Women in the Soviet Economy



WOMEN IN THE SOVIET ECONOMY

Their Role in Economic, Scientific, and Technical Development

A study sponsored by the Foreign Studies Group, Office of Economic and Manpower Studies, National Science Foundation, and prepared under the supervision of the Department of Economics, University of Maryland

NORTON T. DODGE

THE JOHNS HOPKINS PRESS Baltimore

Copyright © 1966 by The Johns Hopkins Press, Baltimore, Maryland 21218 Printed in the United States of America

Library of Congress Catalog Card Number 66-14375

PREFACE

CONCERN IN recent years for the waste of women's talent and labor potential led to the appointment of The President's Commission on the Status of Women, which has issued a series of reports on various problems affecting women and their participation in economic, political, and social life. For any formulation of policy directed toward the better use of our woman power, it is important to know the experience of other nations in utilizing the capabilities of women. For this reason as well as others, the Soviet experience is of particular interest at this time.

Although the lack of reported data on some of the topics under consideration resulted in many unanswered questions, during the past decade there has been a significant improvement in the flow of both statistical and descriptive materials from the Soviet Union. A great variety of statistical handbooks and other materials presenting figures on the country's economic, social, and cultural developments has been screened and analyzed for this study. Because so many of these statistics had to be related to data on population and its characteristics, the pivotal years for analysis in the present study are 1926, 1939, and 1959—the years in which national censuses

for the U.S.S.R. were made. Bench marks so widely separated are of limited use, however, unless one can fill in the gaps with additional information. Thus, intercensal comparisons are supplemented when possible by other published statistics and by estimates of births, deaths, size and structure of the population according to educational attainment, employment, and so forth. Projections of the population by broad age groups are made for 1970 and 1980. As in most studies lacking a strong historical focus, the reader will find that greater attention is devoted—with a few exceptions, when current data are deficient—to more recent materials.

A somewhat analogous progression is attempted in the emphasis by topics, the greatest emphasis being placed on professional women in the field of science and technology. Four chapters do not deal specifically with the labor force but with more general aspects of women, their number, age structure, and education—Chapter 2 on population questions, Chapter 6 on educational trends, Chapter 7 on training in science and technology, and Chapter 8 on educational attainment. Chapters 7 and 8 are, of course, crucial to an understanding of the contribution of women to the scientific and technical achievements of the Soviet Union. Primary emphasis, however, is placed on the role of women in the Soviet labor force. The extent to which

¹The President's Commission on the Status of Women, *American Women* (Washington, D.C., 1963), and other specialized reports.

women participate in the economy as a whole is discussed in Chapter 3. Some of the factors affecting this participation are examined in Chapters 4 and 5. In Chapters 9 and 10, the role of women in the two most important categories of the Soviet labor force is described—the less skilled occupations in agriculture and industry (Chapter 9) and the more highly skilled semiprofessional and professional occupations (Chapter 10). In Chapter 11, I examine and attempt to assess the contribution of women to Soviet science and technology.

The sources used in this study are mainly published Soviet materials. In addition, first-hand information and impressions were gathered in the Soviet Union during a month in the spring of 1955, two months in the summer of 1962, and five weeks in the spring of 1965. During the two latter visits, which took me from Leningrad to Alma-Ata, I had both formal and informal conferences and interviews with several-score Soviet officials, administrators, scientists, engineers, teachers, physicians, economists, and others concerned with problems related to the training and employment of women. Many of those interviewed were women.

Intourist and the Institute of Soviet-American Relations were helpful in arranging my visits to nurseries, kindergartens, schools, higher educational institutions, research institutes, farms, factories, and other institutions and enterprises.

I should like to thank the National Science Foundation for its financial support of this research and to express special thanks to Mr. Joseph P. Kozlowski of the Office of Economic and Manpower Studies for his encouragement and help. This study was initiated by Mr. Michael Roof, but because of other commitments he withdrew from the project.

His contribution, particularly in the early stages of the study, was helpful. Mr. Charles West was also very helpful in the initial stages, and his loyal assistance is gratefully acknowledged. Special thanks are due Mrs. Elizabeth Marbury Bass for assistance on the legal sections of Chapter 4, Mr. James Brackett of the Bureau of the Census for invaluable help on Chapter 2, and Mr. Murray Feshbach, also of the Bureau of the Census, for assistance and advice on Chapters 9 and 10. as well as on bibliographic matters. The excellent collection of materials in the library of the Foreign Demographic Analysis Division of the Bureau of the Census, which was made available to me by Mr. Feshbach, yielded much valuable data.

Mrs. May Spiro ably and loyally edited and prepared the initial draft of the manuscript. Imaginative editorial assistance was given by Mrs. Mary Knight. Mrs. Janet Lugo was also of assistance in the final throes of completing the manuscript.

I should also like to thank the staff of the Slavic Room of the Library of Congress, particularly Dr. Gisela Weinfeld, for its generous help over many months. Professor Dudley Dillard, chairman of the Department of Economics, and the departmental secretary, Mrs. Helen Jenkins, have facilitated my work in many ways. Finally, I should like to acknowledge my great debt and gratitude to my old friend and former colleague, Professor Nicholas DeWitt, whose important and fundamental work in the areas of Soviet education and professional manpower has made my task easier.

NORTON T. DODGE

College Park, Maryland September, 1965

DEFINITIONS

Able-bodied age group Officially 16 to 59 years for men and 16 to 54 years

for women

Age-specific birth rate Number of children born to a thousand women of a

given age

Aspirant Graduate student

Birth rate or crude birth rate

Number of children born per thousand of the total

population

CPSU Communist Party of the Soviet Union

Candidate degree First Soviet advanced degree; roughly comparable to

the Ph.D.

Doctoral degree Highest Soviet advanced degree; senior to the Ph.D.

Dotsent Associate professor

Dvor Traditional peasant household

Feldsher Assistant physician or medic; term originated in the

army

Gosplan State Planning Committee (Commission)

Gross reproduction rate (GRR)

The maternal gross reproduction rate is the number of

female children who will be born per 100 women who will survive through the reproductive ages, if a constant set of age-specific birth rates prevails throughout

the period

Internat Boarding school

Kafedra Academic department or chair in a higher educational

institution

Komsomol Young Communist League

Kulak Rich peasant

MTS Machine Tractor Station

NEP New Economic Policy (1921–28), under which a wide

range of private economic activity was legalized

Nomenklatura Appointments list controlled by the party

Oblast Governmental administrative unit subordinated to a

republic; province

Philology In Soviet usage, the field of languages and literature

Polytechnical institute General engineering school offering several specialties

Private subsidiary agriculture Cultivation of private garden plots

R.S.F.S.R. Russian Soviet Federated Socialist Republic, or Russia

proper

Scientific worker (nauchnyi rabotnik) Specialist working not only in a natural science field

but in any field of knowledge

Technicum Specialized secondary school

Trudoden Labor day; a work-day unit on a collective farm

Working age group Men and women 16 to 59 years of age

Yasli Nursery or crèche

CONTENTS

Preface	XII. Achievements in Science and Technology216
List of Figuresx	XIII. Summary and Conclusions238
List of Tablesx	Appendixes:
Definitions	I. Demographic Tables251
I. Introduction1	II. Population and Employment, by Sex and Age, by Republic, 1959259
II. Demographic Factors Affecting Employment5	III. Child-Care Facilities and
III. Participation in the Labor Force32	Time Budgets269
IV. Social, Economic, and Legal	IV. Education of Women276
Factors Affecting Employment52	V. Graduate Degrees
V. Family versus Work76	VI. Educational Attainment
VI. Education and Training100	VII. Nonprofessional Occupations293 VIII. Semiprofessional and
VII. Specialized Training123	Professional Occupations
VIII. Educational Attainment140	IX. Women Scientists at Universities302
IX. Nonprofessional Occupations160	X. Method of Making Article Counts304
X. Semiprofessional and Professional Occupations	Bibliography307
XI. Professional Attainment200	Index321

LIST OF FIGURES	semiprofessional and professional occupations, 1959
 Sex ratios, 1897–1980	27. Percentage of women among the teaching staffs of higher educational institutions, by
3. Population pyramid, December 17, 19269	field, 1947208
4. Estimated population pyramid, January 17, 1939	4 1. 1771
5. Estimated population pyramid, January 1, 1946	Appendix VII
6. Estimated population pyramid, January 1, 1950	Age distribution of males and females employed in various agricultural occupations, January 15, 1959294
7. Population pyramid, January 15, 195912	2. Age distribution of males and females em-
8. Projected population pyramid, January 1, 197013	ployed in various "physical" occupations, January 15, 1959295
9. Projected population pyramid, January 1, 198013	
10. Population and employment pyramids, 192634	TICE OF TABLES
11. Population and employment pyramids, 195936	LIST OF TABLES
12. Population and employment pyramids, 1959, Latvian S.S.R	1. Females as percentage of total population, 1897–1980
13. Population and employment pyramids, 1959, Uzbek S.S.R	2. Sex ratios, 1897–19806
14. Age-sex distribution of the labor force, 192643	3. Population of working age, 1897–198014
15. Age-sex distribution of the labor force, 195945	4. Annual changes in the sex ratio of the work-
16. Optimal proportion of male to female employment49	ing-age population, 1955–70
17. Optimal proportion of male and female enrollment in higher education117	6. Percentage distribution of the population by age and sex, 1897–198017
18. Optimal proportion of male and female enrollment in graduate education	7. The married population, 1926, 1939, and 1959
19. Educational level of the urban and rural population, by age and sex, January 15, 1959	8. The urban and rural married population, 195919
20. Educational level of the urban population, by age and sex, January 15, 1959149	9. Crude birth, mortality, and natural increase rates, 1913-6420
21. Educational level of the rural population, by age and sex, January 15, 1959	10. Birth rates in Union republics, 1961 and 196221
22. Educational level of employees and collective farmers and their families, by age and sex,	11. Estimated maternal and paternal gross reproduction rates, 1950-6121
January 15, 1959	12. Family allowances, by decrees of 1936, 1944,
23. Age distribution of males and females employed in predominantly physical occupations, 1959	and 1947
24. Age distribution of males and females employed in predominantly physical occupations in agriculture, except private subsidiory.	14. Family composition, average size, by occupation and by urban and rural residence, 195926
tions in agriculture, except private subsidiary agriculture, 1959	15. Family composition, average size, by nationality and by urban and rural residence, 195926
ployed in predominantly physical occupa- tions other than in agriculture, 1959162	16. Percentage of females in each family size, 195927

TABLES xi

	Family members living apart from their families, by urban and rural residence and by sex, 1959	38.	Percentage of total population compared with percentage of total places in permanent kindergartens in selected republics, 1939 and 1959
	families, by urban and rural residence and by age, 1959	39.	Estimated percentage of kindergarten-aged children for whom accommodations were available in permanent kindergartens in the
20.	residence and by sex, 1959	40.	Turkmen and Kirgiz republics, 195985 Monthly payments by parents for maintaining children in kindergartens, 1948–6586
21.	Population and labor force, by age and by sex, 1926, 1939, and 1959	41.	Cost of attending a boarding school88
22.	Participation rates of urban women in the labor force, 1926, 1939, and 195933	42.	Number of extracurricular children's institu- tions of the Ministries of Education in the
23.	Population and employment, by sex and by age, 192635		Union republics and of the Ministry of Railways90
24.	Population and employment, by sex and by age, 195937	43.	Time budgets of male and female workers in 1922 and at the beginning of 196093
25.	Population and employment, by sex and by age, 1959, Latvian S.S.R41	44.	Percentage allocation of time of male and female workers in 1922 and at the beginning
26.	Population and employment, by sex and by age, 1959, Uzbek S.S.R41	45	of 196094 Distribution of families by hours spent on
27.	Total labor force, by major occupational group and by sex, 1926, 1939, and 195944	13.	housework and in the preparation of meals and washing dishes in Leningrad, Tbilisi, and
28.	Percentage distribution of the total labor force, by major occupational group and by sex, 1926, 1939, and 195946	46.	Pavlovo-Posad
29.	Distribution of the labor-force and nonlabor- force population by socioeconomic category, sex, and broad age group, 195947	47.	Percentage of urban population provided with municipal utilities, 1927, 1939, and 1956
30.	Percentage of females in the labor-force and nonlabor-force population, by socioeconomic category and age group, 195948	48.	Production of consumer durables, selected years, 1940–64
31.	Percentage of respondents whose mothers had worked (Harvard Project)54	49.	Number of public catering establishments98
32.	Number of permanent and seasonal nurseries, 1917–29	50.	Percentage of girls in Soviet primary and secondary schools, 1927–61
33.	Number of places in Soviet nurseries, 1913–64	51.	Percentage of girls in Soviet secondary schools in representative republics, 1955107
34.	Percentage of total population compared with percentage of total places in permanent nurseries in selected republics, 1939 and	52.	Percentage of girls in Soviet secondary schools in certain Central Asian republics, 1950, 1955, and 1959
35.	1959	53.	Women among day and evening students enrolled in specialized secondary educational institutions, by field, 1927–64110
	able in permanent nurseries in the Turkmen and Kirgiz republics, 195980	54.	Specialized secondary education enrollment and the proportion of women of local na-
36.	Monthly payments by parents for maintaining children in nurseries, 1948-6581	55	tionality enrolled, Tadzhik S.S.R., 1959110 Total specialized secondary education enroll-
37.	Number, staff, and enrollment of urban and rural kindergartens and nursery-kinder-	55.	ment and the proportion of women of local nationality in total enrollment, Turkmen SSR 1959

56.	Proportion of women enrolled in specialized secondary educational institutions, Tadzhik,	72.	Enrollment of graduate students, by type of institution, 1960134
	Turkmen, and Kirgiz republics, 1950 and 1959111	73.	Graduate students, by type of institution, 1929-61
<i>5</i> 7.	Women among day and evening students enrolled in higher educational institutions, by field, 1926-64	74.	Number and distribution of women graduate students, by type of institution and by field, 1938
58.	Number and percentage of women applying for admission and the ratios of male and fe-	75.	Number and percentage of women granted candidate degrees, 1946-53136
	male applicants admitted to the science faculties of Moscow State University, fall of 1964	76.	Estimated percentage of women receiving candidate degrees, by field, selected years137
59.	Higher educational enrollment and the proportion of women of local nationality en-	77.	Estimated percentage of women receiving doctoral degrees, by field, selected years138
	rolled, Tadzhik S.S.R., 1959	78.	Percentage of literacy of the urban and rural population, age 9-49, by sex, 1897, 1926,
	portion of women of local nationality enrolled, Turkmen S.S.R., 1959119	79.	1939, and 1959
61.	Percentage of women of total enrollment in higher educational institutions, by republic	80.	Proportion of men and women with secondary and higher education, 1939 and 1959.144
62.	and nationality, 1960	81.	Male and female workers, employees, and collective farmers in the urban and rural population with higher or secondary educa-
	nationality in the total enrollment of women in higher education in 1960120	82.	tion, 1939 and 1959
63.	Percentage of women enrolled in higher educational institutions, by field, 1950 and 1959,		than a seven-year education in the population age 15 and over and in the able-bodied age group, 1959146
	in the Tadzhik, Kirgiz, and Turkmen republics	83.	Number and percentage of persons with less than a four-year education in the population
	Percentage of women enrolled in engineering- industrial institutes, 1956–57	84.	age 20 and over, 1959146 Number and percentage of persons with less
65.	Percentage of women enrolled in selected engineering institutes127		than a four-year education in the able-bodied age group, 1959147
66.	Total enrollment and percentage of women enrolled in day division, by faculty, Voronezh	85.	Persons of able-bodied age with higher and secondary education, by republic, 1959149
67.	State University, 1950, 1960, and 1963130 Percentage of women enrolled, by faculty,	86.	Men and women with higher and secondary education, by republic, 1939 and 1959151
	Uzhgorod State University, 1950, 1955, and 1963	87.	Educational level of the employed popula- tion, by socioeconomic group and sex, 1959 154
68.	Total enrollment and percentage of women enrolled in day division, by faculty, Tartu State University, 1950, 1960, and 1963132	88.	Educational level of the urban and rural population employed in physical and mental work, 1959157
69.	Percentage of women enrolled in day division, by faculty, Odessa State University, 1950, 1960, and 1963		Educational level of women in various occupations, 1939 and 1959158
70.	Enrollment and percentage of women enrolled in day, evening, and correspondence	90.	Civilian labor force, by socioeconomic category, branch, and sex, 1959162
	divisions, by faculty, Erevan State University, 1964133	91.	Contribution of able-bodied women to collective farm labor, selected years, 1936-62164
71.	Enrollment and percentage of women enrolled in day division, by faculty, Tbilisi State University, 1964	92.	Percentage of women among able-bodied collective farmers, by republic, selected years, 1940–61

TABLES xiii

	Labor inputs of all collective farmers, in percentages of man-hours worked by each group, 1959	110.	Number and percentage of women specialists with specialized secondary education employed in the economy, by nationality, December 1, 1961
	collective farmers in Krasnodar Krai, in percentages of man-hours worked by each group, 1956–58167	111.	Women specialists with higher education employed in the economy, by specialty, 1941, 1954–57, 1959–64194
	Utilization of collective-farm labor resources, by sex, 1953	112.	Distribution of women specialists with higher education employed in the economy,
	Number and percentage of women among collective farmers employed in predominantly physical labor in agriculture, by occupation, January 15, 1959169	113.	by specialty, 1941, 1954–57, 1959–64194 Percentage of women among all specialists with higher education employed in the economy, by specialty, 1941, 1954–57, 1959–
	Percentage of women among MTS personnel, by occupation, 1948, 1950, and 1954170	111	64194
98.	Percentage of women employed in the private subsidiary sector, by age, urban and rural	114.	Women holding doctoral and candidate degrees, 1950 and 1959-61195
	residence, and republic, 1959173	115.	Women scientific workers having academic titles, 1950, 1955, and 1960-64196
	Number and percentage of women among state farm and other workers of state agricultural enterprises employed in predominantly physical labor, January 15, 1959174	116.	Number and percentage of women specialists with higher education employed in the economy, by nationality, December 1, 1960
100.	Number and percentage of women workers and employees, by branch of the economy, selected years, 1929-64	117.	Utilization of men and women with higher education, beginning of 1959198
	Percentage of women wage workers, by branch of industry, selected years, 1913-62 180	118.	Number and percentage of women administrators and specialists employed in the economy, 1941 and 1956201
102.	Percentage of women among workers and employees, by republic, selected years, 1933-64182	119.	Women administrators and specialists on collective and state farms and in other state
103.	Number and percentage of women employed in major occupations involving physical labor, 1959	120	agricultural enterprises, by occupation, December 1, 1956
104.	Women specialists employed in the economy, with higher or specialized secondary	120.	Women administrators and specialists employed in construction enterprises, by occupation, December 1, 1956204
105.	education	121.	Percentage of women administrators and teachers in elementary and secondary schools of the Ministry of Education and Ministry of Transportation, 1940–41, 1950–51, 1955–56, 1958–64205
106.	Women specialists with specialized secondary education employed in the economy, by specialty, 1955–57, 1959–64189	122.	Number and percentage of women admin- istrators and teachers in elementary and secondary schools of the Ministry of Edu- cation, by republic, beginning of school
107.	Distribution of women specialists with specialized secondary education employed in the economy, by specialty, 1955–57,	123.	years, 1958-59, 1960-61, 1961-62206 Women administrators, teachers, and other
100	1959–64		specialists in educational institutions training specialized manpower, by occupation,
106.	with specialized secondary education employed in the economy, by specialty, 1955–57, 1959–64		December 1, 1956
109.	Utilization of men and women with specialized secondary education, beginning of 1959	125.	Number of physicians, women physicians, and percentage of women, selected years, 1913-63

126.	Number of physicians, women physicians, and percentage of women, by republic,	3. Population and employment, by sex and by age, 1959, Belorussian S.S.R
127.	Women administrators and specialists in medical and health-care establishments, by	4. Population and employment, by sex and by age, 1959, Kazakh S.S.R
170	occupation, December 1, 1956210	5. Population and employment, by sex and by age, 1959, Georgian S.S.R264
120.	Women administrators and specialists in research institutions, by occupation, December 1, 1956	6. Population and employment, by sex and by age, 1959, Azerbaidzhan S.S.R264
129.	Women administrators and specialists employed in project-making and design organizations, by occupation, December 1, 1956212	7. Population and employment, by sex and by age, 1959, Lithuanian S.S.R
130.	Women scientific workers in scientific re- search institutes, enterprises, and other	8. Population and employment, by sex and by age, 1959, Moldavian S.S.R
131.	organizations, 1950, 1955, and 1960213 Number and percentage of women among	9. Population and employment, by sex and by age, 1959, Kirgiz S.S.R266
	the membership of the Central Committee of the Communist Party of the U.S.S.R214	10. Population and employment, by sex and by age, 1959, Tadzhik S.S.R266
132.	Percentage of women among the teaching staffs of different types of higher educational institutions, 1927 and 1947224	11. Population and employment, by sex and by age, 1959, Armenian S.S.R267
133.	Percentage of women with higher education in various specialties compared with per-	12. Population and employment, by sex and by age, 1959, Turkmen S.S.R
	centage of articles in related professional journals contributed by women227	13. Population and employment, by sex and by age, 1959, Estonian S.S.R268
134.	Percentage of women on the professional staffs of higher educational institutions in 1947 compared with percentage of articles in professional journals contributed by	Appendix III
135.	women in 1940, 1950, and 1960228 Percentage of students receiving "outstand-	1. Number of children in nurseries of all jurisdictions, by republic, 1940–64
	ing" on their gostekhekzamen, January, 1936	2. Children's summer playgrounds, 1927-59269
		3. Distribution of kindergartens, by departmental subordination, 1937–55270
1 P.	Appendix I opulation of the Soviet Union, by age and	4. Distribution of summer playgrounds, by departmental subordination, 1955270
se 2. Pi Ja	rojected population of the Soviet Union, anuary 1, 1970 and 1980	5. Children's establishments (other than schools) under the Ministries of Education and the Ministry of Railways in the U.S.S.R. and the Union republics on January 1, 1956271
si:	ze, urban and rural residence, age, and sex, 959	6. Number of Pioneer camps in the U.S.S.R. and the Union republics, 1950–64
si	amily members living together, by family ze, urban and rural residence, broad age	7. Number of children attending Pioneer camps in the Union republics, 1950-64272
5. P	groups, and sex, 1959	8. Number of children in kindergartens of all jurisdictions, by republic, 1940-64272
		9. Number of children's summer playgrounds in the Union republics, 1950-59273
	Appendix II	10. Number of children attending summer play- grounds in the Union republics, 1950-59273
1. P	opulation and employment, by sex and by	11. Children's homes, 1940–55274
2. P	ge, 1959, R.S.F.S.R	12. Time budgets of male and female workers in the U.S.S.R. in 1922 and at the beginning of 1960

TABLES xv

	Appendix IV	6.	Educational level of the urban and rural population, by age, sex, and republic, 1959288		
1.	Percentage of girls in primary, seven-year, and secondary schools, by republic, 1955-56276	7.	Educational level of the population, by socio- economic group, age, and sex, 1959290		
2.	Number and percentage of women enrolled in regular and correspondence courses in higher educational institutions, by nationality, 1959 and 1960	8.	Educational level of persons employed in various branches of the economy, 1959291		
3.	Number and percentage of women enrolled in regular and correspondence courses in higher educational institutions, by republic, 1958, 1959, and 1960		Appendix VII		
4.	Number and percentage of women in secondary specialized educational institutions, by republic, 1958-61	1.	1. Number and percentage of women in various "physical" occupations, 1926, 1939, and 1959 293		
		2.	MTS mechanized personnel, by age and sex, 1948 and 1950294		
	Appendix V	3.	Persons occupied in private subsidiary agriculture, by republic, age, and sex, January 15, 1959		
	Number and distribution of candidate degrees awarded by field, sample coverage, and estimated percentage of women	4.	Persons occupied in private subsidiary agriculture, by republic, sex, and urban and rural location, January 15, 1959		
۷.	Number and distribution of doctoral degrees awarded by field, sample coverage, and estimated percentage of women281	5.	Distribution and percentage of women among state farm workers and collective farmers engaged in predominantly physical labor,		
	Appendix VI		January 15, 1959297		
1.	Percentage of literacy of the urban and rural population, age 9-49, by sex and by republic, 1897, 1926, 1939, and 1959282		Appendix VIII		
2.	Educational level of the urban and rural population, by age and sex, 1959283	1.	Number and percentage of women specialists with higher and specialized secondary educa-		
3.	Educational level of the urban and rural population, by age and sex, 1959284		tion employed in the economy, by republic, December 1, 1957, 1960, and 1961298		
4.	Educational level of the urban and rural population, by age and sex, 1959286	2.	Number and percentage of women in various "mental" occupations, 1926, 1939, and 1959 299		
5.	Educational level of the population, by nationality and sex, 1939 and 1959287	3.	Number of women scientific workers, 1947–64301		

chapter 1

INTRODUCTION

A MAJOR resource of any nation is its people, and the effective utilization of this resource is the precondition for social, economic, or technical development. This study examines Soviet utilization of human resources—specifically, the resources of women—and attempts to present a broad survey of the part played by women in the Soviet economy, particularly in science and technology. Certain other relevant aspects of the life of Soviet women are touched on. The period from the Revolution (1917) to the present, with emphasis on the recent past, is the primary focus, but on occasion it is necessary to examine conditions in pre-Communist Russia in order to gain perspective on the Communist period. This study is intended to provide a foundation for an understanding of the forces which have shaped the role of women in the Soviet economy as well as an appreciation of their contribution to Soviet economic development. Hopefully, it will stimulate further investigation into the many controversial questions which it raises but does not resolve.

In any comparison of Soviet and American manpower resources, one is immediately struck by the differences in the utilization of women. The restricted role of women in the American economy contrasts sharply with their broad role in the Soviet economy. This difference is most striking in the areas of science and technology, where women have come to occupy an extremely significant position in the Soviet Union, particularly at the semiprofessional and intermediate professional levels.

In the chapters ahead it will soon become apparent that the difference in the utilization of women in the two economies stems largely from the fundamental differences in the underlying philosophies and aims of the two societies. The importance of women in the Soviet economy is primarily the result of the profound transformation in the political, economic, and social organization under the Soviet regime. These changes, which have been compressed into a period of fewer than fifty years, are the result of policies deliberately formulated and vigorously, even ruthlessly, pursued by the party and the government. Through the mobilization of the entire society, Soviet totalitarianism has sought to reconstruct not only the economic and social institutions, but also the attitudes and minds of the people. To this end, the regime has exerted absolute control over the various means of mass communication and education and has used them to inspire, manipulate, or drive the public into supporting, or acquiescing in, the regime's programs.

There are limits, of course, to the power of the Soviet regime, even when supported by the modern devices which so facilitate the wielding of centralized power. Formidable restraints are imposed by a society's previous cultural pattern. As the Soviets discovered in Central Asia, long-established beliefs, customs, and practices can be extremely difficult to eradicate. Institutions supporting the status quo—the family, school, and church—may show surprising resilience. Some institutions,

particularly the school, were soon reorganized to further the objectives of the Soviet regime. Others, such as the church, were eventually tolerated after they had survived in a much-weakened condition a period of vigorous attack. The family, however, as a primary social unit, has remained a constant challenge to the state by virtue of its resistance to outside influences and its tendency to harbor traditional values.

Marxist doctrine held that women were no less subjugated under capitalism than was the proletariat. The family was considered to be founded upon the domestic enslavement of the wife. Not only did the Soviet leadership feel bound to eliminate exploitation in the home, but it also believed that the family perpetuated the outmoded bourgeois ideology. Nikolai Bukharin, a leading party theoretician, stated at the Thirteenth Party Congress in 1924 that the family remained "a formidable stronghold of all the turpitudes of the old regime."1 For this reason, early legislation aimed not only at improving the status of women, but also at undermining the strength of the family. Women were granted full equality with men under the law. Measures facilitating divorce, legalizing unregistered marriages, legitimizing children born out of wedlock, and legalizing abortion were designed to loosen the bonds which tied the family together.

The attitude of the regime toward the family changed as the regime gained confidence. By the mid-1930's the family was no longer considered a threat to the political control of the younger generation, and the Soviet leadership had become more clearly aware of the family's positive function in preparing children for their future roles in society. Modern industry called for the virtues of promptness, reliability, co-operativeness, and receptivity to direction on the part of workers—all virtues which the family can inculcate better than the state. As a result, much of the early legislation easing divorce and weakening family ties

was modified. Soviet theoretical discussions of the dissolution of the family and the transfer of its functions to the state are now much less frequent; and they refer, not to the near, but to a distant utopian future when the transition from socialism to full communism will be finally achieved.

The family now forms a social unit which preserves much independence from the state; it also competes with the state for the time and energy of women workers. Family demands may prevent some women from participating in the labor force and some women from giving their work sufficient attention, but the government has nevertheless been remarkably successful in maintaining a high level of participation in the labor force by all age groups, even by those in the principal years of childbearing and child rearing. On the other hand, the double burden of family and work which many women bear has had the unintended social consequence of contributing to a reduction in the birth rate, which in turn may adversely affect future economic growth. It is clear from the complexity of these interrelationships that one cannot properly study women as participants in the labor force without considering how their roles as wives and mothers are affected, and vice versa. In the early chapters of this study, we shall attempt to discover the most important factors encouraging or inhibiting the participation of women in the Soviet economy.

As will be shown, the most important circumstance underlying the high level of participation by women in the labor force has been the forced-draft industrialization of the Soviet Union. The willingness of the regime to sacrifice human welfare for higher rates of economic growth has had a decisive impact on almost every policy affecting women in their economic role. For example, the large relative loss of male population caused by the two World Wars, the Civil War, and the vicissitudes of the 1920's and 1930's would not necessarily of itself have led to an increase in the participation of women in the labor force. However, the regime's determination to maintain the high rate of economic

¹Quoted in Alex Inkeles and Raymond A. Bauer, *The Soviet Citizen* (Cambridge, Mass., 1959), p. 190.

growth necessitated that more women be drawn into and retained in the labor force. This determination also explains the ambivalence of the regime toward the provision of more adequate child-care facilities, cafeterias, and household durables. These would have been provided, even at the expense of investment in producers' goods, if the regime had been less preoccupied with economic growth and more with human welfare. The regime chose, however, to provide only the minimum necessary to keep a large proportion of women in the labor force. As a result, most Soviet women continue to carry heavy domestic burdens in addition to their work responsibilities. The resulting conflict between family and work is found to have important consequences for the productivity of women, especially in the more demanding and creative occupations.

The chapters on education are intended, in part, to show the rapid increase under Soviet rule in the breadth and scope of the education of women. After the Revolution, increasing numbers of girls entered the secondary specialized schools and higher educational institutions. The relative proportion of women in all fields of study increased. As the industrialization drive gained momentum, both the number and the proportion of girls enrolled in the sciences and technology, where the shortages of manpower were greatest, increased impressively. This study examines how young women in the Soviet Union are influenced in their choice of fields and shows why some professions traditionally followed by men—the medical profession, for example -are now largely the province of women. An attempt is made to explain why the relative proportion of female students shrinks as the level of education increases and why, in recent years, there has been a general reduction in the proportion of women enrolled in higher education—a reduction to a level substantially below that which would be expected from the proportion of women in the college-age population. An explanation is called for, since equal access to higher education continues to

be proclaimed as one of the cornerstones of Soviet policy.

The employment of women in unskilled and semiskilled jobs in agriculture, industry, and other sectors of the economy is discussed primarily for the purpose of presenting a background against which the employment of women in semiprofessional and professional occupations can be seen in proper perspective. Although the utilization of women in the professions, particularly in science and technology, is our primary focus of interest, it is important to realize that the bulk of Soviet working women are employed in relatively unskilled work. The largest single group of women is to be found in unskilled field work in agriculture.

With this background, the final chapters turn to our central interest—the employment of women in semiprofessional and professional occupations, especially in the fields of science and technology. The role of women in the various professions and their participation as executives and administrators in various sectors of the economy are examined. As in other countries, the proportion of women in a profession declines as the level of responsibility increases. Notwithstanding this, the proportion of women in a number of professions is so large that their representation in the top echelons is substantial. The present study also assesses the contribution of women to scholarship and research in a wide variety of scientific, technical, and other fields. A number of indirect measures of scholarly productivity are devised and applied. An explanation of the apparent lower scholarly productivity of women is then developed.

The lower productivity of women—particularly in creative scholarly work—has evident implications for the determination of the optimal allocation of scarce educational resources between men and women. The hypothesis is offered that recent trends in the enrollment of women reflect the awareness of planners that women offer the nation a lower average return on investment in their education than men. Similarly, it is concluded that