

Update on the State of Israel's Universities and its Researchers

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Abstract

After creating some of the world's leading research universities during its first two and a half decades of existence, Israel dramatically changed course. Over the next four decades, the country's universities steadily receded from the Israel's national priorities. The number of students per professor more than doubled, while the universities increasingly outsourced the teaching to non-research, external lecturers.

Israeli's often refer to “lost decades.” Conventional wisdom has it that the high- to hyper-inflation years between the Yom Kippur War in 1973 and the implementation of the Stabilization Plan in 1985 were a lost decade for Israeli growth. As can be seen in Figure 5 in Ben-David (2012), that lost decade stretched into nearly four decades of fairly steady – and relatively slow – growth in GDP per capita. There have been no fundamental changes in the country's long-run trajectory from 1973 to this day.

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Such is the case with regard to higher education in Israel. Many refer to the first decade of this millennium as a “lost decade” for the country’s universities. However, as shown in Ben-David (2008a) and updated in this chapter, the long-run policies towards Israel’s universities have actually been quite steady since the mid-1970s. The massive shift in Israel’s national priorities – and their ensuing implications for the country’s research universities – could not be starker than the numbers depicted in Figure 1.

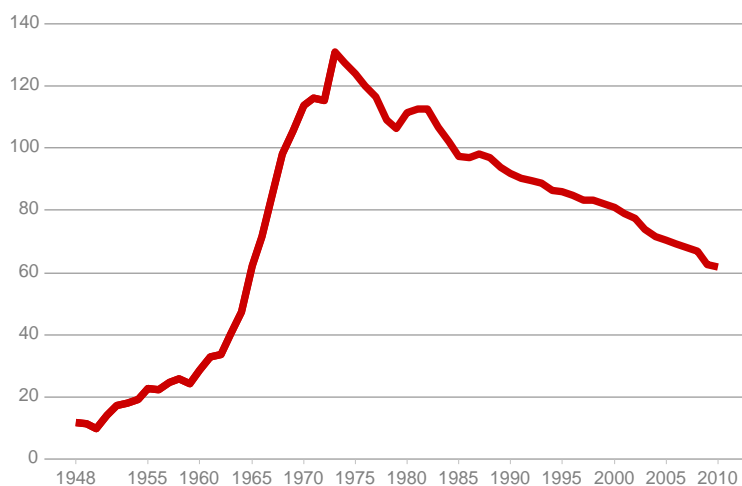
1. Changing National Priorities

During the quarter century between achieving independence in 1948 and the Yom Kippur War in 1973, Israel was inundated with Jewish refugees and immigrants from European and Arab countries who arrived with no more than the clothes on their backs. The period included food rationing in the 1950s and repeated all-out wars. The economy was in its infant stages, with a considerable distance between it and developed country status. Yet despite the massive external pressures and internal budgetary limitations, Israel had seven major research universities by the end of this period. The number of senior faculty members per capita shot up and reached levels similar to those in the United States. Since then, the number of senior faculty per capita in the U.S. has risen. As Figure 1 shows vividly, though, that number has been steadily declining in Israel not just during the purported “lost decade,” but for a period spanning nearly four decades.

Figure 1

Senior research faculty in universities*

senior research faculty per 100,000 people, 1948-2010



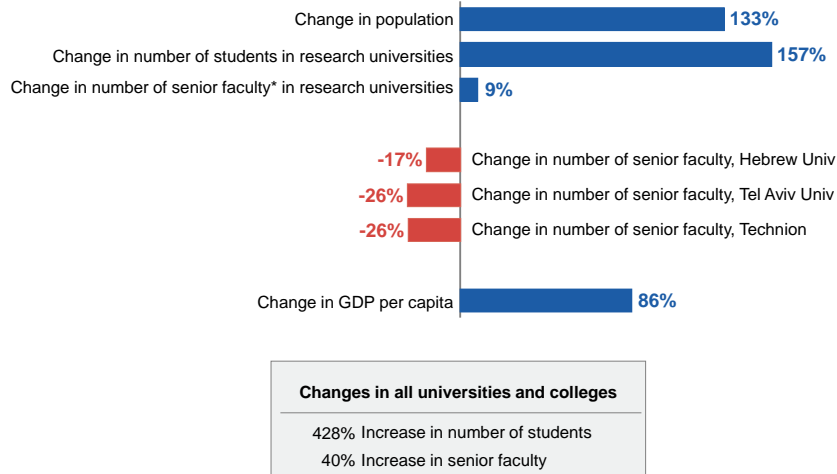
* Senior research faculty includes full professors, associate professors, senior lecturers, and lecturers

Source: Dan Ben-David (2008a updated)

Data: Central Bureau of Statistics, Council for Higher Education Planning and Budgeting Committee

In 1973, there were 131 senior faculty members per 100,000 population. By the 2010-2011 academic year, this number had fallen to 62 senior faculty members, a drop of 53 percent. During these years, Israel's population increased by 133 percent (Figure 2) while the student population in its research universities expanded by 157 percent as an increasing share of the population discovered the importance of attaining a higher education. During these 37 years, the number of senior faculty in the research universities rose by just 9 percent.

Figure 2
Changes from 1973 to 2010



* Senior research faculty includes full professors, associate professors, senior lecturers, and lecturers

Source: Dan Ben-David (2008a updated)

Data: Central Bureau of Statistics, Council for Higher Education Planning and Budgeting Committee

In fact, the size of the academic faculty in Israel’s two flagship universities has actually declined over the past three and a half decades. There were 17 percent fewer faculty positions in 2010 at the Hebrew University than there were in 1973 – and 26 percent fewer positions at Tel Aviv University. The high tech revolution that has enabled Israel’s economy to keep its nose above water became possible as a result of investments made in the country’s research universities decades before. Israel’s leading university in this sphere – and one of the world’s leaders – is the Technion, which recently reached an agreement with Cornell University to open a campus in New York City. The Technion has lost

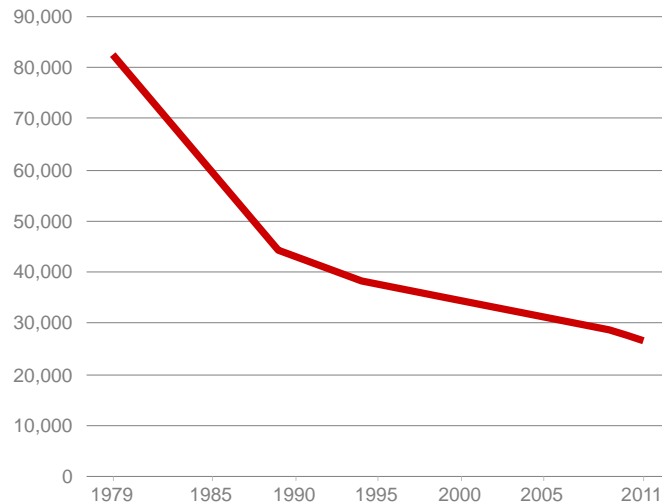
over a quarter (26 percent) of the faculty positions that it had nearly four decades ago.

While the research universities were moved to a considerably lower rung in the nation's priorities, there was a huge boom in the creation of non-research colleges during the 1990s, in an attempt to make higher education more accessible to a greater share of the population. When these colleges are included in the analysis, it turns out that the number of students in Israel's entire higher education system rose by 428 percent – while the overall change in senior academic faculty in all of the colleges and universities rose by just 40 percent.

2. Budgets, Students, and Academic Staff

This discrepancy between the large population changes and the huge increases in the demand for higher education on the one hand, and the relatively meager increases in academic staff on the other hand, was not due to a lack of national resources. Israel's standard of living – as measured by its GDP per capita – rose by 86 percent in real terms (i.e., net of inflation), so Israelis today are considerably better off than they were nearly four decades ago. Public expenditures on higher education per student, on the other hand, were reduced by over two-thirds (Figure 3), from NIS 82,400 in 1979 to NIS 26,500 in 2011 (in 2010 prices, i.e., net of inflation). Part of this is undoubtedly due to the creation of the considerably cheaper non-research colleges, which reduce the average cost per student. But that is not the entire story.

Figure 3
**Public expenditure per student in higher education,
 1979-2011**
 current budget, in 2010 shekels*



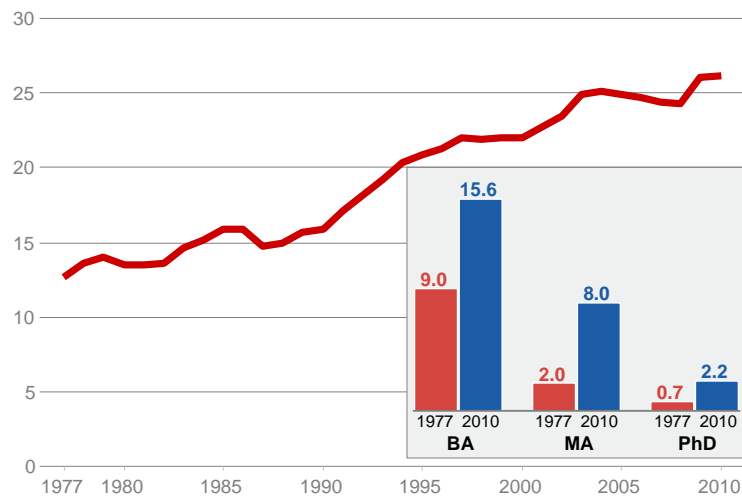
* Deflated by the price index for public civilian consumption

Source: Dan Ben-David, Taub Center and Tel Aviv University

Data: Central Bureau of Statistics, Ministry of Finance

It is Israel's cutting-edge research universities that keep the country at the frontiers of human knowledge. Their importance is not only in pushing the envelope, but also in their ability to convey this knowledge to future generations. That ability has steadily diminished since the 1970s. As indicated in Figure 4, the number of students per senior faculty member more than doubled between 1977 and 2010, from 12.6 students per professor to 26.1.

Figure 4
Students per senior faculty in universities, 1977-2010

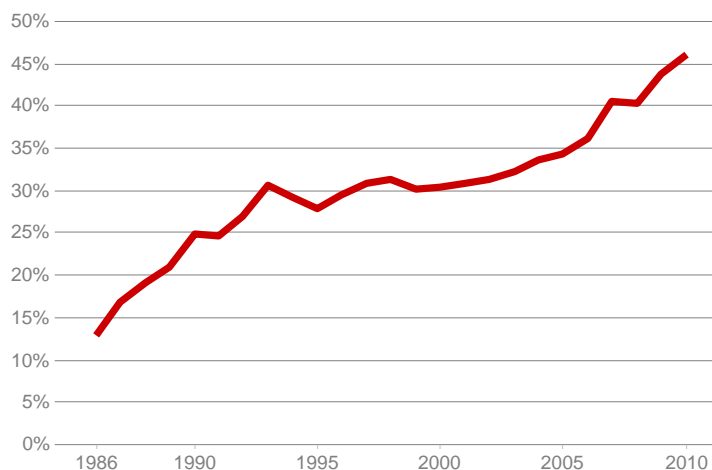


Source: Dan Ben-David, Taub Center and Tel Aviv University
Data: Council for Higher Education Planning and Budgeting Committee

The situation is considerably worse than reflected in these numbers when it comes to the issue of relaying state-of-the-art findings to the next generation of researchers – who are today's graduate students. The number of PhD students to professors rose from less than one student per faculty member to over two students per professor while the number of MA students to professors rose four-fold, from 2 to 8.

To fill the teaching void, the research universities essentially outsourced. They brought in external lecturers in rapidly increasing numbers to replace the tenured and tenure-track research faculty (Figure 5). In 1986, the external teachers represented 13 percent of the senior research faculty. By 2010, this ratio had risen to 46 percent.

Figure 5
**Ratio of external lecturers to senior faculty
in the universities, 1986-2010**



Source: Dan Ben-David, Taub Center and Tel Aviv University

Data: Council for Higher Education Planning and Budgeting Committee

This low-cost solution to the public's declining interest in funding research universities has had two important negative ramifications. The first is the declining quality of instruction that students are receiving from individuals not actively engaged in cutting-edge research. The second is that many of these individuals may have intended to proceed along the research route, but the increasing lack of tenure and tenure-track positions – relative to available graduates – in Israel's research universities has caused many to either drop out of the research path, or to find research positions abroad.

3. Conclusion

In recent years, several windows of opportunity have opened from different directions. The deep recession in the United States has led to a decline in employment possibilities and compensation alternatives there. In addition, there has been an awakening within Israel as to the extent of the dangers faced by the country's research universities. This has resulted in the evolution of a program designed to create "excellence centers" to attract top Israeli researchers.

The government has promised to substantially increase its funding of higher education through the creation of these programs. Key features underlying these centers include heightened degrees of freedom that they receive with regard to the levels of compensation and reduced teaching requirements that they can offer. If such features are considered essential for competing with top American universities, then there is a question why they are limited to the new excellence centers and are not part of a comprehensive reform of Israel's entire university system.

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