90	2.10	0.03
Women's rayon dresses	Each	323	11.20	0.03
Children's cotton pajamas	Each	24.18	1.70	0.07
Knitwear and hosiery				
Women's rayon underwear	Each	22.80	0.80	0.04
Women's nylon slips	Each	104.43	3.40	0.03
Men's cotton underwear	Each	28.20	1.40	0.05
Children's cotton underwear	Each	7.98	0.40	0.05
Men's cotton pullovers	Each	43.79	1.35	0.03
Men's cotton hosiery	Pair	5.14	0.40	0.08
Women's nylon hosiery	Pair	35.98	1.60	0.04
Leather footwear				
Men's shoes	Pair	220.91	10.00	0.05
Women's shoes	Pair	155.75	6.70	0.04
Children's shoes	Pair	47.85	3.40	0.07

a. For the methodology, see Appendix E.

D. Administration

The organization and operation of industries producing consumer goods until 1958 was centrally planned, directed, and controlled by an administrative apparatus that radiated from Moscow. The administrative apparatus controlled an estimated total of 4 million workers and employees in light industry -- about 90 percent in state industry, the rest in local and cooperative industry. The Ministry of Industrial Consumer Goods,* one of 44 ministries that formed the apex of industrial administration of the vast Soviet productive apparatus, was responsible for the administration of the various branches of light industry. As the industry increased in size and complexity, numerous problems, which had persisted under centralized control, appeared to become worse -- problems ranging from the planning of production through to final disposition of commodities. Although operational problems such as these were related generally to the whole of industry, certain problems in light industry were perhaps more acute because of general neglect. Shutdowns, for example, were not unusual, because deliveries of materials were behind schedule; the need for specialization was evident as small plants diversified their operations and reduce their efficiency; and the further need for consolidation was pointed up by an overburdened transportation system.

As a solution to the increasing complexity of managerial problems that beleaguered the controlling ministries, management of industry was decentralized by the economic reorganization in May and June 1957. The Ministry of Industrial Consumer Goods was abolished, and the management of light industry was transferred to the newly formed regional Councils of National Economy, or sovnarkhozes. Under the new system of management, production is planned at the union** and republic levels by the respective gosplans. Administration of light industry is the responsibility of the regional sovnarkhozes, although supersovnarkhozes at the republic level have been created in three large republics -- the RSFSR, the Ukrainian SSR, and Kazakh SSR -- for the purpose of coordinating the various activities of the administrative units. Light industrial goods are distributed by the state and cooperative retail trade organizations that are controlled by the republic ministries of trade.

There is evidence that management of light industry since decentralization in 1957 has improved to some degree. Plans for the most part are being fulfilled -- some substantially exceeded -- but progress, which can be attributed to the reorganization alone, is difficult to

* Early organizational names included the Ministry of Light Industry and the Ministry of Light and Food Industry.
** In April 1960, long-term planning was transferred from Gosplan, USSR, to the State Scientific Economic Council (Gosekonomsovet), USSR.

assess because of the generally more favorable policy toward consumer goods that has developed since the reorganization. Still, many serious problems have yet to be worked out. Many of the items produced are defective, poorly designed and sized, disproportionate in quantity in relation to demand, and inefficiently distributed. These conditions are accentuated by increasing demand for goods of better quality and variety by consumers who now can afford to pay and who are often willing to wait. Yet plant managers claim that they are unable to solve many such problems because of restraints imposed by the republic ministries of trade which, through orders and contracts for specific types of goods, largely determine production of a plant.

Local industry and cooperative enterprises, which also produce light industrial goods, are administered by the local sovnarkhozes. Utilizing raw materials of the immediate area and industrial scrap, these plants produce sizable quantities of clothing and footwear for local consumption, particularly in nonurban areas. Local industry, although administered locally, is included in the state industrial system, but cooperative industry is not included.

The cooperative producers are collective groups of artisans and handicrafters who make a substantial contribution to Soviet light industry at relatively little cost to the state. The cooperatives, in addition, serve the important functions of broadening the product mix and of providing a degree of stability to the supply of consumer goods that state enterprises, with high volume production but with less diversity, have not provided. Nevertheless, since 1955 a number of industrial cooperatives engaged in production of consumer goods have been transferred to the status of state industrial enterprises, reducing the importance of cooperatives as a source of manufactured consumer goods. Cooperatives in this way have served as a means of transition from the system of private enterprise of small craftsmen to their eventual assimilation into the state industrial system. Whatever value the cooperatives have had in the Soviet system in the past, it now appears that they will not long endure as cooperative organizations operating outside the state system. As craftsmen, members of cooperatives have continued to offer valuable skills of which the state is in need, but as entrepreneurs they have withered on the vine of cooperative enterprise. Presently, in the official view, their activity parallels that of local industry, and thus their existence is no longer justified. Already a number of cooperatives have been transferred to the sovnarkhozes on a trial basis, with resulting improvement through specialization of operations. As a further development, a general reorganization now is underway to consolidate the cooperatives with enterprises of local industry.

USSR: COTTON TEXTILE INDUSTRY
1950-1960

Figure 2

- Major textile center
- Other textile center
- Cotton-growing area

PRODUCTION

29732 2-61

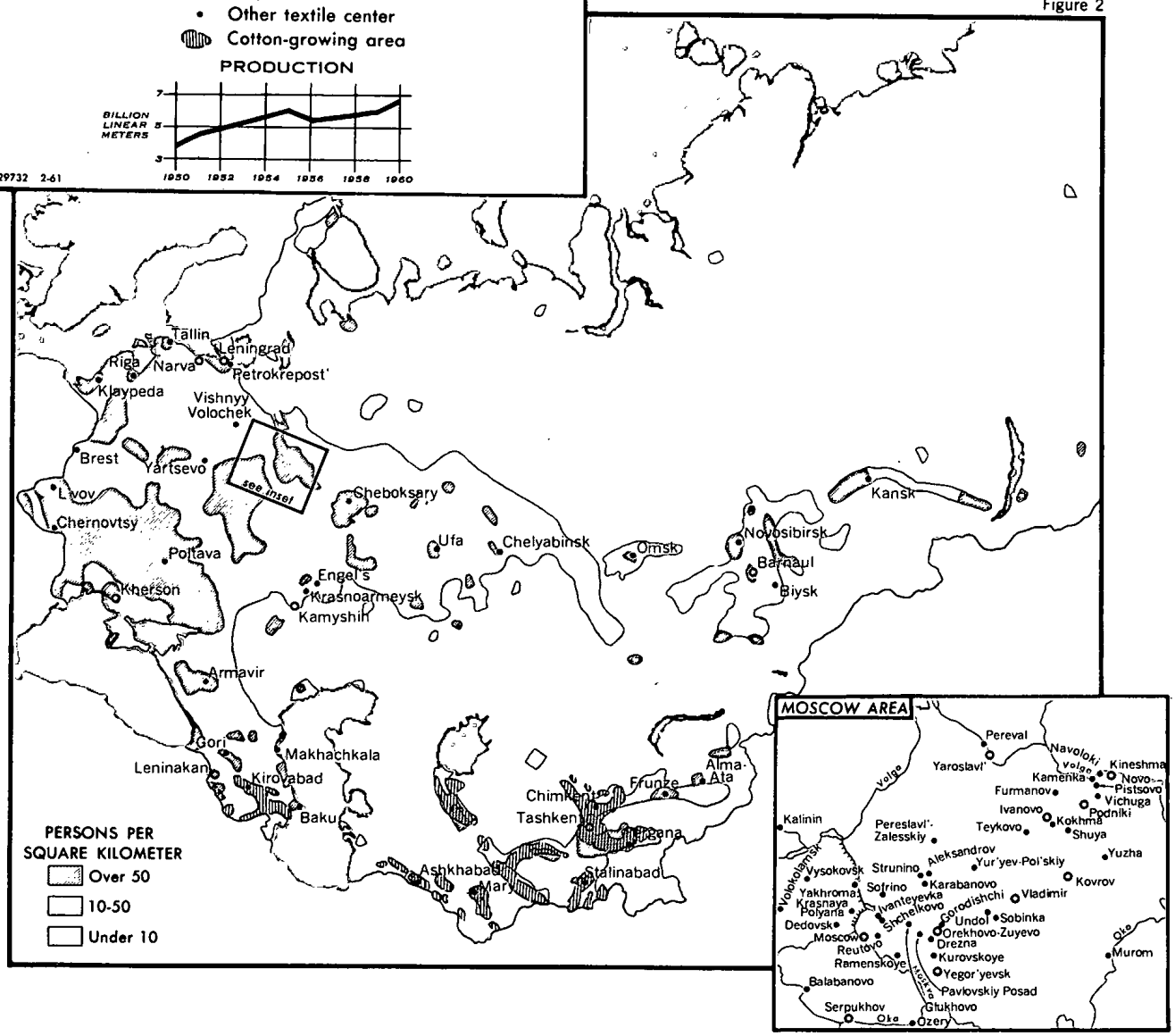


Figure 3

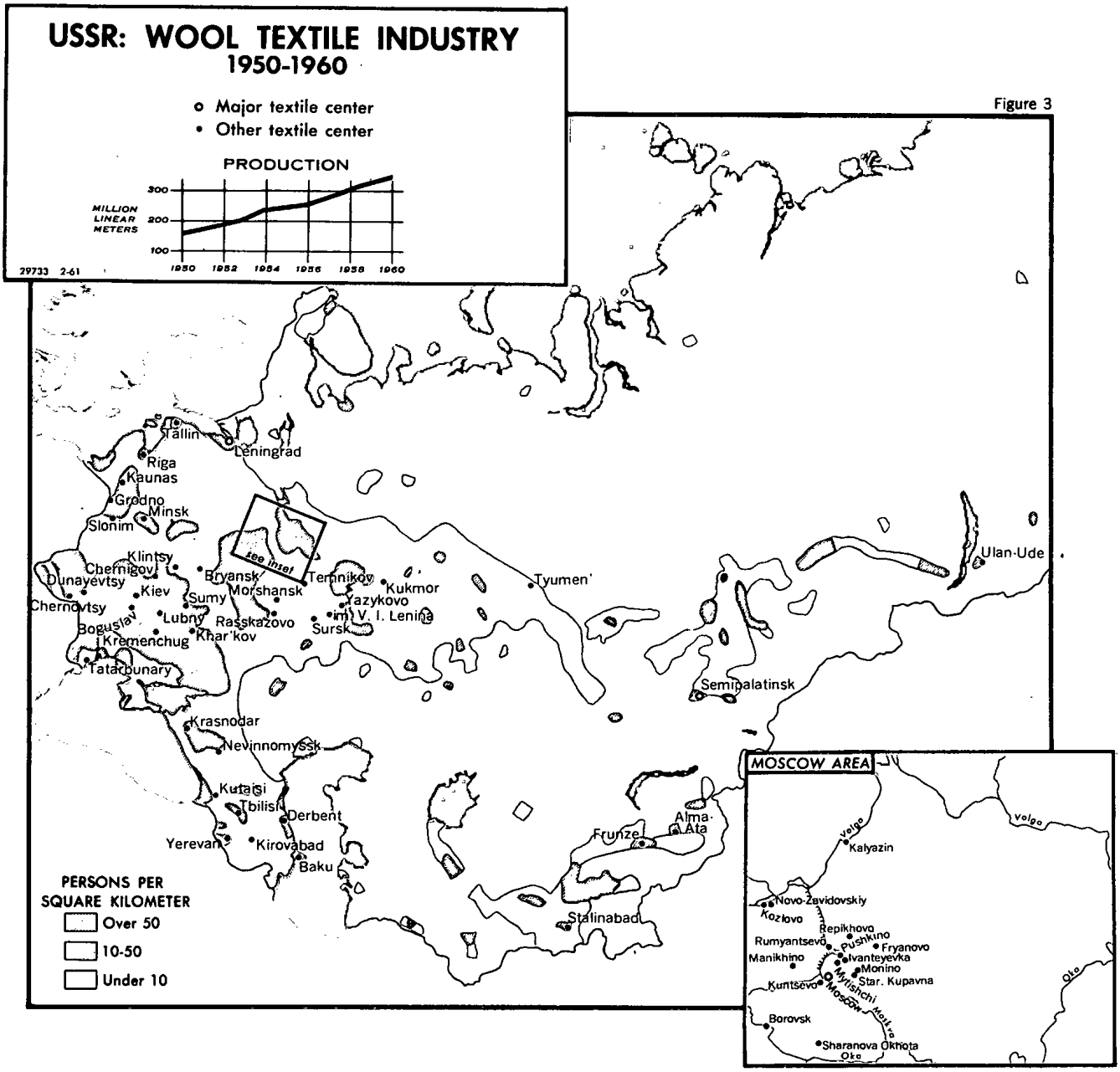


Figure 4

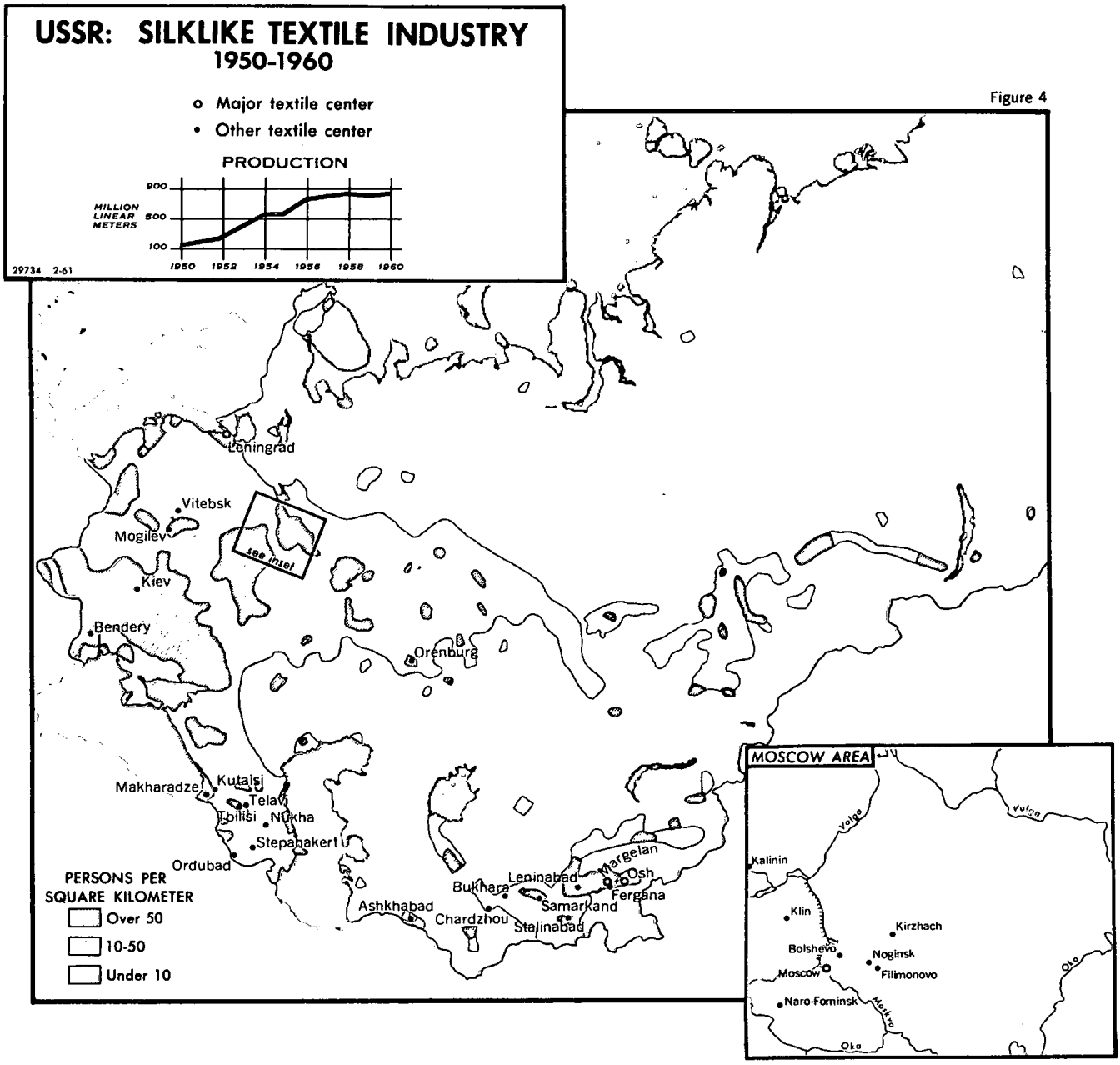
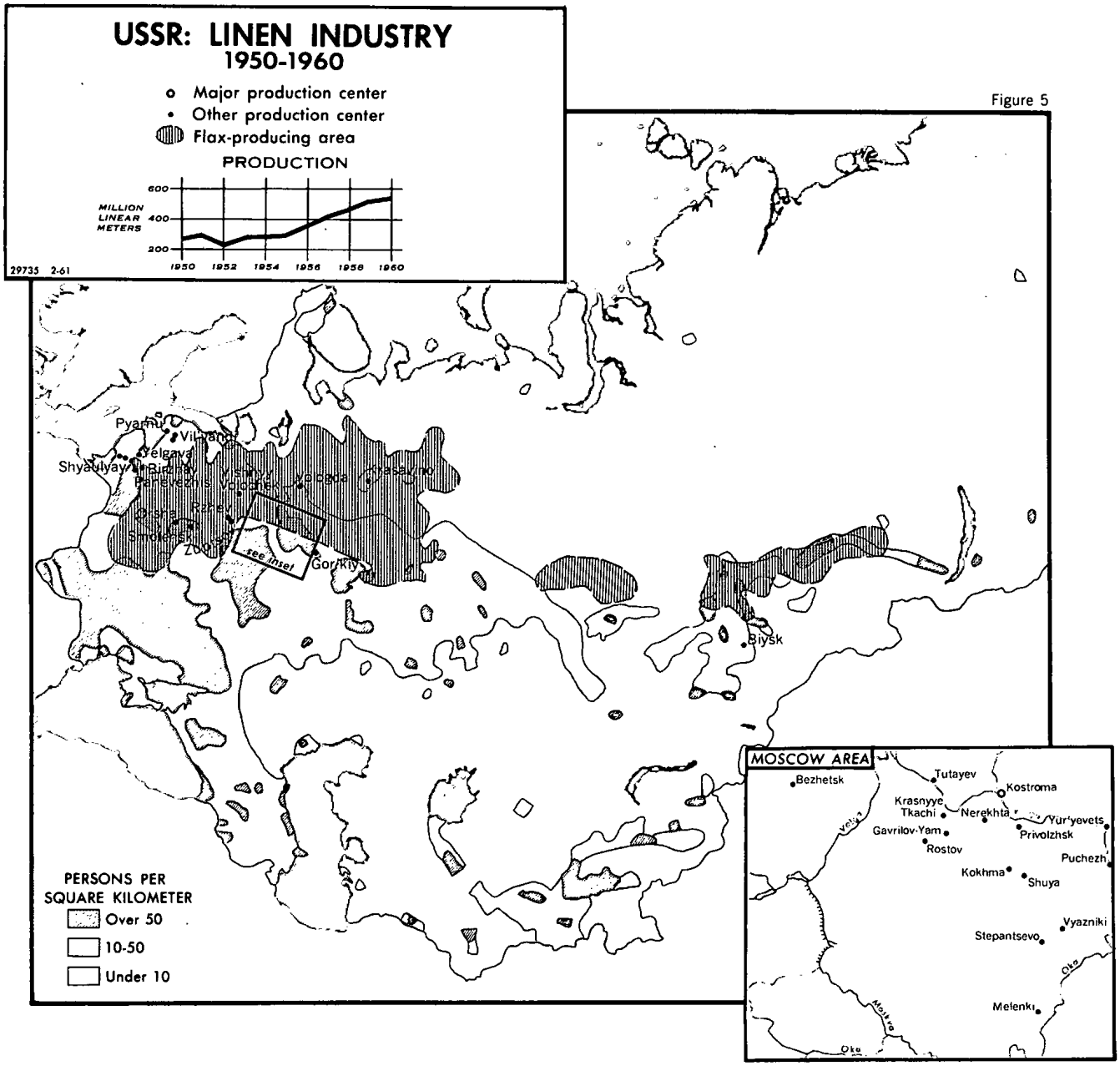


Figure 5



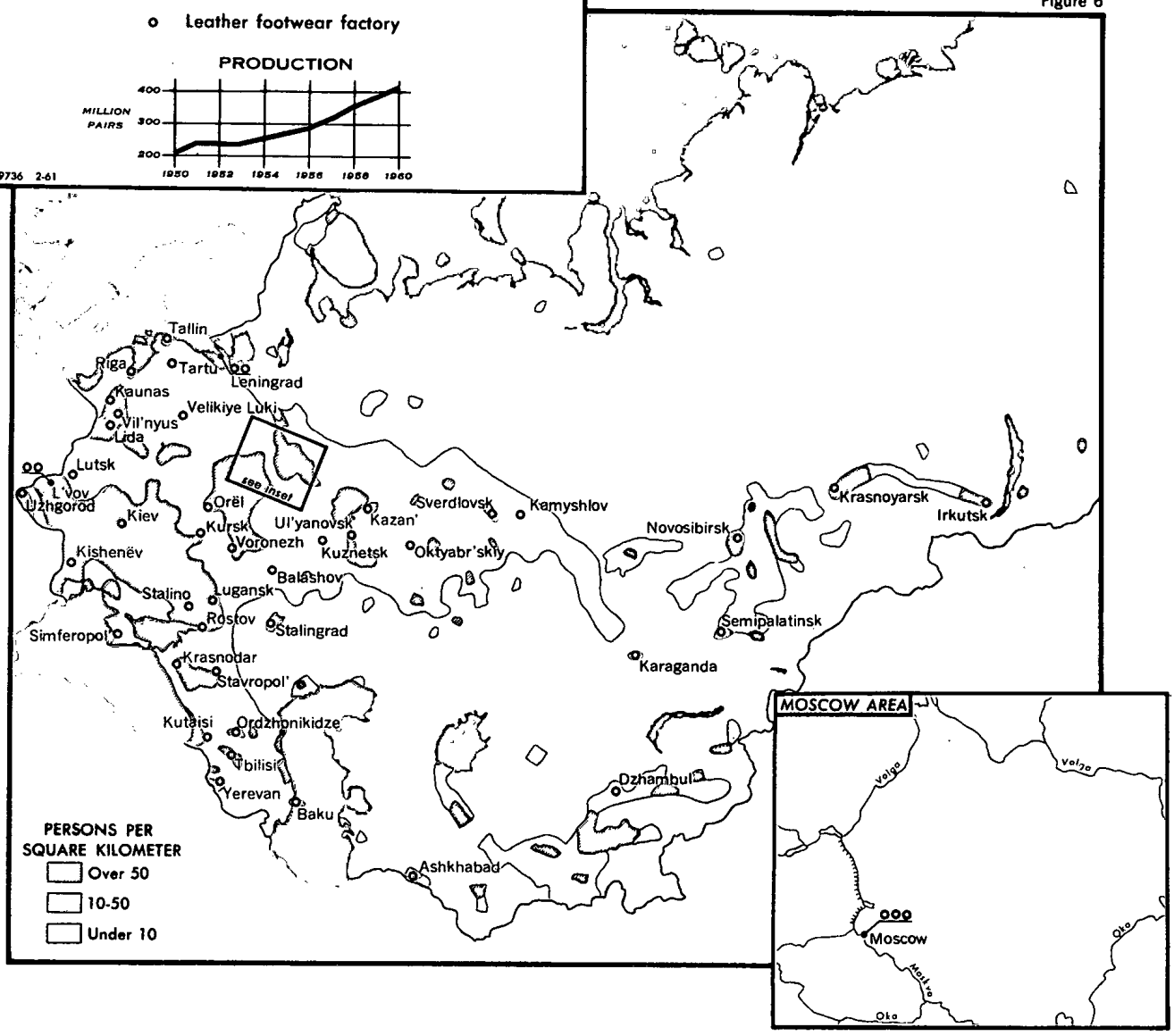
USSR
LEATHER FOOTWEAR INDUSTRY
1950-1960

Figure 6

o Leather footwear factory

PRODUCTION

29736 2-61



III. Seven Year Plan (1959-65)

A. Goals

Goals for light industry under the Seven Year Plan require an average annual rate of increase of 6.3 percent.* This rate is lower than the rate of 7.3 percent that was achieved during the previous 7-year period. Thus the rates of growth called for by the Seven Year Plan are significantly more moderate than is suggested by Soviet propaganda of the past 2 or 3 years.

The lower rate of growth scheduled for light industry under the Seven Year Plan can be attributed largely to the fact that achievements during 1952-58 brought light industry to a much higher level of production, so that, from the higher industrial base, annual percentage increases are more difficult to achieve. Moreover, light industry still is basically dependent on supplies of agricultural raw materials, although chemical fibers and other synthetic materials will, by 1965, make up a greater share of the total. Thus rates of growth for light industry strongly reflect the planned availability of raw materials.**

Further growth of light industry requires additional investment in the construction of new plants or in acquiring new machinery or processes. Furthermore, as the level of production moves closer to the level of demand, light industry is faced with the added tasks of broadening the assortment of goods and introducing improvements in quality -- both of which, while improving output of the industry, would tend also

* Average annual rates of increase are computed at the compound rate for the stated period, including the terminal years. The rates, in percentages, for the Seven Year Plan are compared with those of the preceding 7-year period (computed from data in Appendix B) as follows:

Commodity	Average Annual Rate of Increase 1952-58	Average Annual Rate of Increase 1959-65
Cotton fabric	2.8	4.2
Silklike fabric	25.3	8.4
Wool fabric	8.0	7.4
Linen fabric	6.4	4.0
Sewn garments	10.5	7.5
Knit outerwear	7.3	7.4
Knit underwear	10.5	10.0
Hosiery	5.9	5.0
Leather footwear	5.8	5.4

** See C, p. 24, below.

to slow the rate of growth. The same can be said of the introduction of new commodities -- notably a wide range of commodities to be made of synthetic materials.

Goals for physical production under the Seven Year Plan compared with production in 1958 are shown in Table 5.

Table 5

USSR: Production of Light Industry
1958 and 1965 Plan

Commodity	Unit	1958 a/ (Volume)	1965 Plan Volume b/	1965 Plan Index (1958 = 100)
Cotton fabric	Million linear meters	5,790	7,700 c/	133
Silklike fabric	Million linear meters	845	1,485	176
Wool fabric	Million linear meters	303	500	165
Linen fabric	Million linear meters	481	635	132
Sewn garments d/	Million 1955 rubles (value added)	10,500	17,400	166
Knit outerwear	Million pieces	97	160	165
Knit underwear	Million pieces	399	780	195
Hosiery	Million pairs	888	1,250	141
Leather footwear	Million pairs	356	515	145

a. 13/
b. 14/
c. The lower limit of the range of planned production for 1965 of 7.7 billion to 8.0 billion linear meters.
d. 15/

Through the achievement of the goals of the Seven Year Plan, the Soviet consumer, by comparison with what he has known in the past, will find considerable improvement in the supply of consumer products of light industry, and to some extent the material incentives, which Khrushchev desires, will have been provided. Consumers will notice significant increases in the availability of textiles and footwear, will be introduced to many new products such as the various fabrics of synthetic fibers and blends, and will find noticeable improvement in the supplies of factory-made clothing and knitwear.

In addition to solving problems of shortages of raw materials, achievement of the plan requires that a number of other arduous tasks be performed: industrial capacity must be increased by the construction of new plants and the modernization and reequipment of existing plants; and new products must be brought into production, especially those made from synthetics, requiring the mastery of completely new production processes and manufacturing techniques.

B. Expanding Capacity

1. Over-All Investment

To support the expansion of production of consumer goods, light industry during 1959-65 is scheduled to receive greater allotments of capital funds than were invested in the previous 7-year period. Investment in state enterprises of light industry as originally announced in the Seven Year Plan was to total 33 billion 1955 rubles, or 2.6 times the investment of the preceding 7-year period.* Additional investment funds of 25 billion to 30 billion 1955 rubles called for by Khrushchev have subsequently been allocated for the development of the textile and footwear industries and for the expansion of the agricultural production of raw materials for these industries. 16/ The division of this investment among the manufacturing light industries, the raw material base provided through agriculture, the chemical industry, and the builders of machinery for light industry is not clear, but directly or indirectly light industry will profit from all these investments.

Light industry is thus becoming more capital-intensive as additional new plants are brought under construction, as the reconstruction of old plants continues, and as modernization of equipment progresses. A reflection of the cost of expanding the industry is seen in a shift in the marginal capital-output ratio. For the Seven Year Plan in relation to the preceding 7-year period, the marginal capital-output ratio derived from Soviet over-all plans for light industry is calculated from official data as 0.40 in contrast to 0.16 for the earlier period, as shown in the following tabulation 17/:

	Increments to Production (Billion 1955 Rubles)	Capital Investment (Billion 1955 Rubles)	Ratio
1952-58	76.4	12.6	.16
1959-65	83.3	33.0	.40

* See Appendix C. In addition to capital investment in state enterprises, funds amounting to several billion rubles are believed to be provided for investment in cooperative enterprises that produce the commodities of light industry. As cooperatives are brought into the state system, these funds presumably would be added to the capital investment fund for light industry.

In past years, substantial increases in production have been achieved fairly economically through expansion of existing plants and modernization of equipment, but future expansion will depend to a greater extent on the more costly construction of entire new plants.*

2. New Equipment

[redacted] the USSR is intent on 50X1
becoming one of the leading nations in production of cotton textiles by 1965, rivaling the US in the size of its production. The magnitude of this task is indicated by comparing the Soviet spindle strength with that of other countries which lead in production of cotton textiles. Among the leading countries in cotton textiles according to the number of spindles in place in 1959, the USSR occupies fourth place as shown in the following tabulation:

Country	Million Spindles
US	20.3 18/
UK	19.9 19/
India	13.5 20/
USSR	11.5 21/
China	9.2**
Japan	9.0 22/

During the course of the Seven Year Plan the cotton textile industry is scheduled to put into operation 7.7 million new spindles. If this goal is achieved, the total spindle count for the USSR would, by 1965, amount to 19.2 million spindles, or 95 percent of the number of spindles in the US in 1959.

Soviet planners admit, however, that the Soviet machine building industry has neither the plant capacity nor the skilled personnel to design and build the new textile machinery needed to support planned expansion. In fact, the lesser but equally vital task of replacing wornout machinery in existing textile plants has already proved burdensome. Furthermore, the Seven Year Plan prescribes the additional task of modernizing other textile processes, including replacement of old style looms with modern automatic looms and installation of more modern systems of finishing, such as printing, dyeing, bleaching, pressing, and applying waterproof or wrinkle-resistant finishes.

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* For a more detailed analysis of the marginal capital-output ratios, see Appendix D.

** Estimated.

Procurement of textile plants and machinery from Western manufacturers plays a major role in expanding the capacity of the textile industry and has the added advantage of contributing substantially to the technological advancement of the industry as well. The purchase of machinery abroad lessens the pressure on the machine building plants at home and at the same time saves costly research and designing time by making possible outright copying of the most advanced models produced by Western industry. Such intentions are noticeably demonstrated by Soviet purchasing officers who persist in their efforts to procure from Western firms the very newest and most modern equipment even in cases where conventional machinery is clearly more suitable for a particular operation. For example, when Soviet engineers and officials negotiated for large purchases of textile machinery from the US company Intertex International, Inc., in 1960, they were persistent in their efforts to buy only the finest equipment of the latest model while bargaining hard for the best terms possible. The Soviet buyers showed no interest in other suitable machinery and equipment recommended for purchase at lower prices.

Plants for production and processing of synthetic fibers, and to a lesser extent rayon fibers, appear to hold the highest priority in purchases from Western firms. Prominent among these are plants and processes for production of synthetic fibers not yet available in substantial quantities in the USSR, such as dacron, orlon, and nylon 66 (Du Pont nylon). In addition, purchases are being negotiated for processes already well established in Soviet industry, including plants and methods for production of viscose filament and staple, acetate filament and staple, and a cellulose plant to supply raw materials for production of these fibers. The USSR has sought even to buy from a British firm a plant for production by the continuous polymerization process of kapron (nylon 6), a type of nylon that has been in full-scale production in the USSR since 1950. Such a purchase obviously was motivated by the desire to modernize Soviet processes through the acquisition of advanced technology from Western industry rather than by the development of such improvements internally.

Although the USSR has indicated a strong interest in and preference for US processes and models of equipment, negotiations also have taken place on a large scale with firms in several West European countries such as the British firms of Courtalds, Ltd., and Interfil, Ltd., and the West German firms of Friedrich Alfred Krupp, Inc., and Von Kohorn International. On a lesser scale, manufacturing and trading firms in Italy and Sweden also have participated in the Soviet purchasing program. The USSR began negotiations with Japan for sizable quantities of textile machinery for the first time in 1958. In general, machinery of Japanese make can be bought well below the prices of machinery in the US and West European countries -- as much as 25 percent lower than the prevailing international prices. 23/ Japan, therefore, may prove to be an important source of textile machinery during the Seven Year Plan.

By contrast the USSR appears to be generally less interested in obtaining technology and equipment for other branches of light industry, such as the garmentmaking, knitwear, and footwear branches that, in general, are more backward than is the textile branch. It appears, therefore, that the program of expansion and reequipment of light industry is geared primarily to production of textile fabrics. One official of light industry, in fact, has stated that "fast progress in cloth weaving" is the basic task for the Seven Year Plan. 24/

C. Raw Materials

1. General

Providing increasing quantities of raw materials will be one of the major factors limiting the future growth of light industrial production in the USSR. Production of cotton and wool by Soviet agriculture is expected on the whole to fall short of the goals of the Seven Year Plan. Moreover, even the planned output of most natural fibers will barely support the planned increase in textile fabrics. For example, for 1959-65 the physical output of cotton fabrics is to increase at an annual rate of 4.2 to 4.7 percent, whereas that of cotton fibers is to increase between 3.8 and 4.9 percent. 25/ Soviet planners appear to have become more realistic in recognizing that Soviet agriculture can no longer, as it has in the past, supply fibers in adequate quantities to support the planned expansion of the textile industry. Future goals for fabrics are dependent on the assumption that rayon and synthetic fibers can be produced in quantities adequate to supply the requirements of the expanding textile industry over and above that which agriculture can produce. The importance of chemical fibers in the entire expansion program is emphasized by the fact that for 1959-65 the output of silklike fabrics is to increase at the average annual rate of 8.4 percent, 26/ although production of chemical fibers is to increase 22 percent annually. 27/ Woolen plants in particular are to rely on increasingly larger quantities of synthetic fibers, if, indeed, woollike synthetics can be produced successfully by the chemical plants as planned. Cotton mills also are to receive large quantities of synthetic fibers that are suitable for blending with cotton fiber, probably lavsan or nitron -- the Soviet counterparts of dacron and orlon.

2. Agricultural Fibers

Soviet agricultural production of textile fibers -- principally cotton, wool, and flax -- is expected, on the whole, to fall somewhat short of the goals of the Seven Year Plan. Production of cotton in 1965 is planned at 5.7 million to 6.1 million tons,* an increase of 30 to 40 percent above production at the beginning of the plan in 1958. During

* Tonnages are given in metric tons throughout this report.

the first year of the Seven Year Plan, because of unusually favorable growing conditions, cotton production increased by as much as 7 percent, but in the following year, 1960, adverse weather conditions resulted in a drop to the level of 1958. Thus during the first 2 years of the Seven Year Plan, Soviet agriculture has made little, if any, progress toward the ambitious goal for production of cotton in 1965.

Irrigation networks now under construction in the USSR are expected to expand cotton acreage by some 20 to 25 percent toward the end of the Seven Year Plan. Several large irrigation projects designed to increase acreage planted to cotton are underway in Soviet Central Asia, including the project on the Golodnaya Step and the one in the Central Fergana Valley. A small increase in cotton yields -- 5 to 10 percent -- probably is planned by 1965, even though the USSR already claims Soviet cotton yields to be the highest in the world. Soviet yields compare favorably with those in the US in the irrigated lands of California, Arizona, and New Mexico. New acreage brought into production, however, even with irrigation, does not produce peak yields for several years. Because of these limitations, it is estimated that production by 1965 will reach about 5.5 million tons instead of 5.7 million to 6.1 million tons as planned.*

Nor are the ambitious goals for production of wool expected to be reached. During the Seven Year Plan, production of wool is scheduled to increase from 322,000 tons in 1958 to 548,000 tons by 1965, or an increase of 70 percent. Planned improvements in breeds for increased yields may be difficult to achieve, and the size of herds will be limited by the fact that Soviet agriculture is unable to expand production of livestock feeds and to prevent annual fluctuations in feed supplies. Thus, in total numbers of sheep, the herds by 1965 will be considerably smaller than the increase of 57 percent called for by the plan. Soviet production of wool by 1965 then would reach a level of only about 500,000 tons, or about 10 percent short of the planned goal.

Planned increases in production of fiber flax are to be achieved both through increased yields and through expansion of acreage planted to flax. Special emphasis is being placed on expanding the principal flax-growing regions, where increases in new acreage are expected to amount to about 20 percent. Increased use of mineral fertilizers and improved agrotechniques will promote further the increases in flax fiber that are planned. Thus it is expected that the goal of 580,000 tons of flax fiber will be produced in 1965.

* Data on production of agricultural fibers are unpublished estimates in the files of this Office.

3. Chemical Fibers

As early as May 1958, Khrushchev in his decree outlining plans for the chemical industry had announced his plan for a large rayon and synthetic fiber industry designed to increase production and reduce the cost of textiles and clothing. 28/ The decree called for capacity for production of rayon and synthetic fiber to be increased almost five times during 1959-65. To equip the new synthetic fiber industry, the USSR would, Khrushchev said, rely heavily on the machine building industries of the "brother countries." To save time in machine designing and manufacturing, he further proclaimed, "It would also be expedient to order part of this equipment in capitalist countries, primarily the US, West Germany, and Britain."

Research in synthetic fibers in the USSR is, nevertheless, much further advanced than is indicated by progress at the production level. As late as 1958, Soviet laboratory research on synthetic fibers was estimated to be only 2 to 4 years behind that of the US and Western Europe. 29/ On the basis of these substantial achievements, therefore, the USSR is in the process of expanding its rayon and synthetic fibers industries as scheduled by the Seven Year Plan. Supplies of basic materials needed for production of synthetic fibers -- coal, petroleum, and natural gas -- are cheap and abundant in the USSR, as is cellulose, the basic material for the manufacture of rayon. To date, the USSR has used these inexpensive materials to develop a sizable rayon industry, which produces viscose and acetate rayon, and a small synthetic fiber industry, which produces mainly kapron. Complete plants for production of kapron, which were confiscated in East Germany following World War II and reconstructed near Moscow, served as a nucleus for the Soviet synthetic fiber industry. Other synthetic fibers, for which technology was acquired readymade from European countries and the US and which are already produced in small quantities, are to be produced in much greater amounts. These fibers include two additional types of nylon -- anid and enant -- in addition to nitron (orlon); lavsan (dacron); and khlorin, a polyvinyl fiber.

Soviet officials have emphasized repeatedly the importance of synthetic fiber for reducing in the long run the cost of textiles and clothing, more specifically for reducing labor inputs required for production of fibers. In general, labor inputs are higher for natural fibers than for chemical fibers, but in producing chemical fibers labor costs often are small compared with the cost of capital equipment and cost of materials. For example, the cost of labor in production of viscose staple on an efficient large scale in the US is only about 13 percent of the total cost of production. 30/ In production of acetate, labor inputs are even less, whereas in both cases capital and materials costs are high. By contrast the inputs of labor required for production of cotton and wool make up a large share of the total cost.

A heavy burden falls on the chemical industry for supplying fairly soon the sizable quantities of fibers that light industry will require. Although the program for these fibers is lagging, it is still too early to predict the outcome by 1965. In 1960, rayon and synthetic fibers still made up only 15 percent of the total textile raw materials, and the 1959 plan for construction of plants to produce chemical fibers was fulfilled by only 45 percent. 31/ Bringing into full production the chemical fiber plants already under construction could overcome the lag and put the chemical fiber program on schedule.

Thus the fulfillment in 1965 of the goals for light industry depends in large part on an unprogressive agricultural sector for supplying increases in natural fibers and on an already overburdened chemical industry for providing large quantities of rayon and synthetic fibers. Should agriculture and the chemical industry fail to meet their requirements to light industry, the official program for increasing the supplies of textiles to Soviet consumers would be placed in serious jeopardy. In this event, Soviet planners would have to look abroad for large quantities of textile fibers with which to supplement domestic supplies.*

D. Achieving the Plan and Catching Up with the US

Khrushchev has seen fit to promise the people of the USSR the highest standard of living in the world by 1970, a promise that somewhat surprised the long-neglected Soviet consumer and the world at large. Having endured tens of years of scarcity and privation at the time when Western standards of living were rising steadily, Soviet consumers were impressed by the prospects, however vague, of one day leading the world in consumer goods. That the USSR might surpass the US in consumption

* The USSR, a net exporter of cotton, annually exports large amounts of its total production of cotton mainly to its European Satellites. The total export in 1959 amounted to 22 percent of production. Although increasing domestic requirements appear to strain the ability of the USSR to continue such extensive export, these commitments appear fairly rigid as indicated by the export pattern of recent years. On an unginned basis (converted at the rate of 3 to 1), the USSR imported 60,000 tons of cotton and exported 1.01 million tons in 1955, 32/ imported 327,000 tons and exported 957,000 tons in 1957, 33/ and imported 571,000 tons and exported 1.03 million tons in 1959. 34/ Imports of wool, chiefly from China and other Asian countries, amount in recent years to more than one-third of Soviet domestic production. It may develop that the Soviet need to import cotton and wool in the future may coincide with other Soviet motives abroad, setting optimum conditions for imports of these fibers that are available for purchase or barter. Indeed, it may prove that to purchase is more economical than to produce in cases where problems of agricultural or industrial expansion become pressing.

could not fail also to impress the underdeveloped countries of the world, as well as some Western countries which have levels of consumption far below those of the US. Khrushchev's "standard of living," however, allows only for basic necessities in personal belongings and explicitly excludes the so-called luxuries such as automobiles and many of the convenience items considered basic to households in the US. Still, even in basic commodities, the USSR is far behind the US and many other Western countries. Soviet production per capita of fabrics in 1960 was only 44 percent of US production,* and this rate would afford a supply of clothing and household textiles far from adequate, at anywhere near the standards set by most Western countries, to clothe a population that exceeds that of the US by about 20 percent. Production of leather footwear is only about one-half that of the US, and gross insufficiencies exist in amounts of readymade clothing and knitwear available to the population. The USSR promises to boost its textile production to 8.2 billion square meters by 1965, but the US produced almost 12.5 billion square meters in 1960.

Thus Soviet light industry in the years ahead faces its greatest challenge, and achievement of even the 1965 goal is dependent on utilization by this industry of a considerably greater part of the scarce economic and technical resources than it has utilized in the past. Given the funds and the continuing emphasis on consumer welfare, the 1965 goals probably can be achieved, but to achieve for the Soviet people the highest standard of living in the world is entirely another matter.

How well the USSR "succeeds" in catching up with or surpassing the US in consumer goods will depend to a large degree on the Soviet interpretation of performance. On the one hand, Soviet officials relate their annual production to catching up with US levels of production; on the other, they denounce the US for being grossly wasteful and excessive with regard to consumption. Thus for purposes of comparison and of propaganda, the choice is theirs.

* For the methodology, see Appendix E.

APPENDIX A

GEOGRAPHICAL LOCATION OF SOVIET LIGHT INDUSTRY

Although the plants of light industry are widely dispersed throughout the USSR, they are concentrated most heavily in the industrial centers of Moscow and Leningrad and their suburbs. These cities, which because of their large supplies of labor became the centers of early industrialization, remain almost 100 years later the heart of the industry. Under the Soviet regime a plan for dispersion of industry has resulted in new plants being located away from the industrial areas and in closer proximity either to the sources of raw materials -- Central Asia, Transcaucasia, Siberia, and the Far East -- or to other important centers of population.

Cotton Textiles

Of cotton textiles, 80 percent are still produced in the Moscow and Leningrad areas far from the cotton-growing regions of Uzbek SSR, Turkmen SSR, Tadzhik SSR, Kirgiz SSR, Kazakh SSR, the Volga, and Transcaucasia. Uzbek SSR, noted for high crop yields and expert technology of cotton growing, produces two-thirds of the cotton grown in the USSR. The largest cotton combine in the country, and claimed to be the largest in the world, has been built since World War II at Kamyshin in the region of the lower Volga. Equipped with more than half a million spindles, its scheduled capacity is 1 million meters of cloth a day. Two other large combines, only slightly smaller in capacity than Kamyshin, contribute heavily to the supply of cotton cloth. One, the Barnaul cotton combine in West Siberia, supplies the vast Siberian and Far Eastern regions with a variety of cotton cloth products. Another of these combines is located in Tashkent, the capital and industrial center of Uzbek SSR. Other important combines, although smaller in capacity, are located at Gori, industrial city of Georgia; at Stalinabad, where cotton is grown in the fertile valleys of Tadzhik; and at Kherson, a Ukrainian port city near the cotton-growing lands of the steppe.

Wool Textiles

Wool textiles, like cotton, are produced principally in Moscow and Leningrad. In spite of Soviet attempts at dispersion of the industry by construction of new plants in the Ukrainian SSR and the Georgian SSR, the greater part of wool textiles is still produced in the older industrial areas. Their production includes worsted and woolens of finer quality, whereas fabrics of coarser wool are produced by plants scattered throughout the Ukrainian SSR and the Volga regions. Construction of new wool combines near the sheep-raising regions, however, has brought about a degree of decentralization of production. Combines built since World

War II or presently under construction are found at Bryansk in Western RSFSR; at Chernigov farther south in the Ukrainian SSR; and at Baku in the Caucasus, Sverdlovsk in the Urals, and Kansk in East Siberia.

Silklike Textiles

Silklike textiles of rayon and synthetic fiber are manufactured at 12 major plants which, ranging in capacity up to 30 million meters a year, account for a large share of output. Because the industry has developed in part from the natural silk industry and in part as a branch of the chemical industry, the plants manufacturing cloth of rayon and synthetic fiber are widespread. For example, the principal plants of the industry are located at Moscow and Kalinin in the central industrial region, at Kiev in the Ukrainian SSR, and at Leninabad in Tadzhik SSR. The first rayon plant was built by an English industrialist at Mytishchi, near Moscow, before the revolution. Subsequently, during earlier 5-year plans, rayon plants were built by US companies, one of which is operating at Klin near Moscow.

Linen

Linen is produced principally by seven major plants, ranging in capacity up to 10 million meters a year, and by at least an equal number of smaller plants. Major plants are located in the central industrial region at Gor'kiy, Kostromi, and Vyazniki; in the European North at Vologda and Krasavino; and at Panevezhis in the Baltic region. Construction of plants with capacities of 23 million meters at Rovno and Zhitomir in the USSR was underway in 1959.

Leather Footwear

Factories producing leather footwear are concentrated most heavily in the areas of Moscow and Leningrad. Large-scale enterprises also are located in cities of the Baltic area, at Kiev in the Ukrainian SSR, at Tbilisi in the Georgian SSR, at Kishinev in Moldavia, at Dzhambul in Kazakh SSR, and at Ul'yanovsk and Kazan' in the Volga region. In spite of such dispersion the distribution of this industry still does not correspond with the needs of the population. Millions of pairs of shoes are shipped annually from the central regions to the far reaches of the country, but, at the same time, hides and skins are shipped in the opposite direction.

Clothing Factories

The industries producing knitwear and sewn garments are located in major cities in the USSR. A number of plants were constructed during the Fifth Five Year Plan (1951-55), and others are still under construction in 1960 or are planned for completion in the next few years. In order to disperse these industries, plants in the central industrial areas are being modernized but not expanded, whereas new plants are being located in areas of lesser industrialization.

APPENDIX B

USSR: VALUE COMPONENTS OF THE INDEX OF PRODUCTION OF LIGHT INDUSTRY*
1950-60 AND 1965 PLAN

Commodity	1955 Average Retail Price per Unit (Rubles)	Million 1955 Rubles											
		1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1965 Plan
Cotton fabric	8.32	32,440	39,670	41,966	43,971	46,509	49,130	45,402	46,492	48,173	51,168	53,140	64,064
Silklike fabric	31.54	4,100	5,488	7,096	12,616	16,306	16,590	23,718	25,390	26,651	25,232	25,547	46,837
Wool fabric	116.10	17,996	20,434	22,059	24,265	28,212	29,257	31,115	32,972	35,178	37,849	39,706	58,050
Linen fabric	12.24	3,452	3,843	3,133	3,537	3,513	3,745	4,688	5,190	5,887	6,450	6,842	7,772
Sewn garments		4,585	5,227	5,869	6,556	7,794	8,620	9,491	9,583	10,500	11,600	12,400	17,400
Knit outerwear	47.70	2,242	2,814	3,053	3,148	3,625	4,054	4,054	4,293	4,627	4,961	5,295	7,632
Knit underwear	28.00	4,200	5,544	6,580	7,700	9,156	9,688	9,744	10,472	11,172	12,292	13,188	21,840
Hosiery	7.56	3,576	4,521	4,423	4,627	5,103	5,836	6,071	6,388	6,713	7,001	7,288	9,450
Leather footwear	170.67	34,646	40,790	40,449	40,619	43,521	46,252	48,982	54,102	60,759	66,561	71,340	87,895
Total		107,237	128,331	134,628	147,039	163,739	173,172	183,265	194,882	209,660	223,114	234,746	320,940
Index (1951 = 100)		84	100	105	115	128	135	143	152	163	174	183	250

* For the methodology, see Appendix E. For production in absolute quantities, see the tabulation on the next page.

Production in Absolute Quantities [a]

Commodity	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1965 Plan
Cotton fabric	Million linear meters	3,899	4,768	5,044	5,285	5,590	5,905	5,457	5,588	5,790	6,150	6,387	7,700 [b]
Silklike fabric	Million linear meters	130	174	225	400	517	526	752	805	845	800	810	1,485
Wool fabric	Million linear meters	155	176	190	209	243	252	268	284	303	326	342	500
Linen fabric	Million linear meters	282	314	256	289	287	306	383	424	481	527	559	635
Sewn garments	Million 1955 rubles (value added)	4,585	5,227	5,869	6,556	7,794	8,620	9,491	9,583	10,500	11,600	12,400	17,400
Knit outerwear	Million pieces	47	59	64	66	76	85	85	90	97	104	111	160
Knit underwear	Million pieces	150	198	235	275	327	346	348	374	399	439	471	780
Hosiery	Million pairs	473	598	585	612	675	772	803	845	888	926	964	1,250
Leather footwear	Million pairs	203	239	237	238	255	271	287	317	356	390	418	515

a. Except for sewn garments.
b. The lower limit of the range of planned production for 1965 of 7.7 billion to 8.0 billion linear meters.

A comparison of the computed index with the Soviet index of production by light industry for 1950-60 (1950 = 100) can be made as follows:

Year	Computed Index	Soviet Index
1950	100	100
1951	120	N.A.
1952	126	N.A.
1953	137	143
1954	153	N.A.
1955	161	178
1956	171	191
1957	182	201
1958	196	217
1959	208	240
1960	219	N.A.

The index for light industry as computed above includes only finished commodities and is free of multiple counting. The index is weighted by Soviet retail prices of 1 July 1955. The Soviet index, on the other hand, is an index of gross production, including both semifabricates and finished commodities -- for example, both yarns and fabrics. Thus multiple counting is extensive. Wholesale prices of the enterprise as of 1 July 1955, which include factory costs and profits but exclude trade markups and turnover taxes, were used to weight the Soviet index.

Between 1950 and 1959 the Soviet index shows a growth of 2.4 times, whereas the computed index shows a growth of about 2.1 times. These differences in growth are not large, however, considering that 10 years of production are represented by the indexes. Because of the differences in the commodities covered, the weighting systems used, and the problem of multiple counting, it is difficult to determine the precise reasons for the higher Soviet index. It is reasonable to suppose, however, that the combination of production data and weighting system which showed the highest growth would be chosen to represent the over-all growth of the industry.

APPENDIX C

USSR: CAPITAL INVESTMENT IN LIGHT INDUSTRY

	Million 1955 Rubles		Ratio of Planned Investment 1959-65 to Actual Investment 1952-58
	Actual Investment 1952-58	Planned Investment 1959-65	
Total light industry a/	12,600	33,000	2.6 to 1
Textiles b/	9,000	25,000 c/	2.8 to 1
Cotton d/	3,848	7,812	2.0 to 1
Silklike d/	743	7,088	9.5 to 1
Wool d/	1,312	3,843	2.9 to 1
Other textiles e/	3,097	6,257	2.0 to 1
Knitwear and hosiery d/	527	1,853	3.5 to 1
Sewn garments f/	893	1,785	2.0 to 1
Leather footwear e/	2,180	4,362	2.0 to 1

a. 35/
b. 36/
c. As originally announced. Investment subsequently has been increased.
d. 37/
e. Residual.
f. Estimate based on 1960 planned investment of 255 million rubles. 38/

APPENDIX D

USSR: MARGINAL CAPITAL-OUTPUT RATIOS FOR VARIOUS BRANCHES OF LIGHT INDUSTRY

	1952-58			1959-65		
	Investment a/	Increments to Production b/	Capital-Output Ratio	Investment a/	Increments to Production b/	Capital-Output Ratio
	(Million 1955 Rubles)			(Million 1955 Rubles)		
Total light industry	12,600	81,329	.155	33,000	111,280	.297
Textiles	9,000	46,454	.194	25,000	60,834	.411
Cotton	3,848	8,503	.453	7,812	15,891	.492
Wool	1,312	14,744	.089	3,843	22,872	.168
Other textiles	3,840	23,207	.165	13,345	22,071	.605
Knitwear and hosiery	527	9,633	.055	1,853	16,410	.113
Sewn garments	893	5,273	.169	1,785	6,900	.259
Leather footwear	2,180	19,969	.109	4,362	27,136	.161

a. From Appendix C.
b. Computed from data in Appendix B.

The table above compares Soviet investment in light industry with increments to production, actual and planned, computed from data on production in Appendix B and Appendix C. The ratios thus computed differ from the "official ratios" announced by the regime* and based on increases in gross value of production. For example, the capital-output ratio for light industry for the Seven Year Plan, as computed above, is 1.9 times higher than that for the previous 7-year period, but the official ratio is 2.4 times higher. Even though some difference in the capital-output ratios as derived by the two methods was expected, the ratios are still close. The official ratio is based on the value of gross output for all light industry, including production of semifabricates, whereas the computed ratios are based on the value of production of finished products only, net of multiple counting.

Although the ratios for light industry as a whole, as computed above, will just about double during the Seven Year Plan, ratios for individual commodities in some cases show higher increases, reflecting significant changes that are taking place in particular branches of light industry. The capital-output ratio for the cotton textile industry is approximately the same for both periods. On the other hand, the capital-output ratio for "other textiles" was low for 1952-58 and high for 1959-65, an actual increase of as much as 3.7 times. Even though investments for the early period were high, the capital-output ratio for "other textiles" is low because of the large increment to production that was achieved during this period.

Possible reasons for this remarkably high increment to production from investments in "other textiles" include the following: (1) unused capacity may have been brought into production, (2) cotton textile systems may have been converted to weaving silklike fabrics (this was done rather extensively in the US during the 1930's), (3) blends of rayon and cotton may have been counted as silk and thus reported under "other textiles," and (4) new capacity for silklike fabrics probably is realizing more fabric per unit of investment (not counting the initial investment that is required to produce rayon fiber) because of the use of a continuous filament rayon that requires less processing in the yarn stages. Another explanation might be that the industry was realizing the results of major investment made before 1952, but this possibility appears unlikely in view of the investment priorities of the period.

The higher capital-output ratios for cotton, wool, knitwear, sewn garments, and footwear for the Seven Year Plan probably are indicative of the increased investment in new plant and ancillary facilities that will be required to meet output goals, in effect a decline in the marginal productivity of capital. In the past a larger share of increases in capacity has come from modernization programs that are less costly

* See III, B, 1, p. 21, above.

than new construction programs. The especially large increase in the capital-output ratio of "other textiles" probably reflects the initial impact of the new program for synthetic fibers. New plants, advanced processes, and new equipment, much of which is being purchased abroad, require major investments. At the same time the problems of training personnel and acquiring new techniques will tend to keep production low. Thus the relatively high ratio of capital to output for "other textiles" reflects the changing technology and increased role of investment in this industry and, in part, the lag between new investment and the resulting gain in output rather than definite decline in the marginal productivity of capital. In this branch of light industry, major increments to production may be forthcoming in subsequent periods beyond the Seven Year Plan.

APPENDIX E

METHODOLOGY

Soviet-US Price Ratios

As far as possible the items chosen for the dollar-ruble comparison values in Table 4 were selected as typical of items purchased by Soviet consumers. Soviet prices (average urban-rural prices) and commodity specifications are from official Soviet bulletins of retail prices for 1955 or for later years adjusted to 1955 levels, but few price changes have occurred since 1955. US prices are of commodities chosen to match as closely as possible the Soviet commodity in quality and type. These prices, which were selected from the Sears Roebuck catalog for 1955, were adjusted for transportation cost and for the retail differential factor.

Index of Production for Light Industry, 1950-60

Production data are from official sources including the various handbooks and reports of plan fulfillment. The average retail prices for 1955, which are used as weights, were either officially announced or were derived from official retail price bulletins. Average retail prices for the various fabrics were reported. 39/

Production Series for the Garment Industry

The production series for sewn garments was obtained by moving 1958 production, reported officially in terms of value added, 40/ back to earlier years using the official index for value of production. 41/ Planned production in 1960 is given, 42/ as is the 1965 Plan. 43/ For the purpose of constructing an index, the use of the value-added series to represent sewn garments eliminates the multiple counting of fabrics.

Production Per Capita of Fabrics, USSR and US in 1960

	Total Production of Textiles (Million Square Meters)	Population (Million)	Production Per Capita (Square Meters)
USSR	6,466	214.0	30.2
US	12,491	180.1	69.4

Average Earnings in the USSR and the US

The average earnings of workers and employees in the USSR for 1959 were 9,550 rubles. 44/ Comparable wages in the US were derived from 1959 gross wage and salary disbursements (nonagricultural) and employment, excluding agricultural employees, proprietors, self-employed workers, unpaid family workers, and the armed forces. 45/

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