

**The Absorption in the Labor Market of Immigrants
from the CIS - the Short Run***

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The Absorption of Immigrants from the CIS in the Labor Market—the Short Run

ABSTRACT

This paper examines the patterns of absorption in employment in the short-run of immigrants from the CIS who have arrived in Israel since early 1990. We address the question of whether the pattern of short-run absorption is consistent with its goals in the long term, or whether it diverges from them.

Our analysis of the absorption of these immigrants up to 1992 indicates that considerable difficulties were encountered, and that the economy in fact moved away from its long-term objectives regarding absorption. In contrast to previous influxes, only a small proportion of the immigrants were absorbed in their original occupations. In particular, among those in human-capital-intensive occupations relatively few found employment in their own fields. A high rate of occupational shift represents an economic waste of human-capital resources on the one hand, and, on the other, contributes to dissatisfaction among immigrants. Immigrants' employment difficulties were reflected in a slowdown of immigration, and in a fall in the proportion of academics among new arrivals. This high occupational mobility can be explained in part by the size of the influx relative to the existing population, and in part by the fact that in relation to the absorption process, the economy is still in the short term, in which growth has occurred mainly in nontradables—particularly the building industry—whose occupational structure is very different from that of the immigrants. Furthermore, in the short term the immigrants' human capital has not yet adapted to meet the requirements of the Israeli economy. In 1992 there were some indications of a trend towards growth in tradables; however, this was not yet reflected in employment. If jobs matching the professional profile of the immigrants are to be created, the tradables sectors of the economy—industry in general, and high-tech in particular—will have to grow.

THE ABSORPTION OF IMMIGRANTS FROM THE CIS IN THE LABOR MARKET—THE SHORT RUN*

This paper examines the pattern of absorption in employment of immigrants from the CIS who have reached Israel since early 1990. It is based on an analysis of data from surveys of immigrant employment and on Labour Force Surveys of the Central Bureau of statistics. In a previous article we developed scenarios for absorption patterns based on the long-term absorption of immigrants who came in 1979–81. In this paper we compare our predictions with actual absorption of immigrants in employment since 1991, i.e., in the short run. This enables us to address the question whether the pattern of short-run absorption is consistent with its long-term aims, or whether it conflicts with them.¹

Expected long-term absorption in employment—review of previous results²

In our previous article we examined the long-term absorption in employment of immigrants from the CIS and the implications for the economy of their entry into the labor force, using several scenarios for their distribution among occupations and industries. We assessed the economic desirability of each of these, their effect on the economy, and the investment required.

¹ In this paper the short run is defined as the period prior to the stabilization of immigrants' rates of participation and unemployment, and in which the individual immigrant has not yet found employment in his original occupation. The short run is thus not defined as a period of time, and can vary for different periods. The short run for the current, relatively large, influx is likely to last several years, whereas the period two years after the immigration referred to in the previous paper could be considered the long run.

² See Flug, Kasir, Ofer (1991).

We reviewed various patterns of absorption in employment. At one end of the scale immigrants were absorbed in their original occupations. In this case, the economy adapts itself fully, creating jobs which match the immigrants' existing occupational distribution. At the other end of the scale immigrants change their occupations to match the existing structure of the economy, i.e., all the adaptation is done by the immigrants. The interim patterns are those in which part of the adapting is done by the economy, enabling some absorption of the immigrants in their original occupations, and part by the immigrants. The actual absorption of the immigrants who came in 1979–81 serves as an example of an interim pattern.

Our paper analyzed the pattern of absorption in employment by occupation of the 1979–81 immigrants (using data from the census), which indicated possible and desirable patterns of absorption for the current influx of immigrants, based on certain assumptions about its size. The absorption in employment of the 1979–81 influx, which was quite small, but similar to the present one in occupational structure, served as an indicator of a minimum occupational-change pattern, reflecting mainly the redefinition of occupations to conform with their standard definition in Israel.

By analyzing immigration from the U.S.S.R. in the 1970s and early 1980s we could make inferences about the immigrants' occupational absorption. This was associated with appreciable occupational change, even though there was not much pressure on the labor market, because of the small number of immigrants in relation to the size of the economy, and the relatively low unemployment rate. The main factors expected to exert pressure for occupational change in the current influx are its large size, Israel's high unemployment rate prior to the immigrants' arrival, and the high proportion of university graduates among the immigrants, and of engineers in particular.

Some 40 percent of immigrants from previous influxes employed in Israel changed their occupation. Among university graduates (excluding physicians) the rate was 42

percent, while among physicians and paramedical occupations there was little or virtually no occupational change (3 percent among physicians, 15 percent among paramedics). For other professionals (lawyers, accountants, journalists, managers) the rate of occupational change was 54 percent. When patterns of occupational change were analyzed, we found downward mobility. Thus, engineers became technicians, technicians became skilled workers, and most skilled workers went into service industries. The rate of change in the current influx is expected to be even higher, although in some cases this may be a temporary change, before a return to the original occupation after a training period. In others, downward mobility reflects the redefinition of occupations in accordance with Israeli norms.

The factors which determine the rates of change for different occupations are connected with the occupation's universal character and its appropriateness for Israel, the amount of additional training required in order to adapt it to Israel's needs, and demand for the occupation in Israel. Among the 1979–81 immigrants, these factors were reflected in low rates of occupational change in medicine, teaching (especially non-university, post-high school), and unskilled labor. Immigrants who retained their original occupation usually had the highest level of education within their occupational group. (Because of the size of the current influx and the high proportion of physicians compared with demand, it is expected to display a far higher rate of occupational change.)

In the next few years, the supply of labor, by occupation, will be the result of the continued trends for the established population in combination with the occupational structure of the immigrant population, while the demand side could develop to provide a rare opportunity to change the structure of Israel's economy, switching to a track which utilizes Israel's comparative advantage—its human capital.

Until 1990 the trend of occupational development in Israel was towards contraction in

the tradables sector (agriculture and industry) and expansion in the nontradables sector (private and public services). This trend was expressed by changes in occupational composition, with an increase in the proportion of graduates, members of the liberal professions, managers, clerical workers, and salespersons. At the same time, the proportion of laborers in industry and agriculture fell.

The immigrants' special occupational composition, with its high share of graduates in technical professions, is expected to bias the economy towards hi-tech industries, pushing up their proportion of employees. Among the hi-tech industries which are expected to grow and develop are chemicals, metals, and electrical and electronic equipment. Such traditional industries as textiles may be modernized as tens of thousands of technically highly-trained individuals enter the labor force.

In order to assess the employment potential in industry for engineering and technical workers we examined its absorption capacity, making various assumptions as regards expansion, structural change (expansion of hi-tech industries at the expense of traditional ones), and substitution of factor inputs in industry. Assuming that 500,000 immigrants arrive, that industry expands proportionately to their entry into the labor force, and that there is substitution of inputs and far-reaching structural change, some 40 percent of those with technical training will be employed in industry. Making the same assumptions but with twice as many immigrants, about 30 percent of those with technical training will find employment in industry.

Other immigrants in these professions will find employment in infrastructure industries (construction, communications, transport), which will also undergo processes similar to those described in industry. It will be especially important to make good use of the large number of civil engineers and architects coming to Israel in order to make construction processes more efficient and increase investment in the infrastructure, and in roads in particular.

From the outset it was clear that there would initially be bottlenecks in implementing industry-biased growth. Limitations are expected to arise from an insufficient increase in capital stock, inadequate investment, and the time required before investment bears fruit. There may, therefore, be difficulties in providing large-scale employment in industry within a very short period of time. If that is the case, immigrants may well accept jobs in the services and the public sector, where less investment per employee is required. If the public sector is expanded, this must focus on the rapid expansion of the infrastructure. Investment of this kind has positive external effects on the business sector, and could stimulate employment in general.

Developments and projections

In 1990–91, 375,000 new immigrants arrived in Israel mostly from the CIS, while only 77,000 arrived in 1992. According to the National Budget another 120,000 immigrants a year are expected in 1993–95. Although this projection is within the range discussed in the main section of this paper, the distribution over time differs from the prediction.³

The analysis of occupational composition⁴ from the beginning of the influx of immigrants to the end of 1992 reveals a decline in the proportion of members of the scientific and academic professions, particularly of engineers, physicians, and members of the liberal professions, while the proportion of blue-collar workers increased. In our previous paper occupational composition since 1990 was regarded as being representative of the entire influx, consequently it has an upward bias towards the academic-scientific professions (see Table 1).

During the current immigration, the proportion of the academic-scientific professions

³ In our previous paper the distribution of immigration over time was not taken into account.

⁴ The occupational composition follows the breakdown of occupations used by the Central Bureau of Statistics.

fell from 39 percent in 1990 to 33 percent in 1992. The proportion of engineers fell from 25 to 20 percent, and of physicians from 6 to 4 percent. The proportion of blue-collar workers rose from 15.7 percent to 23.2 percent over the same period.

These features—the slowdown in immigration and the change in occupational distribution—seem, to a large extent, to be a reaction to absorption problems and, in particular, to the difficulties encountered by immigrants in finding suitable employment. It may also reflect developments in the other potential destination countries, and expectations for the future. They may, however, be affected by developments in the required too. The slowdown in immigration may also derive from the reduction of pressure to leave these countries immediately. The change in occupational composition may be affected by differences in occupational composition in the countries of the CIS, for example, and the uneven economic and political development of these countries. The change in the occupational distribution over time is also consistent with the phenomenon of 'Selectivity' typical of immigration flows in general. According to this phenomenon, those from a given pool of potential immigrants with the highest skills tend to move first.

Data Sources

Our information on the absorption in employment of the current influx of immigrants is based on Labour Force Surveys and on two absorption surveys conducted by the Central Bureau of Statistics. The first, conducted in the first quarter of 1991, reviewed immigrants who had arrived in the first half of 1990. The second was conducted at the beginning of 1992, and reviewed immigrants who had arrived in the last quarter of 1990. I.e., the first survey examined immigrants 6–15 months after immigration and the second looked at immigrants after 12–17 months.

The level of aggregation of the data is far higher than it was for previous influxes of immigrants, as the survey is based on some 1,100 family units, incorporating about 2,700 immigrants of working age. Therefore, only broad groups of occupations can be examined. Our previous paper dealt with the pattern of occupational absorption among

immigrants who had been in Israel for a year and a half—a period which may be regarded as ‘long run’ for that influx.

Investigating the situation of immigrants from the current influx a year after their arrival means considering short-run absorption (see Note 1).

On the basis of the information currently available, two questions can be asked:

- (1) Have we reached a point on the path to a long-run absorption pattern?
- (2) What is the direction of occupational absorption over time?⁵

The short-term absorption in employment of the 1990–92 immigrants

The immigrants’ average participation rates rose consistently with the average amount of time they had spent in Israel, and began to stabilize in the last quarter of 1991. In 1992 their participation rate was 62 percent for men and 44 percent for women. The men’s participation rate was similar to that of Israeli men, while the women’s was higher than that of Israeli women (62 and 42 percent respectively). The high women’s participation rate reflects their work habits in the CIS, and economic difficulties which make a second income necessary.

There have been changes over time in the rate of labor-force entry. It was particularly high when the influx of immigrants began, and at the beginning of 1991 it was 59 percent for immigrants who had been in Israel between 6 and 12 months. By the end of 1992 it had dropped by 50 percent for immigrants who had been in Israel for the same amount of time (Table A1).

The slowdown of the pace at which immigrants joined the labor force reflects growing

⁵ It is difficult to make a comparison or study the ‘cohort effect,’ because the two groups have been in Israel for different periods of time.

difficulties in finding suitable employment. Lower participation rates may also reflect the fact that some immigrants despaired of finding work and therefore stopped searching and dropped out of the labor force. This, together with the immigrants' age-composition (a large proportion of elderly), also explains the fact that their participation rate steadied at a lower level than that of the previous immigrants from the U.S.S.R.

The decline in the rate at which immigrants joined the labor market, together with their longer stay in Israel in general, and in the labor market in particular, are reflected in a decline in their unemployment rate, which fell from 42 percent at the beginning of 1991 to 25 percent in the end of 1992 (Table 2). If the time since the immigrants' arrival is held constant, the unemployment rate does not decline over time, however.

A comparison of the occupational absorption of men and women reveals that the situation of women is far worse (Tables 2, 8, 8A, 8B). The unemployment rate for women was about 39 percent in 1992 compared with 20 percent for men.

The problem of occupational absorption was exacerbated by the lack of matching between available housing and jobs. According to an internal migration survey, immigrants moved from the center to the periphery, where there is a large stock of unoccupied housing but a high rate of unemployment. Migration in this direction reduced the probability of finding employment. Moreover, about 35 percent of all employed immigrants—and 45 percent of those in the liberal professions—have to travel out of their district to work.

The by-industry distribution of immigrants' employment in 1990–91 shows that they are concentrated in industry and construction—36 and 10 percent respectively, compared with 22 and 6 percent for Israelis. Relatively few are employed in the public sector—19 percent compared with 30 percent for Israelis. This can be compared with the relatively high absorption of immigrants in the public sector in previous influxes. The large proportion of immigrants in construction is due to that industry's expansion in 1991–92,

while their concentration in industry reflects the bias of their occupational composition. Their concentration in industry and construction is also related to the substitution of immigrants for workers from the administered territories. A comparison of the immigrants' by-industry employment in Israel with their employment in the CIS shows that their proportion in industry is relatively low, and in the services relatively high. This reflects both the difference in the structure of the economy and the relative flexibility of wages in the services, which are less unionized than industry.

The occupational absorption of immigrants in the 1990s

Two features characterize the occupational absorption of the current influx of immigrants (Tables 3 and 4). First, rates of employment in the immigrants' original occupations for members of the academic, scientific, liberal and technical professionals were low,⁶ while the unemployment rate was high. The rate of occupational change consequently understates the difficulties of absorption in employment in these occupations. Secondly, employment opportunities for professionals deteriorated over time. This means that the chances of finding suitable employment are lower for immigrants who arrived later in the current influx than for those who arrived earlier. Considering the fact that the immigrants reviewed in the second survey had been in Israel longer, the deterioration in the situation reflected by the two surveys in fact underestimates its real extent.

The features described above come as no surprise. It was to be expected that the rates of absorption of immigrants in their original occupations would be lower in this influx, particularly in the short run. The reasons for high rates of occupational change in the short run are as follows:

⁶ Because of data limitations, the rates of occupational change refer to broad occupational categories. These rates of change would have been far higher if the occupational break-down had been more detailed.

- (1) There is no time to 'reconstitute' human capital—immigrants' skills are not yet adapted to the requirements of the Israeli economy. Human capital is 'reconstituted' by vocational training courses or on-the-job training (especially in the less skilled professions), and takes time.
- (2) As a result of the influx of immigrants, demand for the business-sector product in Israel was biased in favor of the nontradable sector, and of construction in particular. Employment in the latter increased by 42 percent in 1990–92 while in industry it grew by only 8 percent. The nontradable sector does not match the occupational composition of the immigrants. Furthermore, demand grew within industry, in the three-digit industries which serve the construction sector, rather than in the more technologically advanced industries whose skill composition is closer to that of the immigrants.

While the number of employees in non-technological industries rose by 10 percent in 1989–92, the number of employees in technological industries went up by only 2.5 percent. During 1992, as the initial stage of immigrant-absorption came to an end, the structure of demand changed dramatically, contracting in construction and increasing in the tradables sector. These trends have not yet been reflected in the occupational composition of employment, however.

Beyond the question of the time horizon, it was expected that the rates of occupational change would be higher for the current influx of immigrants, due both to its size and to the high unemployment rate prevailing before their arrival. The current influx contributed to an annual increase of 3 percent in the labor force, compared with 0.5 percent in the early 1980s. The current immigrants came to a country with an unemployment rate of 9 percent, compared with 3 percent in the early 1980s. These factors caused excess supply in most occupations; in some, it will not be possible to absorb all the immigrants even in the long run.

The deterioration in the quality of absorption over time was due to the size of the current influx. The more 'congested' certain occupations became, the less likely it was that immigrants would find jobs in them. This was also reflected in the change over time in the immigrants' occupational composition. Among immigrants, the proportion in occupations with large excess supply—particularly doctors and engineers—declined (Table 1).⁷

Data from the first survey show that only 40 percent of physicians who arrived in Israel in the first half of 1990 had entered the labor market by the beginning of 1991, about half of them were employed and of those around 80 percent as physicians. About half of the physicians included in the second survey had entered the labor force, and almost two-thirds of these were employed, but only 40 percent of the latter as physicians.⁸ Over 80 percent of physicians who had to change occupation were employed in low-skilled occupations.

According to the first survey, about 15 percent of all immigrants employed at the beginning of 1991 worked in the services, and approximately 13 percent worked as cleaners (of streets, institutions, homes). At the beginning of 1992 (according to the second survey) these rates rose to 22 and 19 percent respectively. The actual rate may be even higher, as some of those who declare themselves to be unemployed are actually employed in these occupations. In both surveys, 8 percent of the immigrants were employed in occupations directly related to the construction industry, 3 percent as engineers and architects, 5 percent as skilled workers, and 0.5 percent as unskilled workers. These figures match the immigrants' by-industry distribution—some 10 percent

⁷ Nonetheless, other factors may account for the change in occupational distribution over time. For example, immigrants with human-capital-intensive occupations may have left the CIS earlier. The shift in the distribution of the immigrants by country of origin may also have contributed to the change in their occupational composition.

⁸ Participation rates of some occupations, especially physicians, might be low in the period reviewed because of participation in supplementary courses. Since 1987, physicians have had to take an examination in order to obtain a license, and many of them go on a one-year course (which includes Hebrew) prior to this.

were employed in construction in 1991–92.

Immigrants with occupations oriented towards expanding industries (mainly construction and the services) were absorbed in their original occupation or an allied one, while immigrants in other occupations, some with high levels of human capital, were absorbed in semi-skilled and unskilled occupations, mainly in the services.

Looking at employed immigrants gives only half the picture, since unemployment rates differ markedly between occupations. High unemployment rates among human-capital-intensive occupations, particularly among academics, reveal severe absorption problems (Table 8). There are low unemployment rates, however, in occupations related to the services and construction industries.

COMPARISON WITH THE IMMIGRANTS OF 1979–81

In our previous paper, we discussed the desired absorption patterns for the current influx of immigrants, on the basis of the experience of those who came in 1979–81. We regarded occupational changes of the previous influx as largely reflecting the ‘standardization’ of occupational requirements and the minimal necessary change, since that influx was relatively small, and unemployment was low. Consequently, immigrants whose skills matched the needs of the Israeli labor market had good chances of finding employment in their occupation. Considering the size of the current influx, its occupational distribution, and the unemployment rate which prevailed beforehand, rates of occupational change could have been expected to be higher in the long run. Since the period of time from the beginning of this influx can still be regarded as the short run, we would expect that rates of occupational change would be higher than those of the earlier immigration.

The higher rates of occupational change of the current influx can be seen by

comparing Table 5 to Tables 3 and 4. Of the immigrants who arrived in 1979–81, about 65 percent of those in scientific and academic occupations found employment (after 18 months or more) within their occupations, as compared with about 25 percent in the current influx. In the technical and liberal professions, the figures are 55 and 30 percent respectively.

On average, the rates of occupational change of the current influx are of the order of magnitude reflected in the pattern of 'perfect adaptation to the occupational structure of employment in Israel.' The rates of change are somewhat lower for immigrants who arrived at the start of the influx and higher for those who arrived later. This pattern does not reflect any adjustment of the Israeli economy towards the occupations of the immigrants, that would allow it to benefit from their existing human capital.

CONCLUSIONS⁹

When compared with the occupational absorption of previous influxes, the rate of downward occupational change of the current one is high, resulting in the loss of human capital, on the one hand, and dissatisfaction on the part of immigrants, on the other. Absorption difficulties are reflected in the decline of immigration and the change in occupational distribution towards occupations with lower human capital, and in particular a decline in the proportion of engineers and physicians.

In our previous paper we concluded that in order to use the immigrants' human capital effectively the economy had to grow with a bias towards industry, and hi-tech industry in particular. These industries, in which the export component is dominant, are not

⁹ Our recommendations do not deal with more general policy issues, such as the need for investing in the infrastructure, reducing the burden of taxation on the business sector, and abolishing protective tariffs.

limited to domestic demand and can expand if they are competitive. Their performance through 1991 did not reflect this objective, however, so that relatively few jobs have been created in these industries. The increase in economic activity in 1990–91 reflected the bias of domestic demand towards the construction sector. Another factor which slowed down the expansion of industry is the time required to adjust the immigrants' human capital to the needs of Israel's industries. It could be concluded, therefore, that through 1991 the direction of growth was away from its long-run efficient equilibrium. However, 1992 seems to mark a turning-point, with the construction industry beginning to shrink and industry in general—and hi-tech industry in particular—expanding. These trends have not yet been reflected by an increase in employment, however.

The continued contraction of the construction industry over the next two years will further increase unemployment unless other sectors expand rapidly. In order to facilitate the expansion of other sectors, particularly those able to absorb the immigrants in their original occupations, the government has to intervene on the basis of the economic potential of investments. Investment in technology-oriented industries and R&D tends to be risky, and private investors tend to avoid it. The government could provide an incentive for such investment by sharing in the risk.

Since it has extensively subsidized investment in physical capital, the government should also subsidize human capital in order to deter capital-intensive production technologies. In particular, the government should facilitate the 'rehabilitation' of immigrants' human capital by providing training courses in conjunction with potential employers. In this way, the content of the courses will fit industries' needs.

To provide employment solutions which are successful for both the economy and immigrants, the government should focus on long-term solutions that match the immigrants' skills. Using 'make-work' solutions will not solve the problem of providing employment in occupations with high human capital, and may impede progress towards

the efficiency equilibrium, since such solutions usually focus on low-skilled jobs. There is also a danger that it will be difficult to terminate short-term solutions.

Tables 1: Immigrants from the CIS who were Employed Abroad,
by their Occupations Abroad

	Data from the Monthly Statistical Bulletin <1>										Survey Data <2>		Research Data <3>
	1990 I	1990 II	1991 I	1991 II	1992 I	1992 II	1990	1991	1992	1990-1992	First half of 1990	Second half of 1990	
	(Thousands)										(Thousands)		
Total	24.7	71.4	47.8	31.9	14.7	19.1	96.1	79.7	33.8	209.6	26.8	43.7	
Academic Professions	9.7	27.8	17.4	10.8	5.1	6.0	37.5	28.3	11.0	76.6	9.1	15.8	
of which: Engineers and Architects	6.4	18.0	11.3	6.4	3.2	3.5	24.4	17.8	6.7	48.9	3.8	6.9	
Doctors	1.6	4.3	2.2	1.2	0.5	0.7	5.9	3.4	1.3	10.6	2.0	3.3	
Technical and Liberal Professions	8.5	24.5	15.6	10.2	4.7	6.4	33.0	25.9	11.1	69.9	5.8	8.3	
Skilled and Unskilled Workers	3.7	11.3	9.0	6.2	3.3	4.6	15.0	15.2	7.8	38.1	5.5	9.7	
Other Professions <4>	2.7	7.8	5.7	4.7	1.7	2.2	10.6	10.4	3.9	24.9	6.5	9.9	
	(Percent)										(Percent)		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Academic Professions	39.3	38.9	36.4	33.9	34.7	31.4	39.0	35.5	32.5	36.5	34.0	36.2	40.6
of which: Engineers and Architects	25.9	25.2	23.6	20.1	21.8	18.3	25.4	22.3	19.8	23.3	14.2	15.8	25.0
Doctors	6.5	6.0	4.6	3.8	3.4	3.7	6.1	4.3	3.8	5.1	7.5	7.6	6.3
Technical and Liberal Professions	34.4	34.3	32.6	32.0	32.0	33.5	34.3	32.5	32.8	33.3	21.6	19.0	34.3
Skilled and Unskilled Workers	15.0	15.8	18.8	19.4	22.4	24.1	15.6	19.1	23.1	18.2	20.5	22.2	14.6
Other Professions <4>	10.9	10.9	11.9	14.7	11.6	11.5	11.0	13.0	11.5	11.9	24.3	22.7	10.5

Source:

1. Data from the Statistical Bulletin is based on the immigrant's statement regarding his occupation.
2. Data taken from an employment survey of CIS immigrants: Jan-April 1991 and Oct-Dec 1991, based on their employment two years prior to immigration (Central Bureau of Statistics).
3. K. Flug, N. Kasir and G. Ofer - "The Absorption of Soviet Immigrants into the Labor Market from 1990 Onwards: Aspects of Occupational Substitution and Retention. (based on the population census of 1983).

4) Occupations included in this category: administrators and managers, clerical workers, sales workers and agricultural workers.

Table 2: Immigration 1990-1992,
Labor Market Indicators <1>

Period	Total	Of working age	In the Labor force	Employed	Unemployed
			(Thousands)		
1991	316.8	211.0	88.4	59.3	37.1
1992	422.7	295.9	153.8	110.5	44.5
1990 IV	200	105	24	12	12
1991 I	238	159	59	34	25
II	310	198	87	54	33
III	343	238	112	68	44
IV	378	268	133	85	48
1992 I	395	274	145	97	48
II	411	290	151	108	43
III	432	312	162	116	46
IV	453	322	164	123	41

Period	Percent of immigrants of working age	Rate of Labor force participation			Unemployment rate		
		Total	Males	Females	Total	Males	Females
		(Percent)			(Percent)		
1991	66.6	45.7	56.0	36.7	38.5	28.3	51.8
1992	70.0	52.0	62.1	43.6	28.7	20.3	38.5
1990 IV	53	23			50		
1991 I	67	37	50	25	42	30	60
II	64	44	57	33	38	27	54
III	69	47	54	40	39	30	51
IV	71	50	61	42	36	27	47
1992 I	69	53	62	45	33	25	42
II	71	52	60	44	28	18	40
III	72	52	63	44	28	19	39
IV	71	51	62	42	25	19	33

Source: Central Bureau of Statistics.
Labor force survey - Press releases.

1. The data includes all immigrants who arrived from the beginning of 1990 and onwards.

Table 3: Matrix of Absorption in Employment of Immigrants from the CIS - Survey No.1

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Occupation in the CIS	Total employed prior to immigration(1)	Total employed in Israel(2)	Occupation in Israel							
			Academic professions	of which: Doctors	Engineers	Liberal professions	Service workers	Skilled workers in industry	Unskilled workers in industry	Other occupations and not known
Total	100.0	100.0	8.8	2.4	4.5	13.3	21.6	36.3	11.0	9.0
Academic professions	33.7	23.6	32.6	9.8	16.2	14.2	14.7	23.1	7.9	7.6
of which: Doctors	7.5	2.8	82.7	82.7	0.0	3.4	13.9	0.0	0.0	0.0
Engineers	14.1	14.1	28.2	0.0	25.8	13.1	8.9	30.8	10.0	9.1
Liberal professions	21.6	19.1	1.5	0.6	0.0	30.5	22.6	30.8	6.7	7.8
Administrators & managers	7.7	7.7	2.6	0.0	2.6	18.7	10.7	38.8	14.9	13.3
Skilled workers in industry	19.3	24.7	0.2	0.0	0.2	4.5	11.9	63.7	14.1	5.6
Other occupations and not known	16.8	25.0	2.4	0.0	1.8	6.5	40.9	24.3	12.7	13.2

Source: Central Bureau of Statistics - Survey of CIS immigrants' employment (immigration: Jan - June 1990).

1. Occupation in the CIS of immigrants employed in CIS.

2. Occupation in the CIS of immigrants employed in Israel.

Table 4: Matrix of Absorption in Employment
of Immigrants from the CIS - Survey No.2

Occupation in Russia	Total employment prior to immigration(1)	Total employment in Israel(2)	Occupation in Israel							
			Academic professions	of which:		Liberal professions	Service workers	Skilled workers in industry	Unskilled workers in industry	Other occupations
				Doctors	Engineers					
Total	100.0	100.0	7.1	1.0	3.4	8.8	26.6	33.7	13.4	10.4
Academic professions	36.1	27.8	20.0	3.7	10.6	7.6	22.7	27.6	10.7	11.4
of which: Doctors	7.5	2.4	44.5	40.2	0.0	5.4	18.5	11.3	8.2	12.1
Engineers	15.8	16.0	16.1	0.0	14.8	7.2	21.2	34.8	11.9	8.9
Liberal professions	18.8	16.9	(2.7)	0.0	0.5	27.3	33.0	20.9	9.2	6.9
Administrators and managers	9.1	9.7	*	0.0	5.5	*	14.5	41.8	18.6	15.1
Skilled workers in industry	21.0	23.8	*	0.0	0.0	*	18.9	58.0	16.0	5.8
Other occupations	14.9	11.3	*	0.0	2.4	*	38.1	24.8	18.3	17.0
Didn't work abroad		10.5	*				10.4	44.5	17.9	13.5

Source: Central Bureau of Statistics - Survey of CIS Immigrants employment (Immigration: Oct.-Dec. 1990).

(1) Occupation in the CIS of immigrants employed in the CIS.

(2) Occupation in the CIS of immigrants employed in Israel.

Table 5A: Absorption in Employment(1)
(Percent)

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Occupation in the CIS	Occupation in Israel								
	Total	Scientific professions	of which: Doctors	Engineers	Technical and Liberal professions	Services	Skilled workers in industry	Unskilled workers	Other occupations
Total	100.0	28.1	6.0	16.4	23.5	5.9	24.7	4.7	13.0
Scientific and academic professions	40.6	65.6	95.5	76.8	8.7	1.0	12.0	0.7	12.0
of which: Doctors	6.3	0.0	95.5	0.0	0.0	0.0	0.0	0.0	4.5
Engineers	25.0	65.0	0.0	63.0	9.5	1.0	18.0	0.5	6.0
Technical and other liberal professions	34.3	3.6	0.0	2.0	55.4	5.3	20.8	4.9	9.9
Administrators and managers	0.3	22.2	7.4	14.8	11.1	3.7	18.5	7.4	37.0
Skilled workers in industry	12.6	1.2	0.0	0.9	5.5	7.5	71.8	8.9	5.2
Other occupations	12.2	0.5	0.0	0.0	2.5	22.5	29.4	12.8	32.2

(1) The matrix reflects a hypothetical absorption pattern according to which immigrants change their occupations as per the norms set by the immigrants of 1979- 1981.

Source: K. Flug, N. Kasir and G. Ofer - "The Absorption of Soviet Immigrants into the Labor Market from 1990 Onwards: Aspects of Occupational Substitution and Retention" (based on the population census of 1983).

Table 5B: Absorption in Employment(1)
(Percent)

Occupation in the CIS	Occupation in Israel								
	Total	Scientific professions	of which: Doctors	Engineers	Technical and liberal professions	Services	Skilled workers in Industry	Unskilled workers	Other occupations
Total	100.0	8.6	1.1	2.0	15.4	13.0	23.2	3.4	36.5
academic professions	40.6	21.2	17.5	8.0	14.3	3.7	1.2	29.6	30.0
Technical and other liberal professions	6.3	17.5	17.5	0.0	0.0	20.6	0.0	0.0	61.9
of which: Doctors	25.0	13.2	0.0	8.0	20.0	0.8	48.0	2.0	16.0
Engineers	34.3	0.0	0.0	0.0	28.0	7.0	1.5	28.9	34.7
Administrators and managers	0.3	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Skilled workers in Industry	12.6	0.0	0.0	0.0	0.0	46.8	8.7	10.3	34.1
Other occupations	12.2	0.0	0.0	0.0	0.0	25.4	10.7	0.0	63.9

(1) The matrix reflects a hypothetical absorption pattern according to which immigrants change their occupations as per the norms set by the immigrants of 1979 - 1981.

Source: K. Flug, N. Kasir and G. Ofer - "The Absorption of Soviet Immigrants into the Labor Market from 1990 Onwards: Aspects of Occupational Substitution and Retention" (based on the population census of 1983).

Table 6: By - industry Distribution of Israel Employed Persons <1>

Period	Total	Business sector	Agriculture	Industry	Electricity and water	Construction	Trade and food	Transportation	Business services	Public services	Personal services	
(Thousands)												
1990	1492	1053	62	322	17	76	216	92	149	439	110	
1991	1584	1115	56	340	17	96	224	97	161	468	115	
1992	1650	1167	58	349	15	108	229	104	172	483	122	
1990	I	1475	1025	67	311	15	70	206	88	153	450	107
	II	1484	1057	66	328	17	73	210	92	150	427	114
	III	1492	1071	57	320	18	82	229	94	152	421	109
	IV	1516	1057	57	329	17	79	220	95	139	459	110
1991	I	1537	1064	61	334	15	86	206	95	145	473	109
	II	1577	1108	54	343	16	98	215	96	160	469	117
	III	1595	1142	51	338	19	101	240	96	168	453	119
	IV	1625	1147	56	345	17	99	235	100	171	478	115
1992	I	1632	1139	62	343	15	107	217	100	171	493	114
	II	1633	1152	55	345	12	115	223	106	161	481	123
	III	1653	1184	59	345	14	107	238	108	176	469	127
	IV	1681	1191	56	363	17	101	238	101	181	490	124
(Percent)												
1990	100.0	70.6	4.1	21.6	1.1	5.1	14.5	6.2	10.0	29.4	7.4	
1991	100.0	70.4	3.5	21.5	1.1	6.1	14.1	6.1	10.2	29.6	7.3	
1992	100.0	70.7	3.5	21.1	0.9	6.5	13.9	6.3	10.4	29.3	7.4	
1990	I	100.0	69.5	4.5	21.1	1.0	4.7	14.0	6.0	10.4	30.5	7.3
	II	100.0	71.2	4.4	22.1	1.1	4.9	14.2	6.2	10.1	28.8	7.7
	III	100.0	71.8	3.8	21.4	1.2	5.5	15.3	6.3	10.2	28.2	7.3
	IV	100.0	69.7	3.8	21.7	1.1	5.2	14.5	6.3	9.2	30.3	7.3
1991	I	100.0	69.2	4.0	21.7	1.0	5.6	13.4	6.2	9.4	30.8	7.1
	II	100.0	70.3	3.4	21.8	1.0	6.2	13.6	6.1	10.1	29.7	7.4
	III	100.0	71.6	3.2	21.2	1.2	6.3	15.0	6.0	10.5	28.4	7.5
	IV	100.0	70.6	3.4	21.2	1.0	6.1	14.5	6.2	10.5	29.4	7.1
1992	I	100.0	69.8	3.8	21.0	0.9	6.6	13.3	6.1	10.5	30.2	7.0
	II	100.0	70.5	3.4	21.1	0.7	7.0	13.7	6.5	9.9	29.5	7.5
	III	100.0	71.6	3.6	20.9	0.8	6.5	14.4	6.5	10.6	28.4	7.7
	IV	100.0	70.9	3.3	21.6	1.0	6.0	14.2	6.0	10.8	29.1	7.4

1. Includes immigrants.

Source: Central Bureau of Statistics - manpower survey.

Table 6B: By - industry Distribution of Employed Immigrants

Period		Total	Construction	Trade	Public services	Industry	Other
		(Thousands)					
1991	I	34.0	4.4		5.8	11.2	12.6
	II	54.0	5.4	7.6	9.7	20.5	10.8
	III	68.0	6.1	9.5	12.2	24.5	15.7
	IV	85.0	5.1	11.9	15.1	33.1	19.8
1992	I	97.0	7.8	11.6	18.4	35.9	23.3
	II	108.0	11.9	10.8	22.7	39.0	23.6
	III	116.0	11.6	12.8	23.2	39.4	29.0
	IV	123.0		14.8	23.4	46.7	38.1
		(Percent)					
1991	I	100.0	12.9		17.1	32.9	37.1
	II	100.0	10.0	14.1	18.0	38.0	20.0
	III	100.0	9.0	14.0	17.9	36.0	23.1
	IV	100.0	6.0	14.0	17.8	38.9	23.3
1992	I	100.0	8.0	12.0	19.0	37.0	24.0
	II	100.0	11.0	10.0	21.0	36.1	21.9
	III	100.0	10.0	11.0	20.0	34.0	25.0
	IV	100.0		12.0	19.0	38.0	31.0

Source: Labor Force Surveys of the Central Bureau of Statistics - Press Release.

Table 7: Developments in Industry, 1989 - 1992

	Total	Non-technological industries	Technological industries(1)
Employed persons			
1990	-0.9	-0.8	-0.9
1991	4.1	5.6	1.2
1992	4.1	4.9	2.3
Cumulative 1990-1992	7.4	9.9	2.5
Employees			
1990	-0.8	-0.8	-1.0
1991	4.1	5.7	1.0
1992	4.2	5.1	2.4
Cumulative 1990-1992	7.6	10.2	2.5
Product			
1990	6.1	7.0	4.2
1991	7.0	8.2	4.7
1992	9.4	9.7	8.7
Cumulative 1990-1992	24.1	26.9	18.6
Labor input			
1990	-1.5	-1.4	-1.8
1991	4.8	6.0	2.5
1992	6.6	7.6	4.6
Cumulative 1990-1992	10.1	12.5	5.2

Source: Central Bureau of Statistics - Industry indexes.

1) Technological industries - industries in which at least 15% of the labor force are engineers, scientists, practical engineers and technicians according to Shaliv 1989.

Table B: Distribution of Labor force, Employment &
Unemployment Among Immigrants

* First survey

Occupation abroad	Immigrants of working age (Thousands)	Immigrants in the labor force		Employed (Thousands)	Unemployed	
		(Thousands)	(Percent)		(Thousands)	(Percent)
Total	37.5	21.1	56.3	14.9	6.2	28.4
Total excluding "unknown"	26.8	18.9	70.5	13.5	5.4	28.5
Academics	8.1	5.5	68.8	3.5	2.0	36.5
Of which: Doctors	2.0	0.8	39.7	0.4	0.4	47.9
Engineers	3.8	2.9	76.0	2.1	0.8	27.4
Liberal professions	5.8	4.0	68.4	2.8	1.2	28.5
Administrators	2.1	1.8	79.7	1.2	0.5	28.3
Clerical workers	2.1	1.4	65.0	0.9	0.4	30.9
Sales workers	1.1	0.9	87.5	0.6	0.3	33.7
Service workers	1.2	0.9	75.0	0.6	0.3	29.7
Skilled workers in industry	5.3	4.4	83.6	3.7	0.7	15.0
Unskilled workers in industry	0.2	0.1	49.6	0.1	0.0	30.2
Unknown (1)	10.7	2.2	20.7	1.4	0.8	37.1

* Second survey

Occupation abroad	Immigrants of working age (Thousands)	Immigrants in the labor force		Employed (Thousands)	Unemployed	
		(Thousands)	(Percent)		(Thousands)	(Percent)
Total	63.9	36.6	57.2	24.8	11.8	32.2
Total excluding "unknown"	43.7	32.4	74.2	23.2	9.2	28.3
Academics	15.8	11.2	70.8	7.0	4.2	37.5
Of which: Doctors	3.3	1.6	46.9	1.0	0.6	37.6
Engineers	6.9	5.8	82.6	4.0	1.8	30.8
Liberal professions	8.3	6.3	76.4	4.2	2.1	34.0
Administrators	4.0	3.2	80.3	2.4	0.8	26.5
Clerical workers	2.6	1.6	62.8	0.9	0.7	43.8
Sales workers	1.6	1.1	71.2	0.8	0.4	31.8
Service workers	1.6	1.0	62.5	0.7	0.3	31.8
Skilled workers in industry	8.2	7.5	81.6	5.9	1.7	22.0
Unskilled workers in industry	0.5	0.3	68.5	0.3	0.0	6.1
Unknown (1)	20.2	4.2	20.7	1.6	2.6	62.4

(1) This group includes principally immigrants who did not work in the USSR (The oldest and the young, ages 15-20 & 65+).

Source: Central Bureau of Statistics, Employment of immigrants who came at the beginning of 1990, compiled Jan - April 1991.

Table 8A: Distribution of Labor force, Employment &
Unemployment Among Immigrants - Males

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* First survey

Occupation abroad	Immigrants of working age	Immigrants in the labor force		Employed	Unemployed	
	(Thousands)	(Thousands)	(Percent)	(Thousands)	(Thousands)	(Percent)
Total	17.2	11.6	67.4	9.1	2.5	21.8
Total excluding 'unknown'	13.6	10.7	78.6	8.4	2.3	21.1
Academics	4.1	2.8	67.9	2.0	0.8	29.3
Of which: Doctors	0.9	0.4	40.3	0.2	0.2	44.1
Engineers	2.1	1.8	84.3	1.4	0.4	21.6
Liberal professions	2.2	1.8	82.9	1.4	0.4	21.9
Administrators	1.5	1.2	79.6	0.9	0.3	25.4
Clerical workers	0.3	0.3	79.1	0.2	0.0	11.6
Sales workers	0.5	0.4	86.0	0.3	0.1	22.9
Service workers	0.4	0.3	83.0	0.2	0.1	28.3
Skilled workers in industry	4.4	3.8	85.5	3.3	0.5	12.8
Unskilled workers in industry	0.1	0.1	60.9	0.0	0.0	39.3
Unknown (1)	3.6	0.9	24.9	0.6	0.3	30.0

* Second survey

Occupation abroad	Immigrants of working age	Immigrants in the labor force		Employed	Unemployed	
	(Thousands)	(Thousands)	(Percent)	(Thousands)	(Thousands)	(Percent)
Total	28.9	19.4	67.2	14.9	4.5	23.3
Total excluding 'unknown'	21.9	17.8	81.4	13.9	3.9	22.0
Academics	7.0	5.3	75.7	3.8	1.4	27.1
Of which: Doctors	1.5	0.9	56.6	0.4	0.5	52.6
Engineers	4.0	3.3	83.4	2.6	0.7	22.3
Liberal professions	2.6	2.3	88.1	1.7	0.6	26.3
Administrators	2.9	2.4	83.0	1.9	0.5	19.8
Clerical workers	0.4	0.4	81.3	0.2	0.1	39.0
Sales workers	0.8	0.6	85.2	0.5	0.2	28.1
Service workers	0.4	0.3	75.8	0.3	0.0	11.6
Skilled workers in industry	7.4	6.2	83.9	5.2	1.0	16.9
Unskilled workers in industry	0.3	0.3	81.2	0.3	0.0	0.0
Unknown (1)	7.1	1.6	23.2	1.0	0.6	37.3

(1) This group includes principally immigrants who did not work in the USSR (The oldest and the young, ages 15-20 & 65+).

Source: Central Bureau of Statistics, Employment of Immigrants who came at the beginning of 1990, compiled Jan - April 1991.

Table 88: Distribution of Labor force, Employment &
Unemployment Among Immigrants - Females

* First survey

Occupation abroad	Immigrants of working age (Thousands)	Immigrants in the labor force		Employed (Thousands)	Unemployed	
		(Thousands)	(Percent)		(Thousands)	(Percent)
Total	20.3	9.5	46.8	5.8	3.7	38.6
Total excluding 'unknown'	13.2	8.2	62.1	5.1	3.1	38.1
Academics	5.0	2.7	54.8	1.5	1.2	44.0
Of which: Doctors	1.1	0.4	36.2	0.2	0.2	51.1
Engineers	1.7	1.1	65.6	0.4	0.7	63.3
Liberal professions	3.6	2.2	61.0	1.4	0.8	35.9
Administrators	0.5	0.4	79.9	0.3	0.2	40.4
Clerical workers	1.8	1.1	62.4	0.7	0.4	35.3
Sales workers	0.6	0.5	83.7	0.3	0.2	41.9
Service workers	0.8	0.5	71.0	0.4	0.2	30.5
Skilled workers in industry	0.8	0.6	73.5	0.4	0.2	28.3
Unskilled workers in industry	0.1	0.0	39.5	0.0	0.0	17.7
Unknown (1)	7.1	1.3	18.5	0.8	0.6	41.9

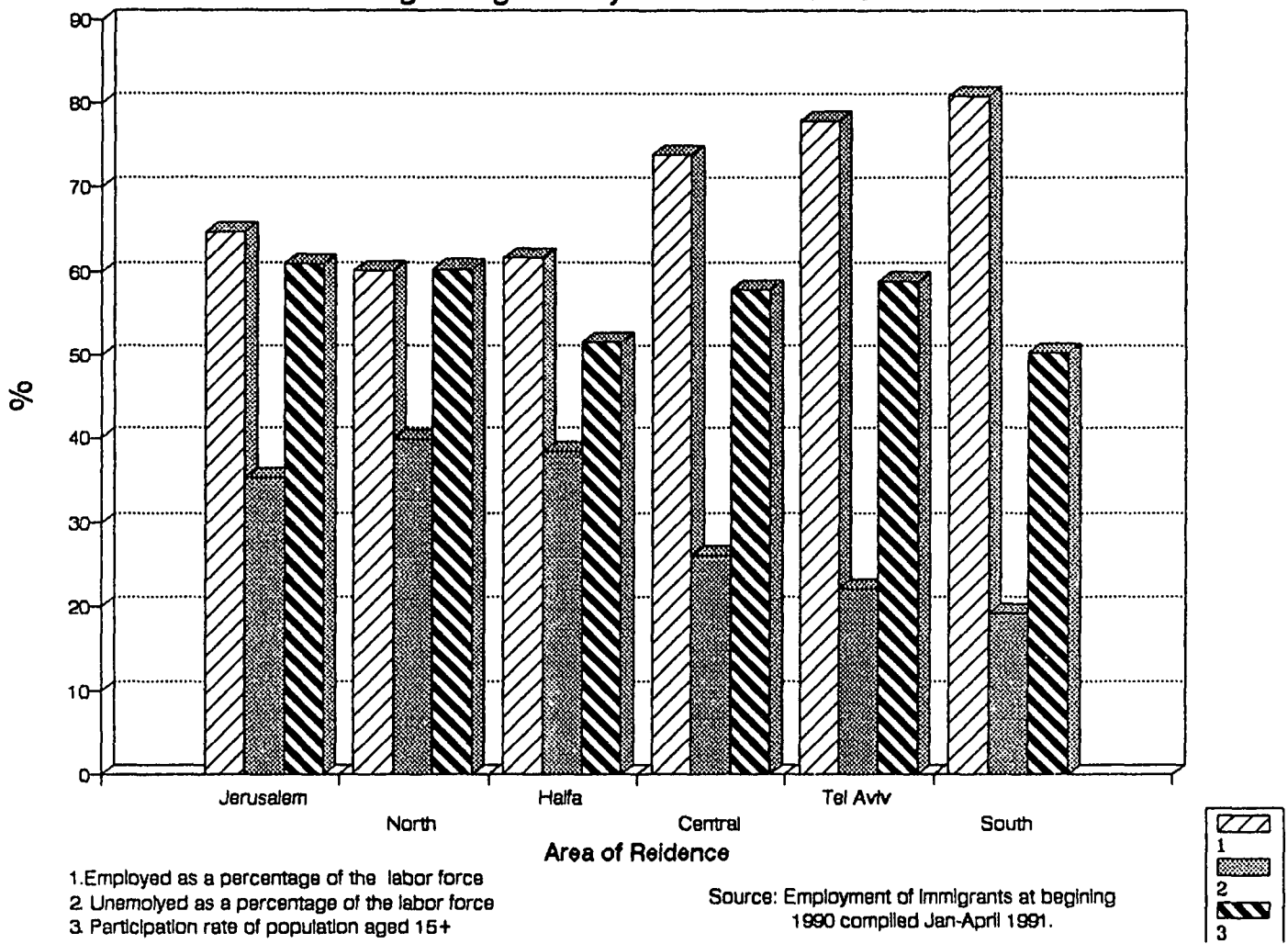
* Second survey

Occupation abroad	Immigrants of working age (Thousands)	Immigrants in the labor force		Employed (Thousands)	Unemployed	
		(Thousands)	(Percent)		(Thousands)	(Percent)
Total	35.0	17.1	49.0	9.9	7.3	42.4
Total excluding 'unknown'	21.8	14.6	66.9	8.2	6.4	43.5
Academics	8.9	5.9	66.9	3.2	2.8	46.7
Of which: Doctors	1.8	0.7	38.7	0.6	0.1	18.1
Engineers	2.9	2.4	81.5	1.4	1.0	42.7
Liberal professions	5.7	4.0	71.0	2.5	1.5	38.3
Administrators	1.1	0.8	72.9	0.4	0.4	47.0
Clerical workers	2.2	1.3	59.1	0.7	0.6	45.1
Sales workers	0.8	0.5	58.7	0.3	0.2	36.6
Service workers	1.1	0.6	57.3	0.4	0.3	42.4
Skilled workers in industry	1.8	1.3	72.5	0.7	0.6	45.6
Unskilled workers in industry	0.2	0.1	38.2	0.0	0.0	31.0
Unknown (1)	13.2	2.5	19.4	1.6	0.9	35.3

(1) This group includes principally immigrants who did not work in the USSR (The oldest and the young, ages 15-20 & 65+).

Source: Central Bureau of Statistics, Employment of Immigrants who came at the beginning of 1990, compiled Jan - April 1991.

Rate of Participation in the Labor force, Employment and Unemployment Among Immigrants by Area of Residence



1. Employed as a percentage of the labor force
 2. Unemployed as a percentage of the labor force
 3. Participation rate of population aged 15+

Appendix Table 1: Participation Rate & Unemployment
by Seniority in Israel

Quarter	Seniority in Israel (months)	Unemployment rate	Rate of participation in labor force
I 1991	8-0	50	25
	12-8	18	59
	Weighted rate	42	37
II 1991	8-0	32	25
	12-8	44	50
	18-12	30	57
	Weighted rate	38	44
III 1991	9-3	54	33
	15-9	41	58
	21-15	28	61
	Weighted rate	40	47
IV 1991	12-8	48	50
	18-12	35	58
	24-18	17	59
	Weighted rate	38	50
I 1992	9-0		44
	9-15	39	53
	27-21	18	62
	Weighted rate	33	53
II 1992	8-0	44	13
	12-8	43	48
	18-12	30	51
	18+	18	58
	Weighted rate	28	52
III 1992	9-0	50	35
	21-12	32	50
	33-21	23	58
	Weighted rate	28	52
IV 1992	12-0	32	34
	24-12	30	52
	38-24	20	58
	Weighted rate	25	51

Source: Labor Force Surveys of the Central Bureau of
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