Chapter 8
Welfare Issues

- Despite the overall improvement in the employment situation during 2021, the number of households without wage earners in the Arab community and in the second income quintile among the general population remained high even at the end of the year, relative to the precrisis period.
- The achievements of Hebrew-speaking students were significantly higher than those of Arabic-speaking students, but the gaps narrow when the socioeconomic backgrounds of the students are taken into account.
- The volume of teaching hours and wages of teachers at Hebrew-speaking schools are markedly higher than in the Arab education system, at all socioeconomic levels, even though the gaps have narrowed in recent years. Furthermore, resource allocation is less progressive in the Arabic-speaking education system than in the Hebrew-speaking system, especially at the high school level.
- One of the indices of teaching quality is the matriculation scores of the teachers when they finished their high school education. At Arabic-speaking schools, this index is higher than at Hebrew-speaking schools at all socioeconomic levels. According to this index, the quality of teachers entering the education system decline in the past decade, mainly among Arabic-speakers.
- In view of Israeli teachers' low wage level by international comparison, it seems that raising their hourly wage, particularly for entry-level teachers, can strengthen the teacher's status and attract highly-skilled teachers to the profession. This finding is more prominent in view of the lack of hourly wage increases in the reforms that have been implemented thus far, which were based only on increasing teachers' labor input in return for an increase in their overall wage.
- The average level of use of the financial system in Israel is similar to the level in high-income countries. However, the use of the financial system among Arab society is lower than in the rest of the population, and this is reflected in part in the higher use of cash and the lower use of advanced means of payment in that society. For instance, in Arab localities, electricity bills are paid in cash at a higher rate than in Jewish localities.
- The use of digital bank services in Arab society is lower than among the rest of the population. The gap is largely due to low Hebrew-language skills among the Arab population, and to the lack of access to financial digital infrastructure in the Arabic language.
- The use of housing loans in Arab society is lower than in the rest of the population. A significant portion of the gap is explained by property registration problems and by higher borrower risk. However, even in Arab localities where a significant share of properties are registered and borrower risk is relatively low, the rate of housing loans is lower than in the Jewish localities.
- The five-year plan for the Arab society includes a number of actions that will help deal with the various barriers to the use of the financial system. These measures include improving knowledge of the Hebrew language among Arab society, translation of digital content to Arabic, and advancing regulation of the real estate market in Arab localities.

INTRODUCTION

The year 2021 was dominated by the economy's acclimation to the COVID-19 routine—widespread vaccinations, an avoidance of lockdowns and severe restrictions, the gradual removal of the economic safety net implemented by the government during 2020, and an accelerated increase in employment. The first part of this chapter deals with changes in households' employment patterns in 2021 based on the number of wage earners in the household and their wage income prior to the crisis, and examines which population groups featured an increase in households with no wage earners. The second part of the chapter discusses the professional quality of teachers in the education system, and analyzes the differences between the Hebrew-speaking and Arabic-speaking systems and their trends in recent years. The third part of the chapter deals with financial inclusion issues, meaning the gap between various Israeli population groups in the use of the financial system. This issue has become more important during the COVID-19 period, both due to movement restrictions that made it difficult to consume financial services face to face and due to governments' need to transfer financial assistance to households rapidly and efficiently. The analysis in this chapter will focus on barriers that prevent many in the Arab society from using the financial system.

1. THE IMPACT ON EMPLOYMENT

The COVID-19 period featured a significant shock to the labor market. With the beginning of the lockdown in March 2020, there was a record number of unemployed. Following that, there was a gradual return to the labor market, such that at the end of 2021, the economy had returned to an employment level that was similar to the precrisis level.[1] During the crisis, there was concern that the impact on employment would lead to an impact on the well-being of households in the prime working ages[2], due to wages' significant share of household income and the assessment that it would be along time until the employment rate would return to its precrisis level. With the aim of minimizing the shock to household income, the government expanded the volume of unemployment benefits and extended the eligibility period to June 2021 for employees up to age 45 and until October for those above that age. According to the National Insurance Institute's poverty report, the change made to the unemployment benefits mechanism during 2020 and the special grants[3] led to a significant reduction in the poverty rate.[4] Since unemployment benefits only partly replace wages, and

1 For more information, see Chapter 2 and 5 of this Report.

2 All the analyses in this chapter relate to households with a head of household in the prime working ages (25–64).

3 Grants for parents, senior citizens, and those receiving welfare benefits, which were given in April 2020, and the Grant for all Citizens that was given in August 2020.

4 Dimensions of Poverty and Income Inequality – 2020, according to administrative data, National Insurance Institute, 2021.

due to the end of eligibility for many workers, we examine how many households experienced a reduction in the number of wage-earners during the crisis, and particularly how many households had fewer wage earners after the end of the safety net than before the crisis, and what their characteristics are—emphasizing households that were left with no wage earners at all.

In the absence of data on household income for 2021[5], we used the Central Bureau of Statistics Labor Force Survey to examine the extent to which employment changed, particularly the rate of households that completely lost their employment income channel (households with no wage earners) relative to the rate in 2019. In the analysis, we divided 2021 into three periods, which enables us to relate to changes in household employment that were influenced by policy changes that were made to deal with the pandemic. The first period (January–April 2021) includes the third lockdown, the beginning of the vaccination campaign, and the beginning of the exit from the crisis. In the second period (May–August 2021), the economy was almost completely opened to activity, furlough payments were ended for those under age 45, and the fourth morbidity wave began toward the end of the period. During the third period (September–December 2021), the fourth wave ended, the safety net was removed for older workers, and the economy returned to almost full activity.

At the end of 2021, the rate of households that had no wage earners returned to its 2019 level.

The rate of households without employed members was high at the start of the year, and declined to the point where, in the September–December period it was similar to that of 2019 (Table 8.1), with a similar composition, and a slight increase in the rate of households with one part-time employee, and a similar decline in the rate of households with one full-time employee (Figure 8.1). The macro picture shows that the changes that took place in the volume of employment at the end of 2021 are not expected to have a significant impact on household income relative to the precrisis situation.

Dividing the Labor Force Survey respondents into income quintiles based on 2019 wages[6] (Table 8.1) shows that most of the impact in 2021 was to households from the second and third quintiles, but at the end of the year, the rate of households with no employees remained high only in the second quintile, where the rate of households relying on only one part-time wage earner also increased (Figure 8.1). In contrast, in the lowest (first) quintile, the rate of households with no wage earners was lower at the end of 2021 than it was before the crisis, and the rate of households with two wage earners increased.

[5] Ideally, we would want to conduct an analysis that includes all household income (from labor, capital, in-kind transfers, etc.), but due to difficulties in measurement and in obtaining up-to-date data for 2021, we focus only on the change in employment on the basis of the Central Bureau of Statistics Labor Force Survey.

[6] The income quintiles are calculated at the annual level by household for those where the head of household is among the prime working ages, based on 2019 income data. Regarding households with no income data in 2019, the income figure was completed using 2018 data, and where this value was also blank, the value of 0 was inserted. This analysis method was chosen because the structure of the Labor Force Survey does not enable panel calculation for the time frame between the precrisis period and 2021.

An examination by main population group shows that in the Arab sector, the rate of households without employees increased markedly throughout the period. This trend was influenced by the rate of households that relied on one full-time or part-time wage earner before the COVID-19 period. A comparison of the employment composition in the Arab sector at the end of 2021 with the composition in 2019 shows that other than the increase in the number of households with no wage earners, the rate of households relying on a single part-time wage earner also increased. Among ultra-Orthodox Jews (*Haredim*), there was a slight improvement in the employment indices—a decline in the rate of households without employees and an increase in the rate of households with a part-time employee. This is perhaps because among the *Haredim* the rate of employees in the public sector is high.[7]

The analysis shows that household employment in most population groups returned to precrisis levels by the end of 2021, and there is no evidence of significant substitution between the various groups, which would have left certain population segments behind. The exception is the slow pace of convergence in the Arab sector: While among the Jewish non-*Haredi* and *Haredi* population groups the rate of households with no wage earners in September–December 2021 was lower than in 2019, the rate among Arabs remained 25 percent higher than it was in 2019.

Table 8.1: Rate of unemployed households in 2019 and in 2021

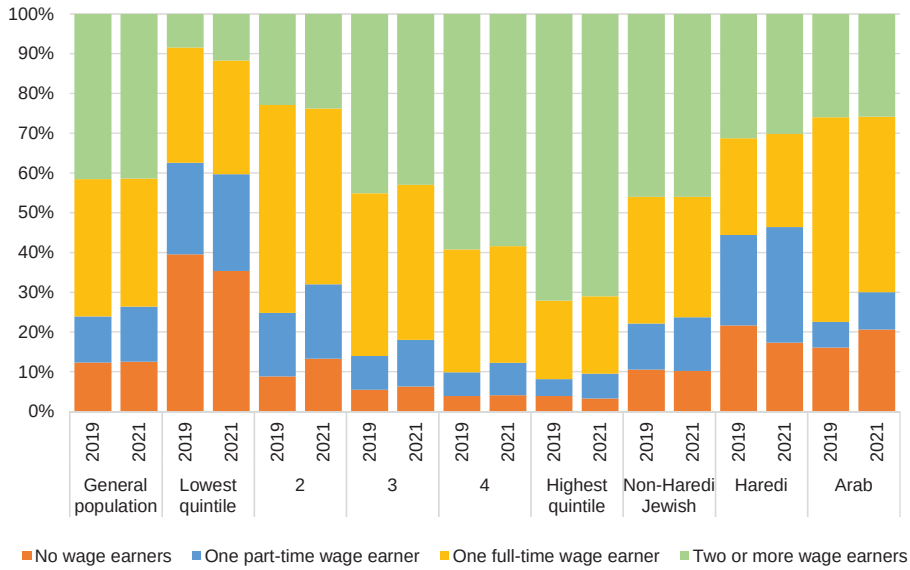
	2019	2021			Rate of change relative to2019 (percentage points)		
	Annual average	January–April	May–August	September–December	January–April	May–August	September–December
General population	12.4	17.4	14.1	12.5	5.1	1.8	0.2
Lowest quintile	39.6	43.8	37.9	35.4	4.2	-1.6	-4.2
2	8.9	22.1	15.5	13.3	13.3	6.6	4.4
3	5.5	10.5	8.3	6.3	5.0	2.8	0.8
4	3.9	3.4	4.6	3.9	-0.55	0.6	-0.1
Highest quintile	3.9	4.1	4.0	3.3	0.2	0.1	-0.6
Non-*Haredi* Jewish	10.6	14.3	11.5	10.2	3.7	0.9	-0.3
Haredi	21.7	26.9	21.5	17.4	5.2	-0.1	-4.3
Arab	16.2	27.1	22.6	20.7	10.9	6.5	4.5

Note: The wage income quintiles are calculated according to the household's wage income in 2019. In each year, there is a representative sample of households in the various groups, but they are not necessarily the same households. Cells in green show the lowest change in the number of households with no wage earners.

SOURCE: Central Bureau of Statistics Labor Force Survey.

[7] About 36 percent of working *Haredim* are employed in the public sector, compared with about 24 percent of the rest of the population.

Figure 8.1
Trends in Household Employment, 2019 Average and October–December 2021 Average[a]



[a] The Figure shows the employment composition of households in 2019 and in October–December 2021. The wage income quintiles are calculated according to the household's wage income in 2019.
SOURCE: Based on Central Bureau of Statistics Labor Force Survey data.

2. QUANTITATIVE AND QUALITATIVE DISPARITIES IN EDUCATIONAL INPUTS BETWEEN THE JEWISH AND ARAB EDUCATION SYSTEMS

A large part of the scholastic achievement gaps between Hebrew- and Arabic-speaking students is explained by the socioeconomic gaps between these populations.

There are wide disparities between Hebrew-speaking and Arabic-speaking students in the Israeli education system, but the gaps narrow considerably with regard to students who belong to the same level on the "nurture index"—an index that ranks schools at all levels of education on the basis of their students' socioeconomic characteristics (Bank of Israel, *Annual Report,* 2019).[8,9] This analysis examines whether the similarity of achievements is due to the investment of similar educational inputs.

There are many educational inputs that have an impact on the cognitive output of students both within the school and outside of it. The economic literature shows that the main inputs that have an impact on the learning process and the accumulation of human capital are the volume of teaching hours at the school, the quality of the teachers, and the family background of the students.[10] Despite the broad consensus

[8] Bank of Israel (2020), *Annual Report* for 2019. Selected issues: "Achievement Gaps between Hebrew-Speaking and Arabic-Speaking Students".

[9] The nurture index, which is based on the conclusions of the Strauss Committee (2007), weights several socioeconomic background parameters of the students in each school: the education level of the most well-educated parent at home (40 percent), per-capita household income (20 percent), peripherality of the school (20 percent); and immigration combined with origin in a "distress country" (20 percent). Students and teachers are assigned to nurture quintiles in accordance with the schools that they attend.

[10] E. A. Hanushek (2008). "Education production function". *The New Palgrave Dictionary of Economics*, Vol 2.

regarding these main inputs, there remains some dispute regarding their relative importance, how they affect the result, and their correct estimation.

The analysis in this Chapter examines the educational achievements in the two education systems, with reference to the main inputs invested in each system.[11] In terms of the quantity of inputs, we outline the volume of teaching hours and the teachers' wages budgeted by the Ministry of Education, and in terms of the quality of inputs, we examine teacher quality on the basis of their matriculation scores. In view of the significant disparities in the socioeconomic backgrounds of the two population groups and their definitive impact on educational outcomes, we focus on comparing students that belong to the same nurture index ranking. However, we must remember that the differences in the socioeconomic backgrounds of the two population groups are themselves a result of the educational inputs invested previously in the education system, and are influenced by many barriers to the integration of Arabic-speaking students in society and in employment.[12]

a. Comparing scholastic achievements in the two education systems

Overall, the achievements of Hebrew-speaking students, according to an index of the dropout rate and an index of matriculation eligibility, are significantly higher than those of Arabic-speaking students, but the gaps narrow when the nurture index is taken into account (Figure 8.2). The phenomenon reflects the large differences in the distribution of twelfth-graders in each education system by the nurture index. Only a negligible percentage of Arabic-speaking students (6 percent) are in the two strongest nurture quintiles (compared with 65 percent of Hebrew-speakers) and most Arabic-speaking students (87 percent) fall into the two weakest quintiles (compared with 17 percent of Hebrew speakers). Therefore, even though Hebrew-speaking students outperform Arabic-speaking students in both indices (for example, an average disparity of 20 percentage points in eligibility for a matriculation certificate), the differences narrow and some even turn around in favor of Arabic-speakers when students are divided into nurture quintiles.[13] This phenomenon is reflected more strongly in additional indices, including eligibility rates for a matriculation certificate including five units

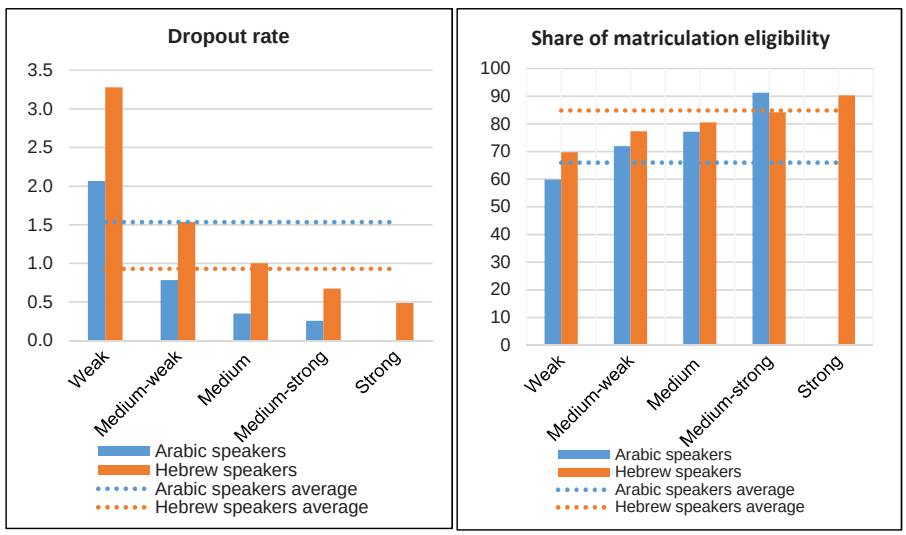
[11] The analysis relates only to schools in the regular, State, education system: official, and recognized non-official.

[12] M. Tehawkho (2019). "Arab Society as a Growth Engine in the Israeli Economy". Aaron Institute for Economic Policy, Policy Paper 2019.06 [in Hebrew].

[13] Similar findings appear in the Bank of Israel *Annual Report* for 2019, Selected Issues: "Achievement Gaps between Hebrew-Speaking and Arabic-Speaking Students". That study found that the achievements of students in Arabic-speaking schools surpass those of students in Hebrew-speaking schools who belong to the same nurture decile. We obtain the same outcome here when the achievements of students in the same nurture decile, rather than of the same nurture quintile, are compared, despite the differences in period. That study also found that the achievement disparities between Arabic-speaking and Hebrew-speaking students narrow when students of similar socioeconomic background are compared.

in mathematics and for matriculation *cum laude*[14], in which Arabic-speaking students in the middle quintile attain at the same rate as Hebrew-speaking students in the strongest quintile.

Figure 8.2
Scholastic Achievement Indices of High School Students, Hebrew Speakers and Arabic Speakers, by Nurture Quintile, 2015–19[a]



[a] We deleted the year 2020 in order to avoid the impact of the COVID-19 crisis on students' achievements in that year.
SOURCE: Based on Ministry of Education.

b. Educational inputs—quantitative comparison

The allocation of teaching hours to Hebrew-speaking students is higher than to Arabic-speaking students, even among students from the same socioeconomic background.

The quantity of educational inputs shown below focuses on teaching hours and teachers' wage payments budgeted by the Ministry of Education, based on data from the Ministry's "Transparency in Education" Web site, which covers most of the national education budget.[15]

The allocation of teaching hours *per class* in elementary and middle schools[16] is higher for Hebrew-speaking students, both on average and when each level of the nurture index is compared (Fig. 8.3). In both education systems, per-class teaching hours are distributed progressively in accordance with nurture quintiles, and there are

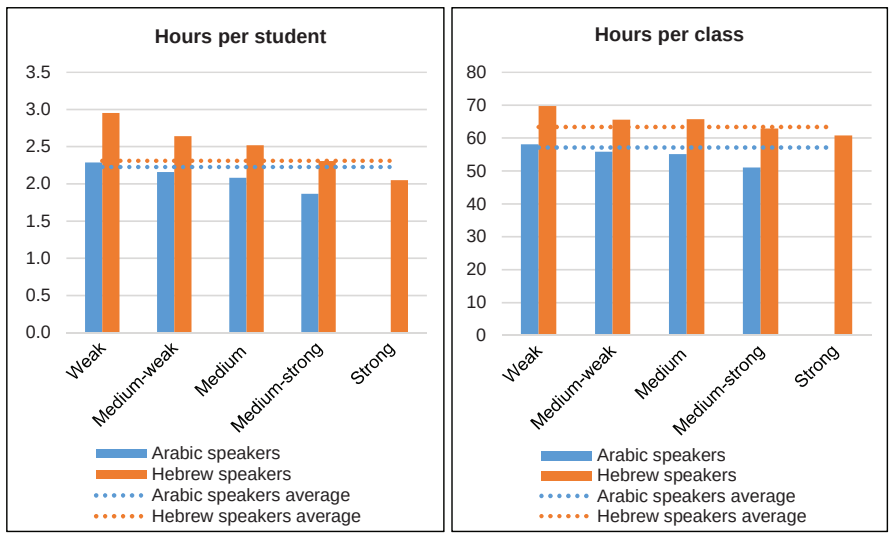
[14] A *cum laude* matriculation certificate is defined by the score achievements on matriculation tests (weighted average score). The minimum number of study units necessary to obtain a *cum laude* matriculation certificate is five in English and four in mathematics. (For further details, see the "Transparency in Education" Web site).

[15] The data in this section refer to budgets allocated to elementary schools, middle schools, and high schools funded by the Ministry of Education only, and do not include municipal budgets, parents' payments, third-sector budgets, or the schools' own income. Ministry of Education budgets that cannot be attributed to specific schools were also not included.

[16] Data for the high school level are unavailable on the "Transparency in Education" Web site.

major disparities in favor of Hebrew-speaking students in each quintile. These gaps are amplified when comparing teaching hours *per student* by nurture quintile because class size, which to some extent reflects the quality of educational input[17], is greater in the Arabic-speaking system in each quintile.[18]

Figure 8.3
Distribution of Budgeted Hours in Elementary and Middle Schools, Hebrew Speakers and Arabic Speakers, by Nurture Quintile, 2014–20 (weekly hours)



SOURCE: Based on Ministry of Education.

The discrepancies between the two population groups are due to the relatively low allocation of hours designated for reducing socioeconomic gaps, especially in the high schools.

These disparities are due to several budgeting rules by which teaching hours are allocated at each level of education, even though all are progressive to some extent (Ministry of Education and Ministry of Finance, 2014).[19] The distribution of teaching hours in elementary and middle schools is based largely on a basic mandatory budgeting of hours per class and includes additional funding for large classes and special curricular programs. Some special programs are meant to help socioeconomically weak populations and weak municipal authorities (e.g., teaching hours from the "nurture basket" and a long school day, which add up to 7 percent of total hours in elementary schools and 18 percent at the middle school level). The distribution of teaching hours at the high school level is determined on a per-student

[17] Research shows that class size affects the learning process in school and students' scholastic outcomes. See J. D. Angrist and V. Lavy (1999). "Using Maimonides' Rule to Estimate the Effect of Class Size on Stochastic Achievement", *The Quarterly Journal of Economics*, 114(2): 533–575; and J. D. Angrist, V. Lavy, J. Leder-Luis and A. Shany (2019). "Maimonides' Rule Redux", *American Economic Review: Insights*, 1(3): 309–324.

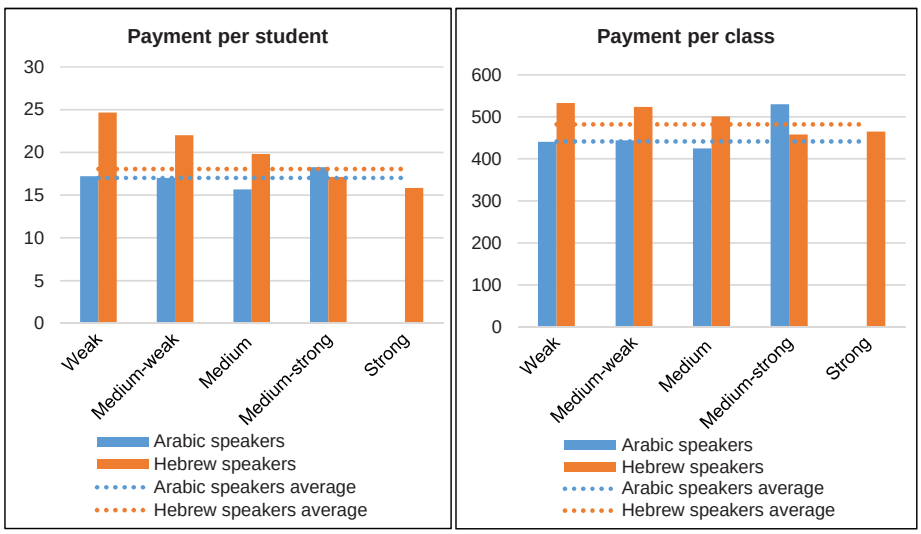
[18] The disparity in class size between Arabic- and Hebrew-speakers in each quintile ranges from1 to 3 students per class.

[19] Ministry of Education and Ministry of Finance (2014). "Report of the Interministerial Team on Narrowing Disparities in Education System Budgeting".

basis and is based on various characteristics: grade level (9–12), scholastic track (academic or technological), type of "major", and class size. Only a few of these hours are meant to help socioeconomically weak population groups in accordance with the size and peripherality of the school (3 percent of the teaching-hour budget).

The disparities between the education systems are reflected to a greater extent in wage payments to teachers budgeted by the Ministry of Education. The progressivity level of the wage payments in the Arabic-speaking education system is even weaker than the progressivity in hours (Fig. 8.4). Imputed in these payments are not only the number of teaching hours but also the average cost of a teaching hour, which differs between the education systems and is derived mainly from the teachers' profile.[20] Even though schools are allowed to employ any teacher of any profile and receive commensurate budgeting, the proportion of teachers holding Master's degrees and above is about 41 percent in the Hebrew-speaking system, compared with about 26 percent in the Arabic-speaking system, and average seniority is around seventeen years in the Hebrew-speaking system, compared with fourteen years in the Arabic-speaking system. These disparities between the education systems in teachers' profile exist in all nurture quintiles.

Figure 8.4
Wage Payments to Hebrew-Speaking and Arabic-Speaking Teachers, All Education Stages, by Nurture Quintile, 2014–20 (NIS thousand)



SOURCE: Based on Ministry of Education.

The other budget items, including participation in the cost of services provided to the schools by the municipality (busing, secretary, janitor, psychologist, etc.) and budgeting of educational projects and initiatives (afternoon care, etc.), account for a

[20] A teacher's profile is determined on the basis of his or her education, seniority, percent of full-time post, and additional parameters such as the teacher's age and whether they are a working parent.

smaller segment of the budget (about 12 percent of total budgeting). However, here too there are disparities between the education systems, and the lower the nurture quintile, the wider the disparities are.[21]

Budget items designated for Jewish society, alongside other items that the Arab society has difficulty obtaining, contribute to the gaps between the two populations.

One of the most important tools that the education system can use to assure equal opportunity and narrow social and economic gaps is affirmative action and differential allocation of budgets. However, the foregoing shows that even though progressivity in the rules of distributing teaching hours is based largely on schools' nurture index level, there is a consistent disparity in the de facto allocation to the disadvantage of schools in the Arabic-speaking system. This is partly due to curricular programs that include special components, which are provided only in the Hebrew-speaking education system, and particularly in State-Religious schools, in order to fund items such as additional hours for prayers and reinforced teaching of Jewish culture. Furthermore, inequality between Hebrew- and Arabic-speaking students, particularly in the weak nurture quintiles, is exacerbated by the lack of awareness and ability to cope with the Ministry of Education's bureaucratic mechanisms in order to obtain additional funds, and by conditioning of such extra funding on municipal support. Other factors, pertaining to the high school level, include extra funding for technological study tracks, which are less common in the Arabic-speaking education system, and a smaller rate of benefits for directing students to the matriculation exams.

c. Educational inputs—qualitative comparison

Apart from the number of teaching hours and the level of budgeting, educational inputs are also differentiated by quality. Empirical findings point to a strong correlation between teachers' quality, measured by a range of cognitive tests, and their students' educational achievements in the same subjects.[22] We measured teachers' quality on the basis of their achievements on matriculation exams in mathematics and language (including bonuses for extra study units and weighting of the score by the number of study units in the subject), normalized to the achievements of all students in the same grade. For this purpose, we merged the files of teachers' posts each year from 2014 to 2020 with the matriculation data of all students who took these exams from 1993 onward. Since the matriculation data were available only from that year onward, the examination related only to teachers aged forty and under.[23] Admittedly, these are only partial indicators of teacher quality because this quality is also composed of

[21] Some of these items, such as expenditure on classroom construction and student busing, include a differential component at the municipal level. Nevertheless, budgeting in some municipal authorities is insufficient, and the authorities have to make up the difference from their regular budgets. See Knesset Research and Information Center (2019). "Differential Budgeting Policies in the Education System: Teaching Hours, Classroom Construction, and Selected Auxiliary Services" [in Hebrew]).

[22] J. Metzler and L. Woessmann (2012). "The Impact of Teacher Subject Knowledge on Student Achievement: Evidence from Within-Teacher Within-Student Variation", *Journal of Development Economics* (99): 486–496; C. K. Jackson (2013). "Match Quality, Worker Productivity and Worker Mobility: Direct Evidence from Teachers", *Review of Economics and Statistics*, 95(4): 1096–1116.

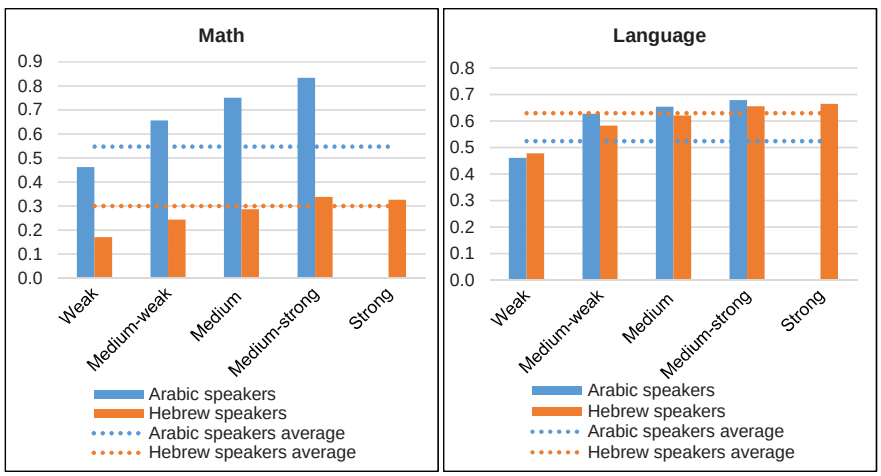
[23] This limitation allowed us to locate the matriculation scores of more than 90 percent of teachers up to age forty.

capabilities not reflected in matriculation scores. However, in the economic literature they are found to be correlated with various measures of education system outcomes.

Figure 8.5 measures the quality of young teachers on the basis of their normalized matriculation scores[24] and shows that the mathematics achievements of Arabic-speaking teachers surpassed those of their Hebrew-speaking counterparts by an average of 0.26 standard deviations. The gap exists at all levels of the nurture index, even though it narrows with the decline of nurture quintiles. The achievements of Hebrew-speaking teachers in language, in contrast, exceeded those of Arabic-speaking teachers by an average of 0.1 standard deviations. However, by studying each nurture quintile separately other than the weakest one, we found that the advantage in language actually belongs to Arabic-speaking teachers. The difference between the overall average in each education system and the average in each nurture quintile reflects the socioeconomic gap between the two population groups.[25] Notably, these gaps between the education systems in each nurture quintile are statistically significant.[26]

The achievements of Arabic-speaking teachers in their mathematics matriculation exams are significantly higher than those of their Hebrew-speaking peers, at all socioeconomic levels. Their matriculation scores in language are also higher if the comparison is between those with the same nurture index level.

Figure 8.5
Normalized Matriculation Scores of Young Hebrew-Speaking and Arabic-Speaking Teachers, All Education Stages, by Nurture Quintile, 2014–20 (standard deviations)



The score reflects the difference, in standard deviations, between the matriculation score of the teacher and the average score in his or her cohort. A positive score indicates a score above the average for that cohort.

SOURCE: Based on Ministry of Education.

[24] The normalized score reflects the difference, in standard deviation terms, between a teacher's matriculation score and the average matriculation score in his or her cohort. A positive score reflects an grade exceeding the cohort's average.

[25] Judged by psychometric exam scores, the quality of Arabic-speaking teachers is lower than that of their Hebrew-speaking colleagues. However, testing teacher quality according to indicators based on matriculation exams has an advantage over using psychometric scores because the matriculation scores are available for more than 90 percent of teachers, whereas the quality indicators based on the psychometric exams relate to only a small portion of the teachers (between half and two-thirds of teachers throughout the period investigated). The characteristics of the teachers who took the psychometric exams are different from those who did not take them, and the share of the former varies across the investigation period. Quality indicators based on teachers' matriculation exams are more reliable because they lack the biases originating in the selection of those taking the psychometric exams.

[26] The highest P-value obtained is 0.05.

Another way to view the findings is according to the relative place of teachers' achievements in their grade. In 2014–2020, 82 percent of young Arabic-speaking teachers exceeded the median scores in mathematics, compared with 76 percent of young Hebrew-speaking teachers. The disparity is sharper in the uppermost quartile, where 46 percent of Arabic-speaking teachers are positioned, compared with 34 percent of Hebrew-speaking teachers. In contrast, in the upper half of achievements in language studies, the numbers are 76 percent and 81 percent in favor of Hebrew-speakers, and in the uppermost quartile—38 percent and 44 percent—again to the Hebrew-speakers' advantage.[27]

The gaps between population groups in the quality of teachers can be explained by the higher status accorded to the teaching profession in Arab society, which is partly due to the alternative employment and wage opportunities available to this population group, and to other barriers to their integration in the broader labor market.

The disparities in teacher quality are also reflected in teachers' status and willingness to enter the profession. An analysis of PISA scores for the relevant years shows that the share of students interested in becoming teachers is about 1 percent among Hebrew-speakers, compared with about 10 percent among Arabic-speakers.[28]

These differences in teachers' status, which affect teacher quality in each education system, evidently originate in the alternative occupational and wage possibilities for teachers in each system. Many studies point to difficulties among minority and immigrant groups in integrating into the labor market for reasons such as language difficulties, deficient human capital and skills relative to the majority group, access to transportation, and discrimination.[29] In Israel, these barriers have been found to reduce the return on human capital and narrow the range of possible vocations for the Arab population, and for Arab women in particular.[30]

The aforementioned barriers may affect the Arab population's choice of teaching as a profession, particularly among women. First, proficiency in Hebrew is found to be decisive in the Arab population's ability to integrate into the labor market.[31] Since in the Arab education system the language of instruction in all subjects in Arabic, one can teach in this system without strong proficiency in Hebrew. Second, most teachers work near their localities of residence, sparing them from having to cope with commuting difficulties (Social Survey, 2016). Finally, cultural factors inhibit Arab women from joining the Israeli labor market and accepting employment outside their

[27] Given that the achievements of Hebrew-speaking students surpass those of Arabic-speakers overall, the matriculation scores of teachers in the Arabic-speaking system exceed the average in their education system, and the gap is even wider than in the Hebrew-speaking system. The disparity in favor of Arabic-speaking teachers is 0.5 standard deviations in the mathematics matriculation score and 0.35 in language.

[28] Bank of Israel, *Annual Report* for 2019. Selected issues: "Who Are the Students who Aspire to be Teachers in Israel? Insights from PISA Tests".

[29] K. Clark and S. Drinkwater (2000). "Pushed Out or Pulled In? Self-Employment Among Ethnic Minorities in England and Wales", *Labour Economics*, 7(5): 603–628; R. W. Fairlie and B. D. Meyer (1996). "Ethnic and Racial Self-Employment Differences and Possible Explanations", *Journal of Human Resources*, 31(4): 757–793.

[30] M. Tehawkho (2019). "Arab Society as a Growth Engine in the Israeli Economy". Aaron Institute for Economic Policy, Policy Paper 2019.06 [in Hebrew].

[31] I. Kalisher, and K. Moskalev, and M. Tehawkho (2020). "Return on Knowledge of Hebrew in Arab Society: Barriers to Language Learning and How to Remove Them". Aaron Institute for Economic Policy, Policy Paper 2020.06 [in Hebrew].

residential localities.[32] Seeking employment in the Arabic-speaking education system may afford an opportunity to surmount these barriers.

Thus, due to the more limited occupational opportunities in Arab society, teaching may be relatively attractive and may draw better-skilled workers. In addition, the alternative wages of Arabic-speaking teachers are lower than those of Hebrew-speaking teachers, which also has an upward effect on the supply of teachers in this population group. Even though the average wage of Arabic-speaking teachers falls below that of Hebrew-speaking teachers due to the differences in teacher profiles in each sector, the alternative wage available to Arabic-speaking teachers is much lower. The ratio of the average wage of an employee with 13–15 years of education to that of a teacher is 0.58 in the Arab education system and 0.85 in the Hebrew-speaking system.[33]

d. Discussion of the findings and recommendations

It seems that the higher quality of teachers in the Arab society at least partially compensates for the resource allocation gaps between the education systems, since the achievement gaps between the systems are small.

Several studies stress the importance of teachers' cognitive skills for their students' scholastic achievements.[34] The findings of our analysis largely support this. Even though the per-student budget and teaching hours in each nurture quintile are lower in the Arabic-speaking education system than in the Hebrew-speaking one, the disparities in achievements between Arabic-speaking and Hebrew-speaking students who belong to the same nurture index level are small. Consequently, the stronger cognitive skills of Arabic-speaking teachers apparently help to improve the achievements of Arabic-speaking students and to compensate somewhat for the effect of the budget disparities. However, this does not compensate for the wide gaps between Arabic-speaking and Hebrew-speaking students at the starting point (parsed by nurture index levels). Therefore, on average, Arabic-speaking students' achievements still fall far short of those of Hebrew-speaking students.

Various processes and reforms over the past decade have slightly changed the picture. The most recent trends in teacher hiring point to a decline in the quality of young and new teachers[35] in both education systems, but to a greater extent in the

[32] E. Yashiv and N. Kasir (2012). "Arab Women in the Israeli Labor Market: Characteristics and Policy Proposals", Bank of Israel Research Department, Discussion Paper 2012.05.

[33] It should be noted that in view of data limitations, the wage of teachers is compared to the wage of employees with 13–15 years of education. However, since a considerable percentage of teachers have a Master's degree or higher, this comparison underestimates the alternative wage of teachers in both sectors. The data on employee wage by population group are based on the Central Bureau of Statistics Expenditure Survey (employees aged 15+, gross monetary income from wages and from employee salary, by population group, gender, and years of education).

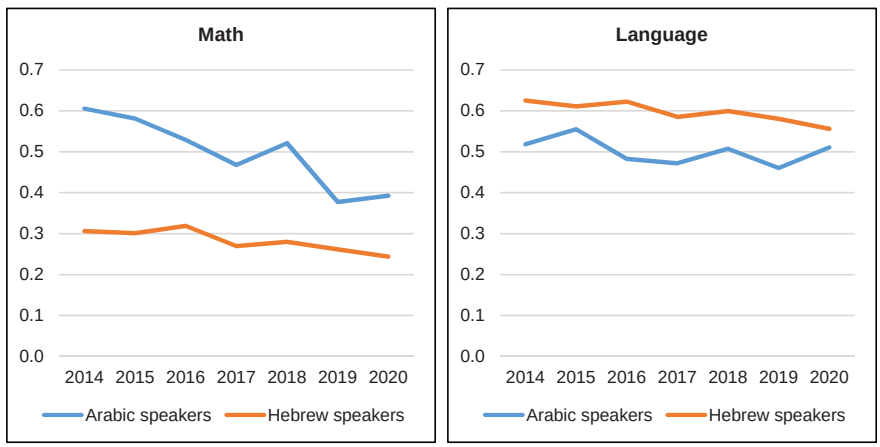
[34] J. Metzler and L. Woessmann (2012). "The Impact of Teacher Subject Knowledge on Student Achievement: Evidence from Within-Teacher Within-Student Variation", *Journal of Development Economics* 99(2): 486–496; C. K. Jackson (2013). "Match Quality, Worker Productivity and Worker Mobility: Direct Evidence from Teachers", *Review of Economics and Statistics*, 95(4): 1096–1116.

[35] A teacher is defined as new in his or her first year of inclusion in the teacher data files. By combining this with the age-forty limit, we managed to identify the matriculation scores of some 90 percent of young and new teachers.

In recent years, the quality of new teachers joining the education system has declined, particularly in Arab society. Alongside the increase in demand for new teachers, some of this phenomenon may be due to the decline in the status of teachers in Arab society and the creation of new employment alternatives.

Arabic-speaking system (Fig. 8.6). The reform that reduced class size, implemented at the beginning of the past decade, stimulated demand for teachers and led to extensive hiring in both education systems, which may have affected teacher quality.[36] However, the steeper decline in teacher quality in Arab society may also be due to more severe erosion of teachers' status in this population group. There is support for the argument about the decline in luster of the teaching profession in Arab society in the PISA surveys, which find that the desire to be a teacher among students in this society fell from 10.9 percent to 8.7 percent between 2015 and 2018, whereas in Jewish society it remained basically unchanged (Bank of Israel, 2019). Similarly, more and more Arab women, particularly those who are well educated, have been joining the broader labor market in the past decade, some of whom may have previously opted for employment in the education system.[37] Overall, these findings suggest that the decrease occurred mainly among the more competent individuals, contributing to a decline in the average quality of teachers who join the education system.

Figure 8.6
Normalized Matriculation Scores of Young and New Hebrew-Speaking and Arabic-Speaking Teachers, All Education Stages, 2014–20 (standard deviations)



The score reflects the difference, in standard deviations, between the matriculation score of the teacher and the average score in his or her cohort. A positive score indicates a score above the average for that cohort.
SOURCE: Based on Ministry of Education.

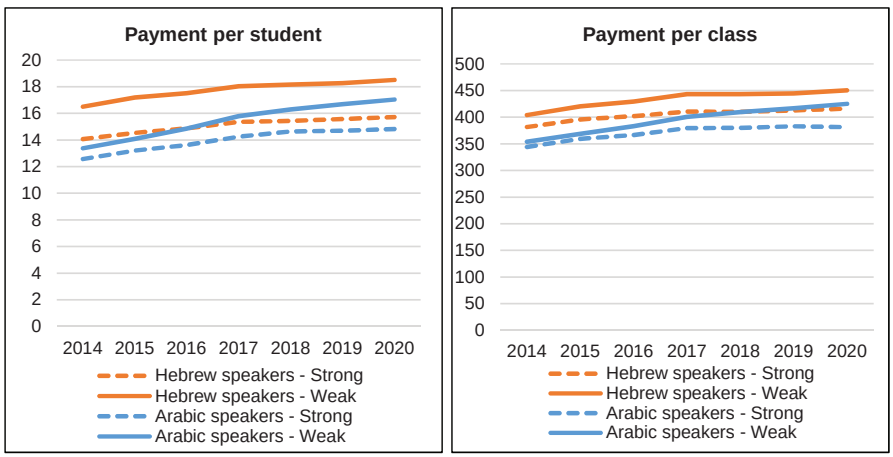
Concurrent with the decline in teacher quality over the past decade, there was a steeper increase in teaching hours in the Arabic-speaking education system. Thus, the budget disparities between the systems in wage payments to teachers—per-student and per-class—narrowed in all nurture quintiles. The most significant increase in wage

[36] Bank of Israel (2019), *Annual Report* for 2018, Chapter 6, Section 7: "Government Services: Developments in the Education Budget and Teaching Quality in Recent Years".
[37] Taub Center for Social Policy Studies: State of the Nation Report: Society, Economy, and Policy in Israel, 2018.

payments to Arabic-speaking teachers between 2014 and 2020 took place in the weak nurture quintiles (Fig. 8.7). This took place only at the elementary and middle school levels, while the gap widened slightly at the high school level. Accordingly, some of the process was likely influenced by the 2014 "Program to Narrow Disparities", which was implemented only in the early stages of education. The program engineered a differential increase in the distribution of teaching hours and thus benefited Arabic-speaking students, most of whom belong to the weaker socioeconomic levels.

The increased progressiveness of resource allocation by socioeconomic level reduced the resource allocation discrepancies between Hebrew- and Arabic-speaking students.

Figure 8.7
Wage Payments to Hebrew Speaking and Arabic Speaking Teachers, All Education Stages, by Grouped Nurture Quintile, 2014–20 (NIS thousand)



Grouped nurture quintiles are defined as follows: Nurture quintiles 4 and 5 are included in the weak nurture quintiles, and nurture quintiles 2 and 3 are included in the strong nurture quintiles.
SOURCE: Based on Ministry of Education.

In conclusion, there is concern that the decline in cognitive skills among Arabic-speaking teachers will cause the scholastic disparities between the population groups to widen even though inequality in per-student teaching hours and per-student budgeting has narrowed.

The decline in teachers' cognitive skills and the erosion of their status are typical of many countries in recent decades. The background for these trends is an improvement in occupational alternatives for women in the labor market[38] and, in Israel, for Arab women in particular. However, various local phenomena may affect the path of the decline in teacher quality: The increase in demand for teachers due to smaller class sizes may accelerate the decline in the quality of the teachers being hired, whereas raising teachers' wages may attenuate or even reverse the process.

The "Ofek Chadash" and "Oz LeTmurah" education reforms, implemented at the beginning of the previous decade, did improve teachers' global wages but their per-hour wage relative to that of other employees in Israel remained unchanged (Bank

[38] M. P. Bacolod (2007). "Do Alternative Opportunities Matter? The Role of Female Labor Markets in the Decline of Teacher Quality", *The Review of Economics and Statistics*, 89(4): 737–751.

In order to halt the decline in the status of the teaching profession and in the quality of teachers, teacher wages, which are low by international comparison, should be increased—mainly that of new teachers. Progressive budget components should also be increased in order to continue narrowing the gaps in the education system.

of Israel, 2019).[39] Today, the wages of teachers in Israel—beginning teachers in particular—are low by international comparison, and teacher quality, assessed on the basis of international literacy and numeracy tests, is poor (OECD, 2021; Hanushek et al., 2018).[40,41] Raising the wages of teachers in Israel, particularly for those starting out, may therefore enhance teachers' status and attract better-qualified people to the teaching profession. The effect of such a measure may be stronger among teachers in Arab society than among Jewish counterparts due to the differences between the groups in alternative wages, and may therefore narrow the gaps between the education systems. More broadly, transitioning to achievement-based payment, teacher evaluation, and improved payment for teachers of high-demand subjects would help to enhance teacher quality in all areas of the education system. In addition, strengthening the progressive components of the budgeting method based on students' socioeconomic background, with a sizable portion of the increase in funding devoted to teaching Hebrew in Arab society, will narrow the budget gaps between the education systems and will advance the integration of Arabic-speaking students in the Israeli labor market.[42]

3. FINANCIAL INCLUSION IN ARAB SOCIETY IN ISRAEL

The term "financial inclusion" means access to, and use of, financial services[43] at a reasonable cost. The World Bank measures financial inclusion as the rate of individuals and companies who use financial services, with the understanding that access, quality, and cost influence the extent of such use.

The importance of financial inclusion increased during the COVID-19 period and the social distancing restrictions that were imposed at the time. These restrictions prevented people from consuming and trading in traditional ways, and emphasized the importance of the digital economy in general and of digital financial services in particular. (For more discussion see Chapter 1.)[44] Population groups and individuals who, before the crisis, generally had limited access to financial services, were expected to be more hard-hit by the crisis due to a lack of tools for trade and for making secure

[39] Bank of Israel (2019), *Annual Report* for 2018, Chapter 6, Section 7: "Government Services: Developments in the Education Budget and Teaching Quality in Recent Years".

[40] E. A. Hanushek, M. Piopiunik, and S. Wiederhold (2019). "The Value of Smarter Teachers: International Evidence on Cognitive Skills and Student Performance", *Journal of Human Resources,* 54(4): 857–899; OECD (2021). *Education at a Glance* 2021, OECD Indicators, OECD Publishing.

[41] According to the 2014/2015 PIAAC survey, the quality of teachers in Israel in numeracy and literacy is lower than in other OECD countries (ranking third and fourth from the bottom, respectively). The median score of Israeli teachers in the distribution of these skills among the population at large is also poor.

[42] These recommendations are in line with those in the Bank of Israel Research Department Special Report (2019) and the Bank of Israel Plan to Accelerate Economic Growth (2021).

[43] This refers to all possible financial services—bank accounts, credit and insurance services, digital and mobile means of payment, and so forth.

[44] The analysis in Chapter 1 provides more information on the increased use of means of payment and remote banking channels during the COVID-19 crisis.

payments at low cost and without personal contact. A further impact was reflected in the government's difficulty in transferring assistance payments. For instance, when the "Grant to all citizens" payment was made automatically to most Israeli residents, the National Insurance Institute had difficulty finding bank account details for about 5 percent of eligible recipients, who were required to go to the post office to receive their payments in cash. This difficulty was mainly experienced in localities in the low socioeconomic clusters (1–3), which contain slightly more than one-quarter of the eligible population but more than half of those who were sent to the post office to collect their payments.

Citizens with low financial inclusion levels have recently had difficulty consuming financial services and obtaining government assistance grants.

In 2021, an interministerial team led by the Deputy Governor of the Bank of Israel and the Deputy Attorney General was established to advance financial inclusion in Israel. It is currently completing a report on its work. As part of the team's work, it mapped the gaps in financial inclusion. The apparent findings show that the level of financial inclusion in Israel is high, similar to the level in other advanced economies, and that the main gaps are between the Arab society and the rest of the population. In contrast, in *Haredi* society, the gaps were very small in some of the services, and the use of other services was even higher than in the general population.

In view of the gaps in financial inclusion in Israel found by the interministerial team, we chose to focus in this section on the barriers and market failures that contribute to the low use of the financial system among Arabs. The analysis focuses on the use of advanced means of payment as a feature of financial inclusion, barriers to the use of remote banking, and barriers to obtaining housing loans—areas whose special importance in 2021 is discussed in various chapters of this Report.[45]

a. The use of means of payment as a feature of financial inclusion

One of the measures of financial inclusion is the use of means of payment—distinguishing between traditional means of payment such as cash and advanced means of payment—and the extent of utilization of each means. Policy makers have an ambivalent view of the use of cash. While cash is legal tender and can be used in most types of economic transactions, its use as a main means of payment makes it difficult to document transactions, which is exploited by the unreported economy. Many countries are therefore acting to reduce the use of cash and to implement the use of advanced means of payment such as payment cards, while maintaining a certain volume of cash in the economy.[46] In recent years, significant steps have been taken in Israel to increase the use of advanced means of payment and to reduce the use of cash (for instance the Reducing the Use of Cash Law, 5778–2018).

[45] See Chapters 1, 4, and 9 of this Report for more discussion.

[46] There are countries, including Sweden and the UK, which are acting to increase the use of cash at the expense of the use of advanced means of payment, after the use of traditional means of payment declined to low levels.

The increased use of cash is in indication of a low level of financial inclusion, since it comes at the expense of the use of a bank account[47] and advanced means of payment that give the individual safety, convenience, and sometimes even credit to make his payments. Using a bank account also enables the financial system to get to know the customer and his payment behavior. Initial raw data from the Central Bureau of Statistics Household Expenditure Survey for 2021, which include data on the means of payment used in transactions, show that the lion's share of household expenditures in Arab society were in cash, and that the gap relative to the rest of the population is wide. The significant use of cash in Arab society also appears as a trend in an analysis of the means of payment used to pay electricity bills, and it remains when taking into account the socioeconomic cluster of the locality (Figures 8.8a and 8.8b).

There is greater use of cash in Arab society than of other means of payment.

Moreover, according to 2019 data from the Central Credit Register, the rate of credit card ownership in Arab society is significantly lower than in the rest of the population. Half of those aged 18 and over in non-Jewish localities do not hold a credit card, compared with 30 percent in *Haredi* localities and about 16 percent among non-*Haredi* Jews. An examination of the usage patterns of all payment cards (debit and credit) shows that the annual number of transactions per payment card among Arab cardholders is about half of the amount among Jewish cardholders.[48] This discrepancy shows underuse of the financial system among Arab households. This situation also has a negative impact on their well-being in the future, when they want to use the system, because at a time when the use of the Central Credit Data Register is increasing, lenders cannot get to know them and may therefore avoid providing them with credit, or may increase the prices such customers must pay for the services they will need.

b. Barriers to the use of digital channels

The rate of banking transactions carried out remotely is lower in Arab society than among the Jewish population.

Another dimension of financial inclusion is the use of digital channels for consuming services in the financial system. The importance of remote consumption of services increased during the COVID-19 period due to the movement restrictions and the reduced deployment of branches in the banking system. An examination of banking transactions executed remotely[49] in a given population group as a share of all banking transactions in that group shows that in Arab society, the rate is significantly lower than in the rest of the population (Figure 8.9). These gaps are maintained when examining each population group by the socioeconomic cluster of the locality. There are a number of barriers that may explain these gaps—including the lack of supporting infrastructure such as Internet connections, the lack of digital literacy, and the lack of

[47] Interviews with focus groups in the population show that there are people who tend to withdraw their entire income from their bank account at the beginning of the month, and to operate on a cash basis during the month. Their bank account activity is therefore marginal.

[48] Based on data from the credit card companies, 2020. The population is identified by their residential locality.

[49] Remote banking services are provided via websites, applications, call centers, SMS messages, faxes, and so forth.

service in Arabic alongside the low level of Hebrew reading and writing among Arab society.

In order to examine the effect of the Internet access barrier, we looked at the rate of those aged 20 and over who use the Internet in each group, based on data from the Central Bureau of Statistics Social Survey (Table 8.2). The survey shows that there is no significant difference between Arabs and non-*Haredi* Jews in Internet use.[50] In terms of use among Arabs and non-*Haredi* Jews, almost all those who are connected to the Internet use social networks, which attests to similar capabilities in using common applications. It therefore seems that the infrastructure barrier does not significantly restrict their remote consumption of banking services.

When the comparison includes communication channels that are accessible in Arabic, the usage gap between the groups narrows.

Figure 8.8a
Rate of Electricity Bills Paid in Cash

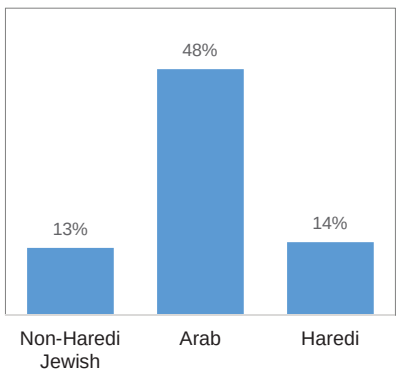
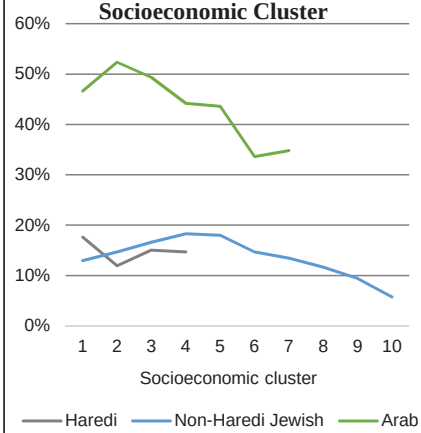


Figure 8.8b
Rate of Electricity Bills Paid in Cash by Population Group and Socioeconomic Cluster



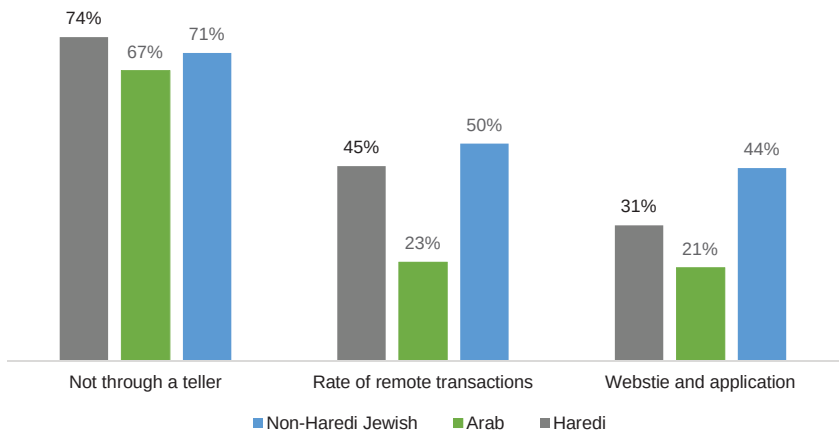
Note: Population groups are identified by the main religion in the locality or the level of religion in the locality. The sample includes 1,141 localities, including 113 non-Jewish localities and 12 *Haredi* localities.
SOURCE: Israel Electric Company data collected as part of the work of the Interministerial Team to Increase Financial Inclusion, 2020.

In order to examine the effect of the lack of digital literacy, we compare usage patterns between Arabs and *Haredi* Jews—two population groups whose digital literacy levels are lower than that of non-*Haredi* Jews. (The literacy level is measured according to the "Problem solving in a computerized environment" section of the 2015 PIAAC tests.) The examination shows that in both groups, use of banking websites and applications (tools that require digital literacy) is lower than among non-*Haredi* Jews. However, if the other remote communication channels for carrying out banking transactions (such as telephone call center or SMS messages), which are accessible

[50] In Arab society, use of the Internet is far more common via cellphone connection than via landline connection. This discrepancy may be due to the low quality of physical infrastructure in Arab localities. For more discussion, see Chapter 1.

mainly in Hebrew and do not require high levels of digital literacy, are included in the examination, the gap between *Haredim* and non-*Haredi* Jews narrows, and the gap between *Haredim* and Arabs widens (Figure 8.9). This shows that even if the gaps in digital literacy have an impact, Arabs face other barriers that influence the rate of use of communications channels that do not require these abilities.

Figure 8.9
Use of the Banking System, by Activity Channel and Population Group, 2020



Note: Remote activities include all banking channels using means of communication, and exclude ATMs. Activities not through a teller include ATMs. All indices were calculated in relation to all activities carried out in that population group. Population groups are identified by the mail address known to the bank.
SOURCE: Based on data from the banking system.

In terms of the language barrier, the gaps between the groups in the use of the banking system narrow significantly when we examine the rate of transactions executed without a teller, particularly through automatic service machines located at branches, which are among the only digital banking services that are almost completely accessible in Arabic. This finding shows that when there are services that are accessible in Arabic, there is significant use of them (Figure 8.9). This change in the size of the discrepancies raises a barrier concerning the combination of a lack of Arab fluency in Hebrew reading and writing and the fact that most remote communication channels are available only in Hebrew. Social Survey data show a significant gap between the groups in the rate of respondents who are very fluent in Hebrew reading, which is maintained in all age groups (Figure 8.10).[51] In order to examine the effect of language, we compared the level of use of digital banking among Arabs who are very fluent in Hebrew and the level among those who are less fluent in Hebrew. The comparison shows that Arabs who are fluent in Hebrew make use of digital banking

[51] For more discussion on the lack of Hebrew fluency among Arab society, see I. Kalisher, and K. Moskalev, and M. Tehawkho (2020). "Return on Knowledge of Hebrew in Arab Society: Barriers to Language Learning and How to Remove Them". Aaron Institute for Economic Policy, Policy Paper 2020.06.

and digital payments more than non-*Haredi* Jews. Only the rate of use of payment applications is lower among Arabs who are fluent in Hebrew. This is perhaps because the transfer or receipt of payments via application requires the use of the application by the counterparty to the transaction, and in Arab society, the use of such applications is miniscule (lack of network effect).[52] (Table 8.2).

Table 8.2: Social Survey data on Internet use and Internet use for financial purposes, 2020

		Non-*Haredi* Jewish	*Haredi*	Arab	Arab	
					Highly fluent in Hebrew reading	Not fluent in Hebrew reading
In the past 3 months	Used the Internet	93%	64%	89%	98%	84%
	Used a cellphone to access the Internet	91%	31%	89%	98%	84%
	Used a computer to access the Internet	79%	63%	36%	66%	22%
Very high level of fluency in Hebrew reading		78%	89%	32%	100%	0%
Did you use the Internet for:	Digital banking services	68%	39%	41%	77%	24%
	Paying bills	49%	23%	29%	59%	14%
	Transferring money through a payment application	50%	10%	4%	10%	1%

Note: The Table relates to all genders. Those who have a "very high level of fluency in Hebrew reading" are those who responded that their level of Hebrew reading is very good.

SOURCE: Data from the 2020 Social Survey.

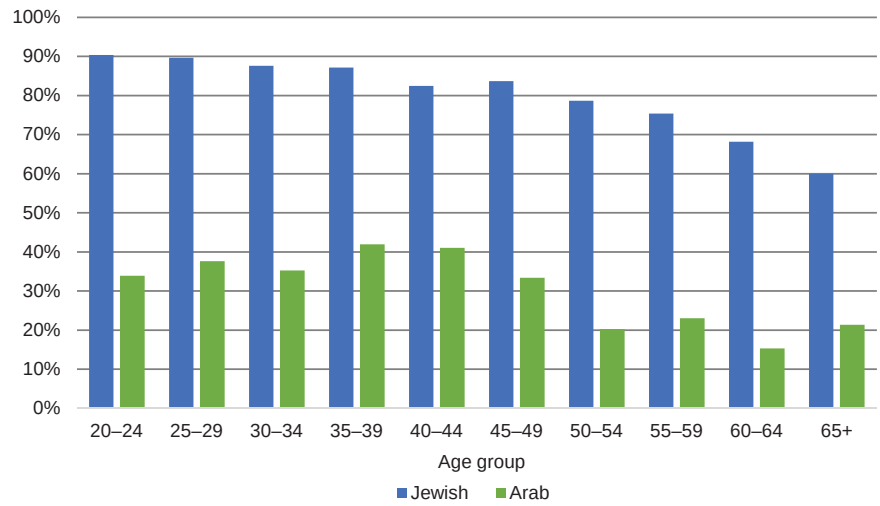
A high level of literacy and digital use of the financial system may be correlated with other characteristics that could influence the consumption of banking services over the Internet, such as gender, age, level of education, level of income, level of religion, and trust in the government. Using a regression, we therefore examined whether these variables can successfully explain the variance in the use of the Internet for digital banking and payments. Table 8.3 shows the results of the estimation. In Columns 1–3, the dependent variable is the use the Internet for digital banking purposes. Column 1 shows that the difference between Arabs and non-*Haredi* Jews is negative and statistically significant. In Column 2 we added controlled variables that should influence the use of Internet banking services, and found that the gap narrows but remains negative and statistically significant. In Column 3, we also added control of the level of Hebrew literacy and the interaction between it and whether the individual is Arab. We did this because in terms of the capabilities required to use these tools, there is a differences between a Jewish resident who does not know how to read a language in which most of his life is conducted and an Arab who does not know how to read a language that is foreign to him. All language and interaction variables were found negative and statistically significant, but the gap between the groups (Arabs and

An examination using a regression shows that the level of Hebrew-reading fluency affects the volume of digital financial service consumption among Arabs.

[52] In a network economy, a product's value to an individual is greater if more individual's consume it. Therefore, the lack of a broad distribution of payment applications in the Arab society reduces the possibility of using this product among all of its users in the society.

non-*Haredi* Jews) became statistically insignificant. Similarly, we estimated the effect of Internet use for payments (Columns 4–6), and obtained similar results. All of these results show that language knowledge affects the volume of digital services that an individual consumer, even after controlling for background variables.

Figure 8.10
Rate of Those Reporting a Very Good Hebrew Reading Level, by Age Group and Population Group, 2020



Note: The figure relates to all genders.
SOURCE: Central Bureau of Statistics Social Survey, 2020.

Table 8.3: Estimates of the factors affecting the discrepancies between Arabs and Jews in the use of the Internet for financial services

	(1)	(2)	(3)	(4)	(5)	(6)
	Use of the Internet for digital banking	Use of the Internet for digital banking	Use of the Internet for digital banking	Use of the Internet for payments	Use of the Internet for payments	Use of the Internet for payments
Dummy variable for "Arab"	-0.262***	-0.167***	0.029	-0.198***	-0.102***	0.062**
	(0.016)	(0.016)	(0.023)	(0.017)	(0.017)	(0.025)
Dummy variable for "*Haredi*"	V	V	V	V	V	V
Background variables (gender, age, education, income, religious level, and trust in government)		V	V		V	V
Dummy for the level of Hebrew, and interaction between the dummy for "Arab" and the level of Hebrew language			V			V
Constant	0.733***	0.437***	0.627***	0.547***	0.127**	0.267***
	(0.009)	(0.05)	(0.05)	(0.009)	(0.054)	(0.055)
Observations	6790	6790	6790	6790	6790	6790
R-squared	0.061	0.265	0.307	0.042	0.201	0.227

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
The Table relates to all genders.

The findings support the hypothesis that a lack of accessible content in Arab creates a barrier for the use of remote banking services among Arab society. This gives rise to the question of why most financial entities[53] have thus far chosen not to make their service channels accessible in Arabic, even though it could be expected to increase their volume of activity in Arab society. One possible explanation is the fact that the segment of the Arab population that is fluent in Hebrew, which is among the strongest segments in Arab society, can consume digital services in Hebrew. The attractiveness of investment in developing systems that would enable the expansion of services to the rest of the Arab population is not high, due to the low level of income and the limited supply of products.

c. Barriers in the field of housing loans

Purchasing a home is the most significant economic transaction for most households in Israel, and has an impact on aspects of their well-being and on the socioeconomic opportunities open to them. Many households use housing loans (mortgages), making such loans a major part of their debt. In a housing loan, the purchased property serves as collateral for the lender, in return for which it lends the money at a lower price (interest rate) than a loan without collateral. The percentage of the adult population that takes out a mortgage in the Arab sector is significantly lower than in the other population groups[54], and this gap is maintained even when taking the locality's socioeconomic cluster into account.[55] Without access to a housing loan, a household wishing to purchase a dwelling is liable to encounter a liquidity crunch or must turn to another, more expensive, source of financing, which harms its well-being.

The rate of mortgage borrowers in Arab society is lower than in Jewish society. A large part of this gap is due to difficulties in guaranteeing the property and to borrower risk.

The gaps between Arabs and Jews in the rate of mortgage borrowers are due to the large volume of unregulated construction in the Arab sector, the undeveloped real estate market, and the borrower risk faced by the banks. Comparing the measures of regulation[56] and risk according to the rates of those aged 18 and over who have enforcement and collections files shows significant discrepancies between the non-Jewish and Jewish localities (Figure 8.11). The real estate market in the Arab sector suffers from a lack of defined property rights, which makes it difficult to use a property as collateral. There is a discrepancy between registration in the land registry and actual ownership of the property, due to difficulties in conducting registration and parcelization arrangements as a result of the large amount of land that is jointly registered, a lack of land registration in the registry, a lack of registration of joint dwellings, and a multiplicity of unregistered transactions and inheritance orders. Due

[53] Banks, insurance companies, pension funds, and so forth.

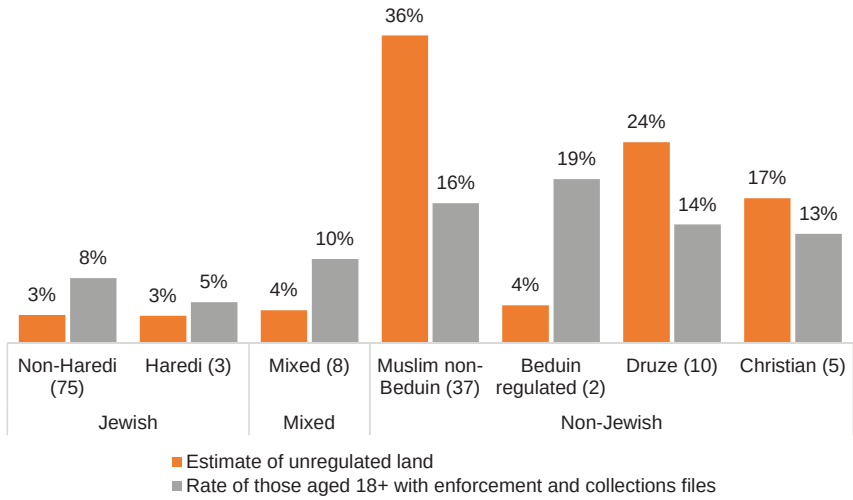
[54] Analysis of the mortgage market for borrowers from the Arab sector in view of the structural failures in the housing field in this sector (Bank of Israel, 2017).

[55] Findings in the draft report of the team to advance financial inclusion, 2022.

[56] The regulation index is calculated according to a GIS layer that included counting the number of buildings in each parcel. When the number of buildings per parcel exceeds 4, the parcel is defined as not having undergone parcelization. In order to calculate the index, the area of the parcels that have not undergone parcelization is divided by the area of the locality's urban fabric.

to the lack of proper registration, transactions within the family, and a shortage of credit, the real estate market in the Arab sector is typified by a lack of tradability. An analysis of data from the Israel Tax Authority's real estate data file shows that between 2018 and 2020, there were only 100 second-hand transactions each year.

Figure 8.11
The Rate of Unregulated Land and the Rate of Those Aged 18+ with Enforcement and Collections Files, Average by Main Religion and Religious Level of the Locality, 2019



Note: Identification of the population groups is by the locality's main religion or religious level. The estimated rate of unregulated land according to the Israel Mapping Center's GIS layer is relative to the urban fabric of the locality. The number of Enforcement and Collections files of private debtors is relative to the number of people aged 18+ in the locality. The numbers in parentheses are the number of localities included in each group.

SOURCE: Based on Israel Mapping Center, Enforcement and Collections Authority, and Central Bureau of Statistics.

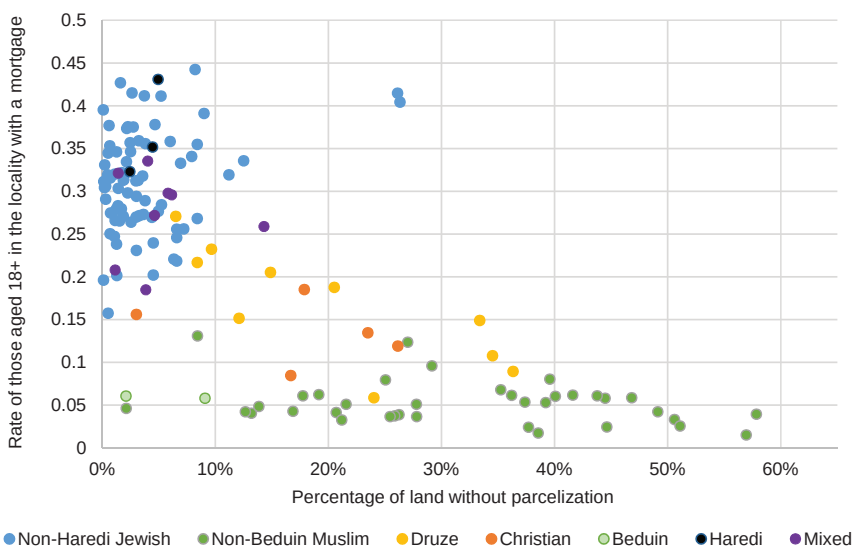
The variance in land parcelization and the difference in borrower quality do not explain all of the variance in mortgage borrowing. There are other factors in the low volume of mortgages in Arab society.

In order to examine the effect of various factors on the volume of mortgage borrowing, we examined the correlation between the land regulation index and the borrower risk index for the rate of mortgage borrowers in the locality. Figure 8.12 presents the correlation in relation to land regulation, and shows that land regulation is negatively correlated with the rate of all mortgage borrowers in the locality (the declining dispersion of points regardless of color), but the correlation in each of the population groups—non-*Haredi* Jews, *Haredim*, Muslims, Bedouin, etc.—is lower (dispersion of points by group color). The risk indicator presents a similar picture (Figure 8.13)—a negative correlation regarding the entire sample, but a high dispersion of the rate of those in debt to the Enforcement and Collections Agency in each population group, alongside a very low correlation with the entire rate of mortgage borrowers in the locality. It therefore seems that the lack of land registration regulations, and borrower risk, do not tell the entire story, and that there are other factors that affect the low rate of mortgage borrowing in Arab society. Those factors

include the discrepancy in financial literacy between Arab society and the rest of the population[57], the lack of access to services, the lack of financial information on borrowers[58], and difficulty in realizing the assets, which would enable entities to provide significant amounts of credit, as well as cultural differences that are reflected in the low amount of trade in real estate in the Arab sector.

Not dealing with the root problems of the real estate market in the Arab sector and the financial limitations in it leads to an increase in the barriers mentioned above, a crisis of trust, and the development of alternatives that harm the individual. This is because of the fact that due to demographic growth, demand for housing exceeds supply, and because of limited access to housing loans and the lack of a developed rental market, Arab households have found other ways to deal with the problem. One of those is the utilization of building rights in family areas. A long-term survey showed that 12 percent of households in the Arab sector live in a dwelling owned by a relative, compared with about 2.5 percent of Jewish households. This solution deepens the problem of a lack of collateral, since the property rights of each of those living in the property are not well-defined, not all building expansions are done legally, and lenders have difficulty pledging a joint property that includes a number of different borrowers.

Figure 8.12
The Correlation between the Rate of Unregulated Land and the Rate of Those Aged 18+ with Mortgages

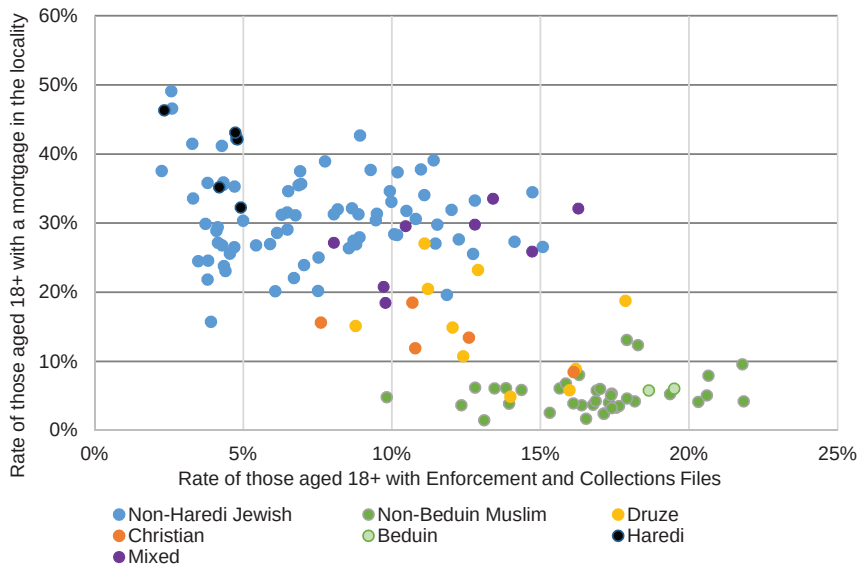


Note: The Figure relates to all genders. The estimated rate of unregulated land is according to the Israel Mapping Center's GIS layer. The number of mortgage borrowers relative to the number of those aged 18+ in the locality.
SOURCE: Based on Israel Mapping Center, Statistical Credit Register, and Central Bureau of Statistics.

[57] Maya Haran-Rozen and Orly Sadeh (2021), "The Disparate Effect of Nudges on Minority Groups", Bank of Israel Research Department, Discussion Paper 2021.21.

[58] Financial information includes details of reported income, payment ethic, and the household's financial behavior.

Figure 8.13
The Correlation between the Rate of Private Debtors with Enforcement and Collections Files and the Rate of Mortgages in the Locality, 2019



Note: The horizontal axis shows the number of Enforcement and Collections Files of private debtors in the locality relative to the number of people aged 18+ in the locality. The vertical axis shows the number of mortgage borrowers in the locality relative to the number of those aged 18+ in the locality.
SOURCE: Based on Enforcement and Collections Agency and the Statistical Credit Register.

Another solution is the use of alternative financing products, particularly consumer loans, whether on an adjusted track[59] or through multiple simple consumer loans. This solution has two main disadvantages. First, there is a correlation between a multiplicity of consumer loans and late repayments, and the capital cost of these products is higher than that of housing loans. These factors increase the risk of borrowers from the Arab sector. Second, the consumer loan financing channel increases the contractor's uncertainty, which leads to a reduction in contractors' activity in Arab localities and harms the development of construction projects in the Arab sector.[60]

d. Conclusion and government actions

There are financial inclusion gaps between Arab society and the rest of the population in Israel. Some of these discrepancies are due to barriers and market failures, which may not be solved without government intervention. The increased use of cash in Arab society is expected to harm households when they want to consume services

[59] Some banks offer loan tracks with amounts ranging between NIS 400,000 and NIS 600,000 for 10 years as an alternative to a mortgage. These loans have a higher cost and a shorter repayment period than mortgages, which is reflected in a higher monthly payment.

[60] The Central Bureau of Statistics Building Tracking Survey estimates that construction by contractors accounts for about 1 percent of all new construction in Arab localities, compared with about 80 percent in Jewish and mixed localities.

from the financial system, due to problems concerning a lack of information and due to anti-money-laundering regulations. The market failure regarding a lack of Hebrew-language fluency has a negative impact on household's abilities to consume services and make transactions digitally, and reduces the benefit they derive from the entry of new digital financial services to the market. Problems regarding the regulation and registration of properties, the high level of borrower risk, and other factors do not enable many Arab households to take housing credit, impose an excess cost burden on them in other financing channels, and may even deepen the property registration problem.

As part of the five-year plan for Arab society and the work of the Interministerial Team for Financial Inclusion, policy measures are being advanced to lower barriers to financial inclusion in Arab society.

The five-year plan for Arab society includes a number of actions that aim to deal with some of these barriers and market failures. The Ministry of Education and the labor branch of the Ministry of Economy and Industry have been instructed to advance programs to strengthen Hebrew-language literacy skills. In order to narrow the gaps in the use of government services resulting from the language barrier, it was decided that the digital array would make language and cultural adaptations or main government services (national identification system, personal areas on government and business websites, and government forms service), and that government ministries would translate at least 50 percent of documents relevant to citizens into Arabic. In the planning and building area, it was decided to complete outline plans in the program's localities, advance unification and parcelization plans, advance urban renewal programs, and advance other actions to promote the registration and planning of residential units in the program's localities, including the allocation of state-owned land within the localities' boundaries. These actions are expected to lower barriers to the integration of the Arab population in the financial system, and thereby contribute to the well-being and quality of services offered to it. In addition, the interministerial team to promote financial inclusion is currently formulating recommendations in a variety of areas: improving financial literacy of the entire population with a focus on Arab society and low-income population groups; encouraging the use of digital payments; language and cultural diversification in access to financial services; and more.