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Report on First Generation Students in Israeli Academia

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This document presents comprehensive data on graduates of Israel's higher education system who fall under the category of "first generation in academia" and provides academic institutions and policymakers with recommendations for supporting such applicants and students. The term "first generation in academia" ("first generation," from here on) applies to students and graduates for whom neither parent has a higher education degree. The term serves policymakers in various countries, in particular the United States, in the development of specific programs to guide and support these students. Increasing the inclusion of first-generation students in higher education is an important policy objective, as education raises individual income levels and promotes growth and prosperity at the national level. Lessening the barriers impeding the integration of excluded populations in general, and first-generation individuals in particular, is also important to promoting social fairness and equality. Although many first-generation students have additional demographic impediments to academic integration such as low socio-economic status, immigrant status, or religious minority status, numerous studies have shown that parental education level is the strongest predictor of higher-education attainment even when controlling for other variables. Thus, it is important to ensure that parental education is employed as a criterion in higher education budgeting and in the creation of support systems.

No national-level programs are currently offered for first-generation students in Israel; nor are such students recognized for budgeting purposes. A 2023 study conducted by the Israel Central Bureau of Statistics found that the odds of individuals in this category enrolling in the higher education system are half of those of individuals whose parents are academically educated. Moreover, the odds of first-generation students to enroll in Israeli universities (as opposed to the country's second-tier academic colleges) are a third of those of children of academically educated parents. Those odds diminish to a tenth for prestigious academic programs such as medicine (CBS, 2023). The same study also showed that for all academic degrees, the percentage of graduates that are first-generation is lower than that of graduates whose parents are academically educated. **Furthermore, the vast majority of first-generation students – 75 percent at the undergraduate level, 80 percent at the Master's level, and 88 percent at the doctoral level – do not belong to other minority categories recognized for budgeting or support-service purposes, such as Arabs, ultra-Orthodox, or immigrants from**



Ethiopia/children of such immigrants. Thus, these students are not currently eligible for any financial or other support from the State of Israel or from the institutions in which they are enrolled.

Access to higher education has grown in recent decades worldwide and in Israel, with greater integration of diverse populations into the system. Indeed, many students are now the first in their nuclear families to enroll in higher education. There are different definitions of “first generation” – some include students raised by non-biological parents in this category, while other definitions exclude students whose parents do not hold undergraduate degrees but who have grandparents or siblings with academic credentials. These differing definitions will affect how the percentage of students in the category is calculated. However, the prevailing definition in both the research literature and governmental regulation is that of students pursuing undergraduate degrees at least, while neither parent holds an undergraduate degree. For the most part, the definition excludes students pursuing non-recognized degrees, vocational certificates, and the like (Ives & Castillo-Montoya, 2020). This is the definition we adopt here. The percentage of first-generation students varies between countries, institutions, study programs, and degrees. In countries such as Poland, Portugal, and Italy, the share of such students who are pursuing undergraduate degrees is 60-80 percent, while in Germany, Denmark and Norway the share is 20-40 percent (Spiegler & Bednarek, 2013). In 2020, first-generation students constituted 45 percent of bachelor degree graduates in Israel across all academic institutions including second-tier colleges, and 33 percent at universities alone (including Ariel University of Samaria in the West Bank, see Figure 2).¹

A considerable body of scholarship has inquired into the barriers and challenges that face candidates for academic study and students who are first-generation. These include lack of access to institutions of higher education, especially to selective institutions and programs; high dropout rates; and lack of support systems within the family, the community, and the institutions. Scholars have also investigated identity-related challenges faced by these students within the academic institution and the home environment (Reay, 2001; Reay et al., 2009). For the most part, first-generation students are older than students whose parents have academic degrees; they grew up in lower-income families, belong to ethnic minorities, and they themselves or their parents are immigrants. Due to these characteristics, their screening-exam scores and high-school grades are generally lower than those of students whose parents have academic degrees. First-generation students are less likely to participate in enrichment programs or in programs that entail travel (such as student exchanges) during the course of their academic studies, and fewer of them pursue advanced degrees. Many first-generation

¹ International comparison for this parameter is inexact, as the percentage of academically educated parents differs from country to country, as do the definitions of parental education level, of what constitutes “student status,” of labor market requirements regarding academic degrees, and so forth.



students live with their parents during their academic studies and work to pay for their expenses and to help their families. They often describe their encounter with academia as a “culture shock” and the academic experience itself as unfamiliar and threatening, leading them to feel “like a fish out of water” (Bahack & Addi-Racah, 2022; Gofen, 2009). In terms of their achievements, however, these students are an elite group among young people of similar backgrounds, despite the gaps between them and students with academically-educated parents. Notably, the integration and success of first-generation students within academia is impacted by the familiar and institutional support systems can access (scholarships, teachers and counselors at schools, mentoring, study assistance, support networks, peer groups, and the like).

In Israel, a number of steps were taken in the 1990s to make higher education more accessible, including the opening of state-budgeted academic colleges, the academization of teaching colleges, opening of non-budgeted colleges, and the creation of alternative admissions tracks in the universities. These measures advanced equality; increased access; and helped many students from Israel’s economic, geographic, and social periphery, including first-generation students, to enroll in academic study. However, first-generation students or prospective students still face many barriers (Dayan & Bar-Shushan Gazit, 2021). Such challenges include low rates of high-school matriculation eligibility, especially at a level considered suitable for academic study; a lack of understanding of admissions tracks, study options, and the differences between academic institutions; and economic difficulties. During their academic studies, these students are also more prone to attrition, while the time it takes them to earn their degrees is longer than that of other students. A 2022 survey of 1,700 doctoral students administered by Sigal Alon found that first-generation students report financial problems that hinder their studies at higher rates than do students whose parents are academically educated, and that the chances of first-generation students to enroll in direct doctoral tracks and to receive competitive scholarships are lesser than those of peers who are not first-generation (Alon, 2022²). This state of affairs can also be seen among faculty members whose parents are not academically educated. A collection of articles edited by Moti Gigi, Sigal Nagar-Ron and Tami Razi (2022) documents the unique experiences of first-generation graduates and lecturers at Israeli colleges and universities. The book discusses the economic, cultural, and emotional barriers encountered by first-generation faculty members in the course of their studies and employment, and raises important issues to be addressed at the institutional and national levels (Gigi et al., 2022).

Here, we seek to illustrate the importance of promoting and assisting first-generation students within Israel’s higher education system. Despite the greater access to higher

² The study has not yet been published, but findings from it appear here: <https://www.haaretz.co.il/news/education/2022-03-15/ty-article/.premium/00000180-5bb3-de8c-a1aa-dbbb32640000>



education relative to past years, 50 percent of Israeli high school graduates are first-generation (Figure 1). The share of first-generation students in higher education differs between institutions, degrees, and study programs (Ayalon & Mcdossi, 2016), but it is lower than that of individuals whose parents have academic degrees, especially in the more selective institutions and programs (Figure 3). Importantly, the vast majority of first-generation students in Israel do not belong to other categories of students receiving budgetary allocations and support services, such as Arabs, ultra-Orthodox, or Ethiopian immigrants and their children; they currently receive no financial or other support (see Figure 8).

Before turning to our policy recommendations and a more detailed look at the data, we seek to highlight a few advantages in applying the parental education criterion. Although as noted above, overlap often exists between first-generation status and other demographic attributes such as low income, immigrant status, or affiliation with ethnic or religious minority groups, multiple studies have shown that parental education level is the most predictive factor for higher-education attainment, even when controlling for other variables. It is therefore important that parental education level be employed as a main criterion for budgeting and support (Gabay-Egozi & Yaish, 2021; Rumberger, 2010; Triventi, 2014). Moreover, additional considerations support reliance on this criterion:

1. Parental education is an easily assessed and unequivocal criterion, and thus one that policymakers can readily use.
2. Parental education is a criterion that pertains to the individual rather than to the group. As such, it enables support that is focused on the individual while averting over- and under-budgeting and the labeling of entire groups. It could, for instance, be misleading to rely on indexes based on the high school attended, as schools in Israel often enroll students from differing economic backgrounds, with parents of differing education levels. Also, students at the same school study in different classes and in different and separate groups based on academic achievements.
3. It is a criterion that is used worldwide; it has been studied in depth, and many countries apply it to define categories for funding and assistance.
4. The parental education criterion is directly related to higher education attainment, making it useful for guiding policy related to higher education.
5. The term “first-generation” is not an identity category, and has a generally positive connotation among administrative staff, faculty members, and the students themselves. The positive connotation is important in avoiding stigmatization of groups in need of assistance, which already suffer from poorer access to resources.
6. The term “first-generation” enables the development of joint programs for students who are first-generation and who belong to various other subgroups,



thereby creating solidarity. These programs can serve similar needs across the subgroups and offer a framework for meaningful encounters. For example, Arab and Jewish first-generation women students would be able to meet and receive support for their common challenges

Policy recommendations:

1. Add a funding category based on parental education to the support programs, guidance and general budgeting of the higher education system. This is a necessary measure, given the high share of young first-generation individuals within the population, as well as the documented impact of parental education on the successful pursuit of academic study and achievements. Moreover, the data we present below demonstrates a low proportion of first-generation students in more selective institutions and points to the fact that most Israeli students in this category do not belong to other budgeted categories.
2. Promote conversation on the topic of first-generation students in institutions of higher education among policymakers, academic faculty, administrative staff, and students. There is a need for awareness of the challenges faced by first-generation students and their particular needs.
3. Advance data-gathering on first-generation students at the various levels of the education system: in higher education institutions, at the pre-academic level, and for undergraduate and graduate degrees. Data gathering should include issues related to applications, admissions, acceptance, attrition, time until study completion and other matters.
4. Develop large-scale support programs and support systems for first-generation students to increase their chances of success in academic study.
5. Expand support systems beyond higher education to reach potential students at both younger and older ages. Information about the importance of education and about the wide range of study disciplines and programs available should be made accessible.
6. Developing alternative admission paths for first-generation applicants to selective institutions and to selective programs in particular.

Below, we present data about first-generation graduates at the various Israeli institutions and for the various degrees (BA, MA, PhD), processed from Central Bureau of Statistics data files. Further research is needed to understand the data in greater depth; to analyze the data by breaking it down into different categories, including gender; and to further investigate the distribution of first-generation students in the various study programs



and disciplines. Despite the preliminary nature of the data hereby presented, the resultant picture provides important information about the percentage of first-generation students in Israel's higher education system.

Data summary

Amongst 55% of Israeli high-school graduates, neither parent has an academic degree. This percentage has remained relatively stable for the past twenty years. The share of first-generation students among university graduates at the Bachelor's and Master's levels is 30 percent, while their share among doctorate holders is 15 percent. These rates have also been stable for the past two decades.

Undergraduate Degree

At the more selective institutions, the share of first-generation graduates is lower than the share of students whose parents have an academic education. In 2000, first-generation students amounted to 30% of all university Bachelor's degree recipients and 50% of all second-tier college graduates.

The percentage of first-generation graduates varies amongst particular universities: at the Hebrew University of Jerusalem, the Technion – Israel Institute of Technology, and Tel Aviv University, their share is 25 percent, while at the University of Haifa, Bar-Ilan University, and Ariel University of Samaria they amount to 40 percent.

The percentage of first-generation graduates varies amongst the colleges as well: At the budgeted colleges, such students comprise over 40 percent of graduates, but at the Jerusalem Academy of Music and Dance and at the Bezalel Academy of Arts and Design (the more selective colleges), they amount to less than 25 percent.

The vast majority (75 percent) of first-generation undergraduate degree holders do not belong to other budgeted categories such as Arabs, ultra-Orthodox or Ethiopian immigrants/children of immigrants.

Master's Degree

In 2020, first-generation graduates comprised 33 percent of those who completed Master's degrees at the universities and 40 percent of those who completed such degrees at colleges.

The percentage varies between the different universities: at the Hebrew University of Jerusalem, the Technion – Israel Institute of Technology, the Weizmann Institute of Science and Tel Aviv University, the share of first-generation graduates amounts to 25



percent, while at the University of Haifa, Bar-Ilan University and Ariel University of Samaria, their share is 40%.

The vast majority (80 percent) of first-generation Master's degree graduates do not belong to other budgeted categories such as Arabs, ultra-Orthodox or Ethiopian immigrants/children of immigrants.

Doctoral Degree

In 2020, first-generation doctoral graduates comprised 20 percent of all university doctoral graduates. The percentage of first-generation graduates varies between the universities: At the Hebrew University of Jerusalem, the Technion – Israel Institute of Technology, and the Weizmann Institute of Science the share is 17 percent, while at Bar-Ilan University, the University of Haifa and Ariel University of Samaria their share is 25 percent.

The absolute majority (88 percent) of first-generation doctoral graduates do not belong to other budgeted categories such as Arabs, ultra-Orthodox, or Ethiopian immigrants/children of immigrants.



Figure 1: Percentage of Israeli High School Graduates by Parental Education Level (2000, 2010 and 2020)

*For a small segment of the population, information about parental education is lacking.

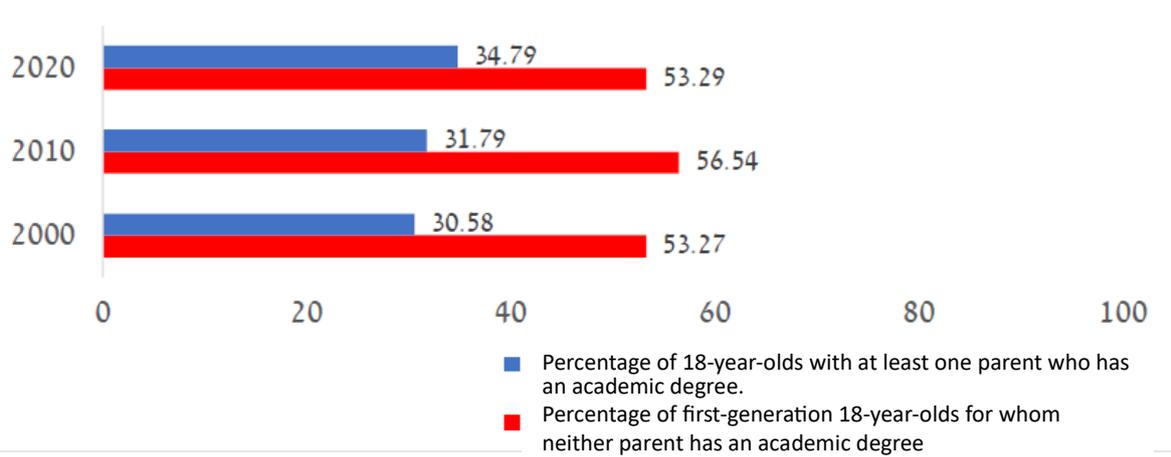




Figure 2: Percentage of Bachelor Degree Graduates Categorized as First-Generation (2020)

*The Open University offers admission tracks that do not require a matriculation certificate;

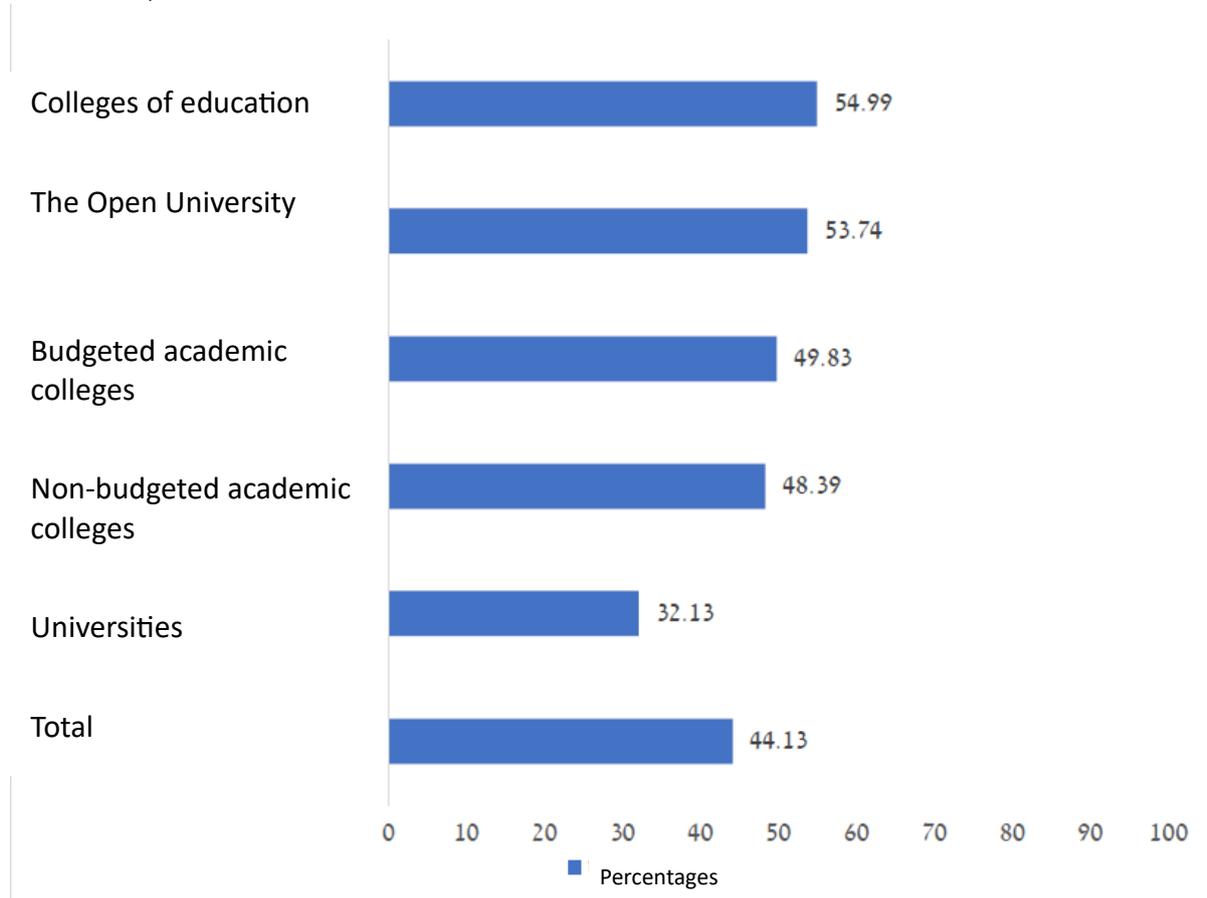




Figure 3: Percentage of Bachelor Degree University Graduates Categorized as First-Generation, by Institution (2020)

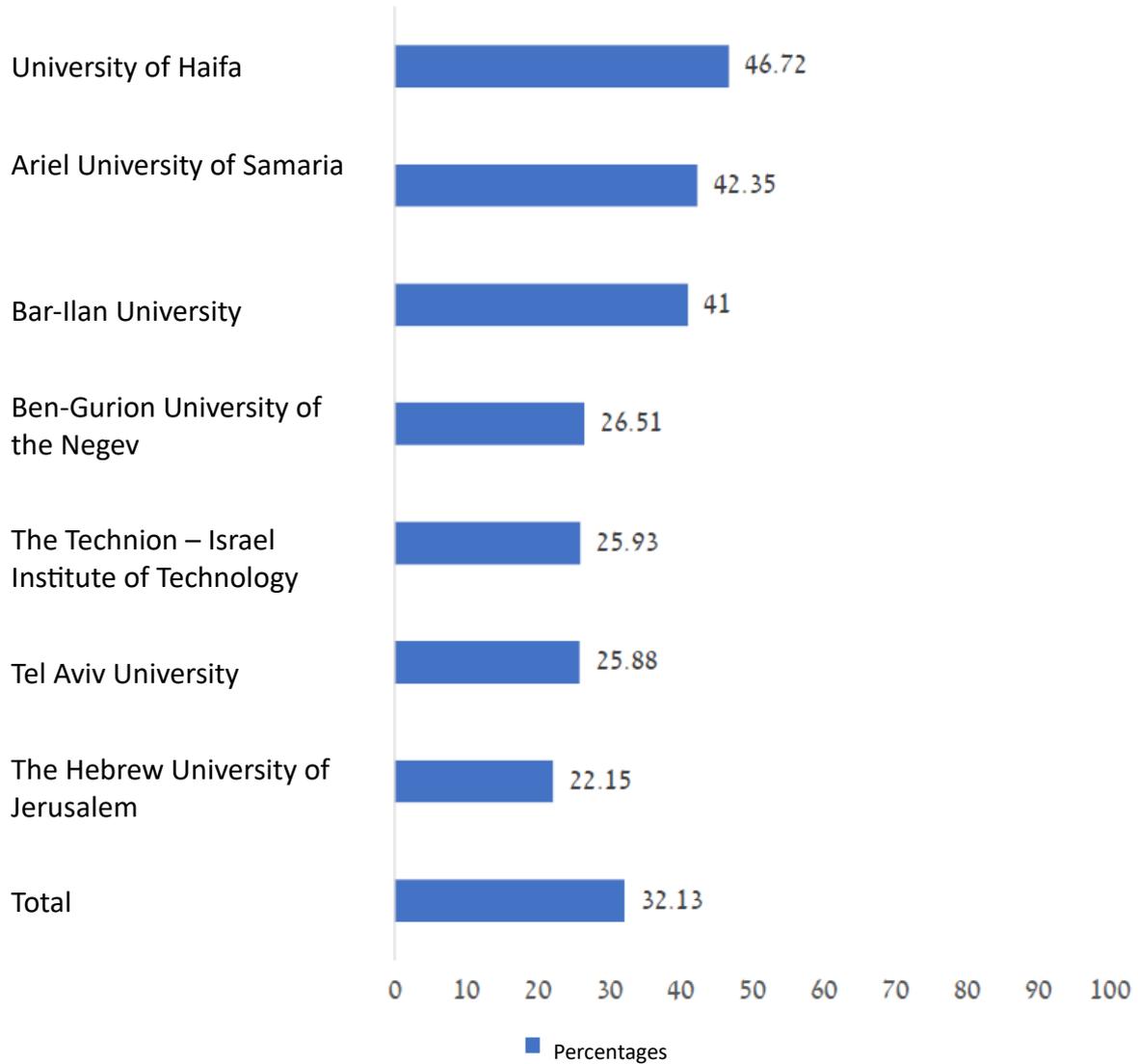




Figure 4: Percentage of Bachelor Degree Graduates of Budgeted Academic Colleges Categorized as First-Generation, by Institution (2020)

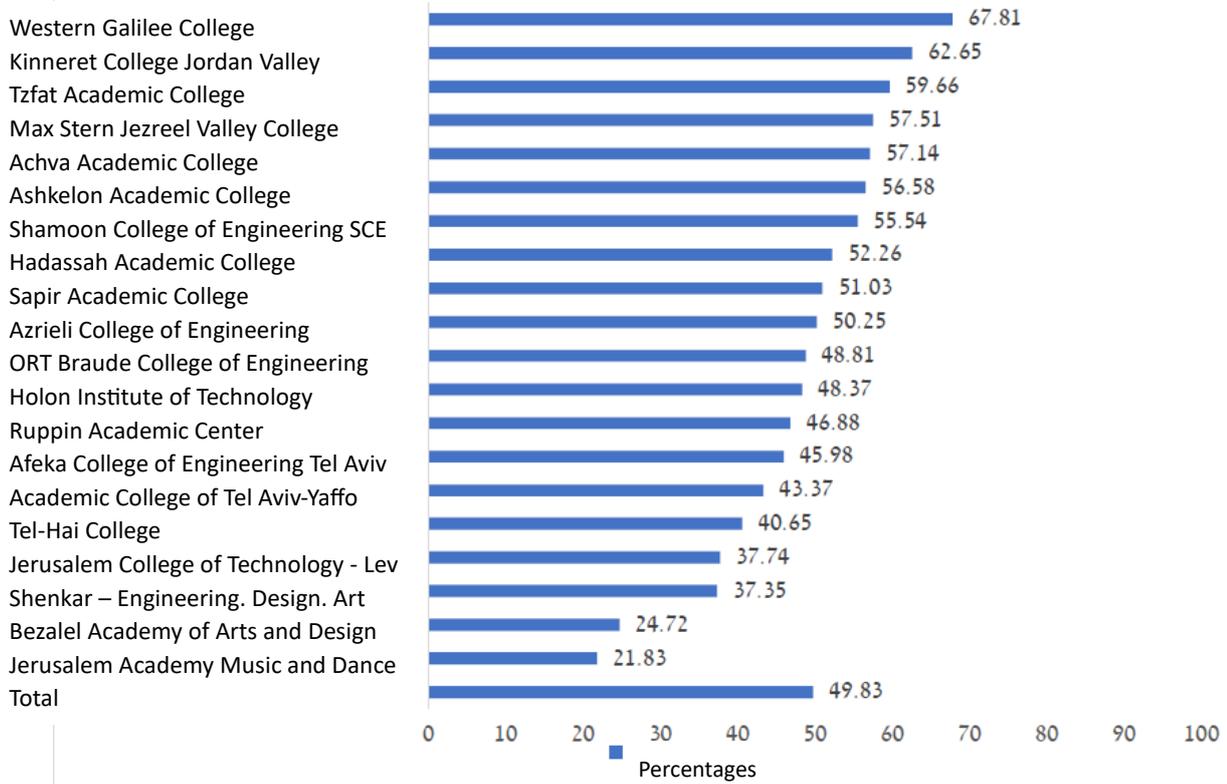




Figure 5: Percentage of Master's Degree Graduates Categorized as First-Generation, by Type of Institution (2020)

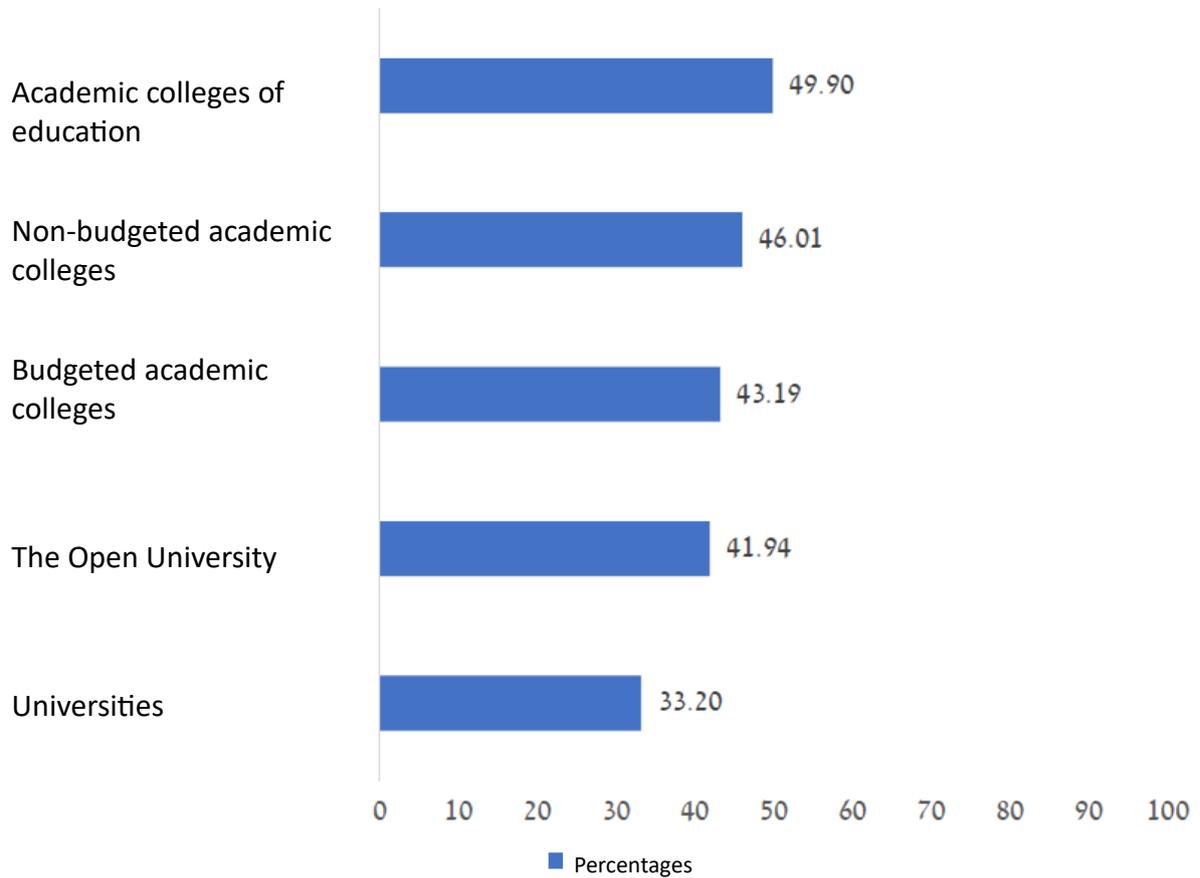




Figure 6: Percentage of Master's Degree Graduates of Universities Categorized as First-Generation, by Institution (2020)

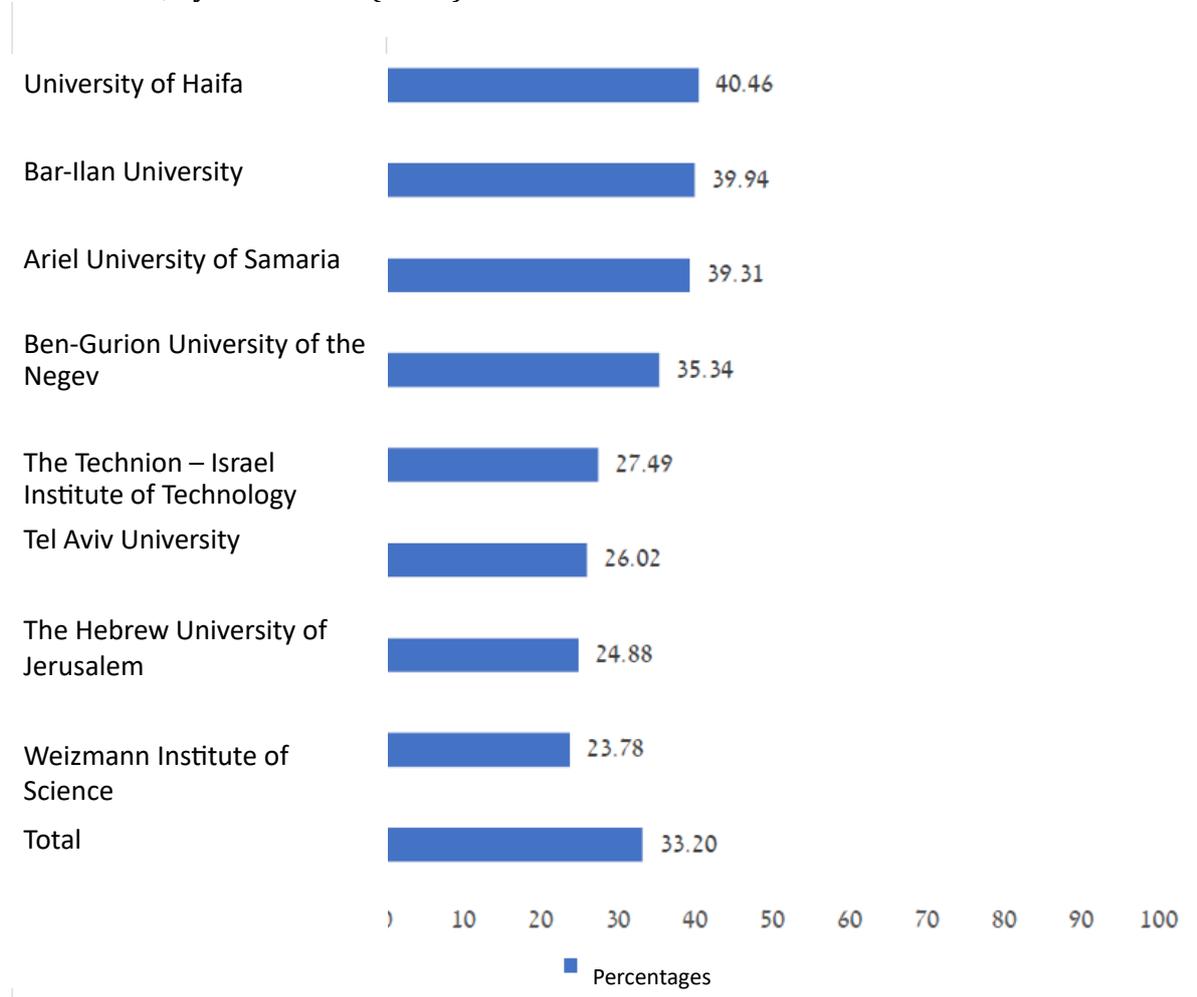




Figure 7: Percentage of Doctoral Degree Graduates of Universities Categorized as First-Generation, by Institution (2020)

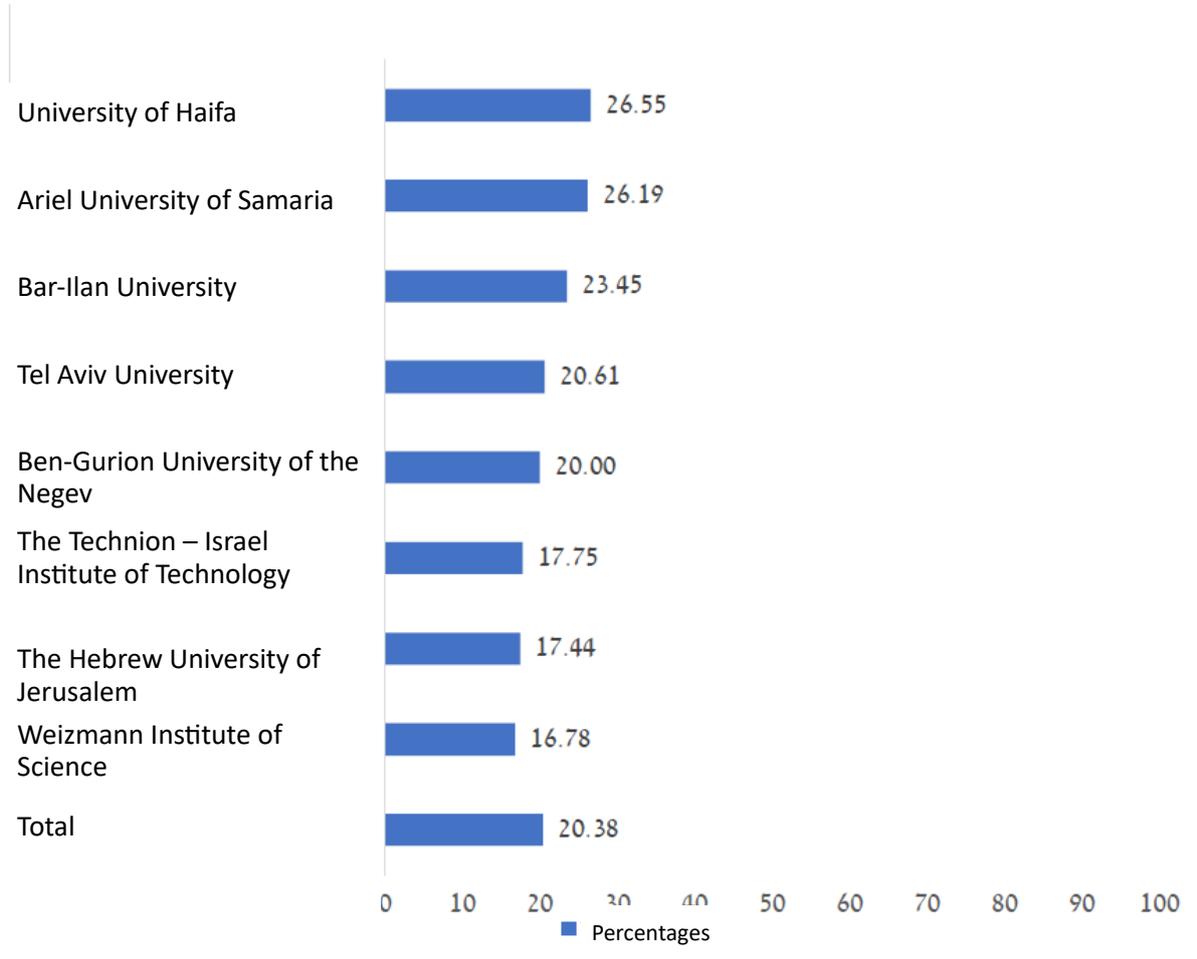
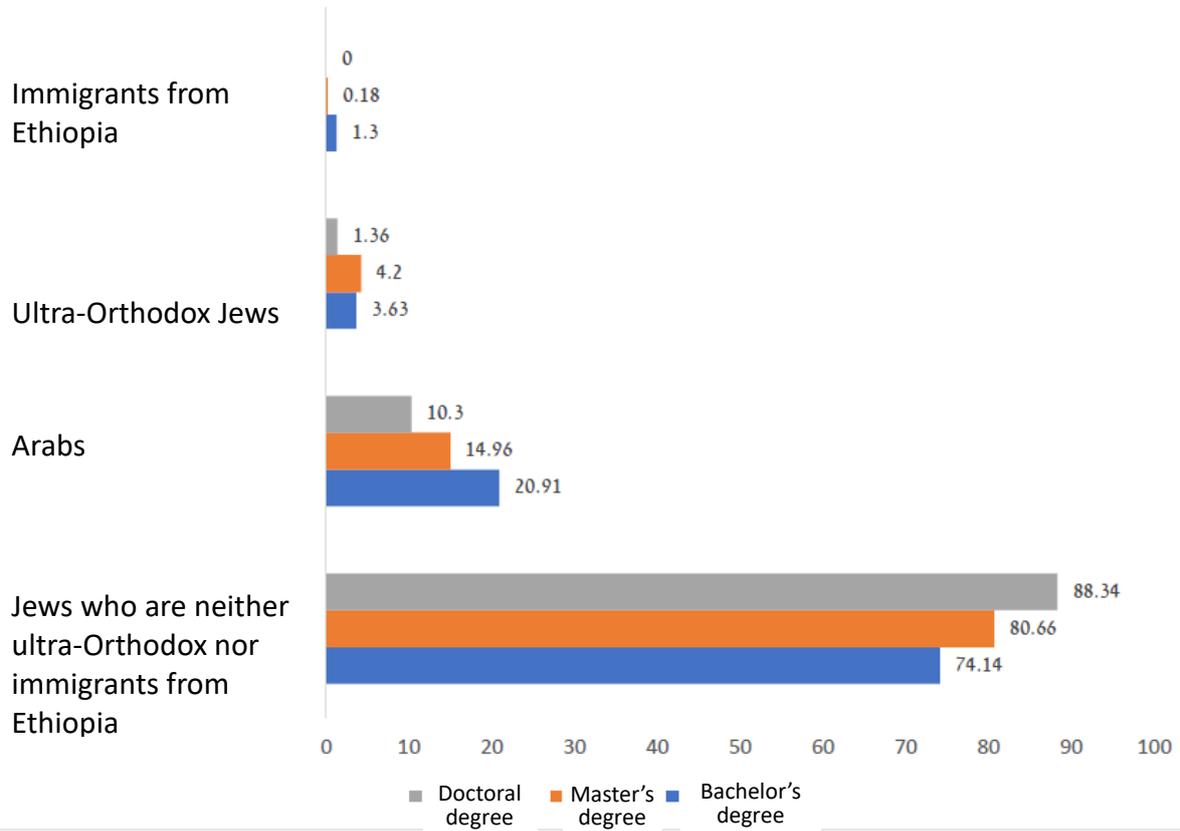




Figure 8: Percentage of Graduates of Universities Categorized as First-Generation, by Sector and Degree (2020)





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