FELLOWS PROGRAM | KORET MILKEN INSTITUTE

JULY 2008
NO. 26

EXECUTIVE SUMMARY

HUMAN CAPITAL CONTRACTS: AN INNOVATIVE INSTRUMENT FOR FINANCING HIGHER EDUCATION

Abed Assli

Koret-Milken Institute Fellow

KORET FOUNDATION | MILKEN INSTITUTE

About the Koret-Milken Institute Fellows Program

The Koret-Milken Institute Fellows Program accelerates Israel's economic growth through innovative, market-based solutions for long-term economic, social, and environmental issues. The program focuses on connecting government, philanthropic, and business resources that are vital to national growth and development.

Directed by the Milken Institute Israel Center, the Koret-Milken Institute Fellows Program awards annual fellowships to outstanding graduates of Israeli and international institutes of higher education. Fellows serve yearlong internships at the center of the nation's decision-making—the Knesset, government ministries, and other Israeli agencies—and aid policymakers by researching and developing solutions for various economic and social challenges.

In addition, fellows craft their own policy studies aimed at identifying barriers to economic and employment growth in Israel. The fellows' studies, carried out under the guidance of an experienced academic and professional staff, support legislators and regulators who shape the economic reality in Israel. The program offers the ultimate educational exercise, combining real-life work experience with applied research five days a week.

Throughout the year, fellows receive intensive training in economic policy, government processes, and research methods. They acquire tools for writing memorandums, presentations, and policy papers, and they develop management, marketing, and communication skills. The fellows participate in a weekly workshop, where they meet senior economic and government professionals, business leaders, and top academics from Israel and abroad. They also participate in an accredited MBA course that awards three graduate-level academic credits that are transferable to other universities in Israel. The course, which focuses on financial and economic innovations, is taught at the Hebrew University of Jerusalem's School of Business Administration by Professor Glenn Yago, Director of the Milken Institute Israel Center and Director of Capital Studies at the Milken Institute in California.

Fellows Program alumni can be found in senior positions in the public and private sectors. Some serve as advisers to government ministries while others work at private-sector companies or go on to advanced studies at leading universities in Israel, the United States, and Great Britain. Within the program's framework, more than 80 research papers have been published, catalyzing reforms, reducing barriers, bringing about economic growth, and improving the quality of life for Israeli citizens.

The Koret-Milken Institute Fellows Program is nonpolitical and nonpartisan. It is funded by the Koret Foundation, the Milken Institute, and other leading philanthropic organizations and individuals in the United States and Israel.

More about the program: www.kmifellows.org
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Human Capital Contracts: An Innovative Instrument for the Financing of Higher Education

By Abed Assli

Background

Lacking abundant natural resources, Israel relies heavily on human capital to drive its economic success and high-tech achievement. The number of students in tertiary education is growing annually. However, despite governmental subsidies, many students find it difficult to afford their education, while the institutions of higher education also struggle to finance their activity. Tuition in private colleges is much higher than that of subsidized institutions, forcing a growing number of students to finance their studies at much higher cost.

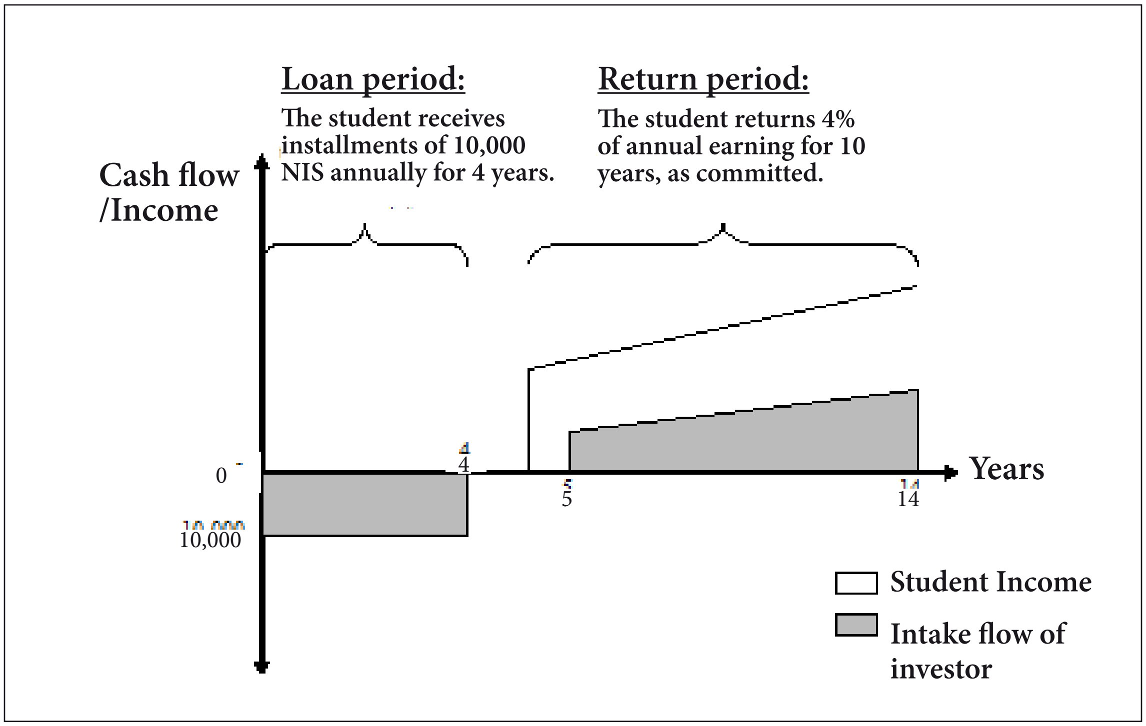
The Problem

Tuition in Israeli institutions of higher education is standardized, according to the desired degree, and is subsidized by the government. This presents a threefold problem. First, tuition fees in subsidized institutions do not reflect the actual cost of providing educational services. This, in turn, imposes a burden on the taxpayer, while subsidized institutions sink lower in debt. Secondly, potential earnings have no influence over the rate of tuition fees. The tuition of a student undertaking first degree computer studies is identical to that of a student undertaking a first degree in philosophy, despite the difference in their potential earnings. Thirdly, a vicious cycle is created in which students have no outlet that would allow them to pay full tuition fees. Socioeconomic differences also play no role in the rate of tuition fees: rich and poor students are equally subsidized in their study programs. No resolution is offered by the Israeli private sector, which is almost uninvolved in financing higher education.

A Potential Solution

This paper examines the financial investment required in order to acquire higher education and proposes a solution for its financing, known as *Human Capital Contracts* (HCC). A human capital contract enables students to receive the money necessary to finance their education in return for a commitment to return a predetermined percentage of their future, post-graduation earnings, during a predetermined period. Such a scheme is welcome for tertiary education students in both subsidized institutions as well as the nine unsubsidized, private institutions currently operating in Israel. For instance, a student requiring 10,000 NIS annually during his/her four years of study will pay back 4% of his/her future earnings for a period of ten years, beginning one year after graduation. The cash flow resulting from such a scenario is presented in the following diagram.

Students' cash flow under HCC



Martin Weldi, "Financing Higher Education Cost through Human Capital Contracts - An Empirical Analysis by Subject and Degree for Germany" (Goethe University, Frankfurt , April 2007), p. 31

Human capital contracts were introduced in the context of higher education in 2001 by the MyRichUncle company. Compared with traditional financing instruments, human capital contracts are advantageous to both students and investors. They relieve students of uncertainty concerning their ability to make regular installments and pay off their loans before having secured a proper income. In human capital contracts, payments depend on future income and are a fixed portion of it. Thus, students are protected in cases of income that is lower than expected or during terms of unemployment. The rate and period of return depend on expected earnings, which are determined by the field of study, the school, the likelihood of securing employment and other variables.

From the investor's point of view, the correlation between the rate of return and the expected earnings minimizes the risk of evasive borrowers and of lost return periods resulting from periodic lack of income. If a graduate loses his job after, say, three years, but owes two more years of payments, payments will be put on hold for the period during which there is no income. Payments will resume once a new job is secured. For the HCC recipient, this is an incentive to avoid dodging payments.

Human capital contracts would also assist in improving the services offered by higher education institutions by contributing to their competitiveness. Potential investors will estimate the student's future earnings as a function of various factors, including the reputation of the school or program. The more students use human capital contracts, the more information would be gathered by investors. Accuracy of the models for operation could thus gradually be increased.

In terms of the national economy, use of human capital contracts mandates that higher education institutions charge full tuition fees, reflecting real costs, without governmental financing. This would alleviate the current burden imposed on taxpayers while allowing institutions to charge full compensation for the costs of their services. However, such a state of affairs could only be instigated if a handy solution, use of human capital contracts, becomes available. In order to allow for this, legislation must allow for the protection of investors by supplying the means to monitor graduates' earnings during the life of the contract, so as to minimize the risk to investors.

Human Venture Capital

No collateral can be subordinated under a human capital contract in case of a loan default, so any direct contract between the investor and a student is unreasonably risky for the former. With a single-product portfolio, risk is not dispersed among assets, further jeopardizing the investor. For the students, a direct contract would require them to wave anonymity. A human venture capital fund would resolve such difficulties. The fund would invest in a large number of students enrolled in various disciplines, bound to it through a variety of contracts, thus offering investors risk-reducing diversity. Such funds may be initiated by philanthropic organizations, perhaps in co-operation with the government. Such an organization would manage the funds, whereas the government would provide the legal framework and assist in collecting the debt.

At first, the revenue could be returned to the fund for re-investment, increasing fund capital and enabling it to extend its operations. A growing database of operations would ease the distribution of investment and allow for better yields. This, in turn, would attract both private and institutional investors and contribute to the financial market in Israel in general. The growing number of investors would allow the fund to issue bonds or build other financial instruments, steps that would also attract small investors.

In Chile, such bonds were offered to the private sector but students objected, as they were afraid that the contracts would be equal to servitude. The suggested setup involving a philanthropic organization as chief operator of the funds would assist in removing obstacles similar to those encountered by the Chilean government.

A model for the evaluation and cost of human capital contracts has already been proposed (Palacios, 2004). Based on the Black & Scholes equation and the Capital Asset Pricing Model (CAPM), this model can assist decision makers as well as philanthropic organizations to create a human capital contract program in Israel.

Recommendations

Based on the findings of this study, several recommendations can be made to policy makers in charge of higher education. First, the extent of governmental intervention in the tertiary education market should be reduced in order to allow fees to manifest the true economic value and costs of higher education. In tandem, the human capital contract system should be introduced to the market. It is advisable that the existing aid fund change its practice and distribute its funds in the form of human capital contracts as well. Such a transition may be achieved through an HCC fund established by a philanthropic organization with the co-operation of the government, which would operate within the framework of the current aid fund until it reaches economic viability.

Employment of human capital contracts will have to be accompanied by an adequate legal framework to protect both investors and students. Such a framework should cover all eventualities, such as bankruptcy, immigration, etc., as well as means of collection - possibly through the income tax or national insurance agencies, by means of a special graduate tax, etc. The tax system may also be used to encourage the use of human capital contracts through tax benefits provided to both students and investors. With the increased use of human capital contracts and the decrease in government funding of tuition, taxes of students in such programs may be alleviated to a certain extent.

Further Reading

The Koret-Milken Institute Fellows Research Program aims to stimulate Israeli economic expansion through increased involvement of the private sector and new financial solutions for old problems.

The research study by Abed Assli commences with a description of the Israeli higher education sector. The first part of the paper monitors the development of tuition and financial aid programs available to students in Israel, while explaining the need for change. Its second part examines international trends in tuition fees and the ways in which they are calculated. The third part of the paper presents the human capital contract program and other applicable ideas suitable to the Israeli economy, including the idea of human venture capital and conditions required for a student aid program, along with a model for evaluating and pricing human capital contracts. The paper concludes with a short summary and a list of recommendations for policy makers. The full research study can be found in Hebrew on the program website: www.kmifellows.org.

Public Debate:

Freedom of School Choice

Would parental choice of schools increase social stratification or encourage excellence?

Those in favor of increasing the freedom of choice claim it to be a fundamental right in any democratic society, expected to increase parental satisfaction from the educational system as well as their involvement in schools. Freedom of choice is expected to encourage inter-school competition, bringing about further efficiency, greater accountability, and extensive diversity aimed at catering to specific demands of the public. Superior schools would expand, while those of lesser quality would be forced to improve or close. As a result, the quality of education is expected to improve and new innovations can also be expected. By removing the geographic bond between students and their schools, parents would also be able to increase their children's the chances for social mobility.

Opposing parties claim that allowing parents the power of choice would impair student heterogeneity, resulting in a homogenous ethnic or social make-up of schools that harms social cohesion. It is feared that information concerning choices would be restricted to stronger social groups, while weaker groups would not be privy to the information. It is also claimed that extensive freedom would induce administrative inefficiency within the education system, which, in turn, would hamper the authorities' ability to regulate supply and demand. Essentially, opposing parties profess that freedom exercised in economic markets should not be applied to the educational system: freedom of choice may improve some schools but requires further examination in Israel concerning how it could bring positive change throughout the system.

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תוכנית עמיתי קורת – מכון מילקן
בית מילקן, רחוב תל חי 13
ירושלים, 97102

info@kmifellows.org
www.kmifellows.org