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VALUE OF BRANDED EDUCATION

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Abstract

The objective of the paper is to examine value creation in private higher education. The results of the research are to be applied in reasonable structuring of study programs and courses and for creating profitable business and marketing strategies for private universities. From a student perspective, higher education is a project that must generate a positive net present value. In the pre-investment and investment phases, students see cash outflows and opportunity costs. In the third phase, the project generates benefits that take the form of cash inflows from employment or doing business in the relevant field. The value of the study program from the perspective of a private university is produced by the present value of the future cash flows generated by the investment in the study program and its administration and operation. The main cash inflows are created by tuition revenues and the main cash outflows are brand-related investments and personnel costs. The market equilibrium occurs when the value of a degree program from the perspective of a private university corresponds to the total aggregate net present value of a degree program at a private university from a student perspective.

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Introduction

The value of education can be measured in different ways. It is also possible to investigate the different impacts that education brings - whether it is human capital formation and the impact on economic growth at the national economy level or the microeconomic perspective, where the focus is the subjective impact of investment in education at the individual level. In any case, it is necessary to incur expenditures in order to obtain education. These costs take the form of directly reimbursed expenses (tuition and study-related expenses) as well as opportunity costs (lost wages during study, interest on student loans).

In this paper, we will examine value creation in private higher education. We will start from the functional linkage of the value of intangible assets of a private university (the quality and attractiveness of the offered study programs and courses, brand and brand related assets, the faculty team) and of the value of education for the students (higher earnings and career opportunities acquired as a result of investment in a university degree).

To create positive value for the institution and its products (long-term intangible assets), the university must bring benefits to students in the form of relatively higher and more stable future earnings over the course of their professional careers.

Literature review

The financial (monetary) value of higher education has been the subject of a number of empirical studies since the late 1950s (see Leslie & Brinkman, 1988; Webb & Jagun, 1997; Wilkinson & Wilkinson, 2020; Woodall et al., 2014), when this topic was developed along with the formation of the human capital theory (Becker, 1964; Mincer, 1958; Psacharopoulos & Patrinos, 2004 and 2008; Schultz, 1961). Kantrowitz (2007) evaluates the empirical effects of the value of an achieved level of education on an aggregate basis for the USA, using the 30-year Treasury Bond revenue as the discount rate for calculating the present value of future financial effects.

It is clear from the research that the value of education has so far been viewed by the prism of net present value (see Krabec & Čižinská, 2016). Methodologically, it is an analysis of aggregated data, usually even at the level of the entire US economy. Therefore, the aim of this paper is to broaden this research, to individualize the creation of the value of education and to link it with the formation of the study program or of the university as a business entity.

Hypothesis formulation and expected outcomes

Expanding on prior studies (see Psacharopoulos & Patrinos, 2018), the research requires an individualized understanding of the issue and an analysis of the economic return on investment in education both from the perspective of students and their expected economic benefits on the one hand and from the perspective of a private university on the other.

The basic prerequisite for our analysis, which will be the object of empirical testing in the following research, is the assertion that the value of a university's degree programs and brand is functionally linked to the incremental income that the graduates are able to generate, taking their explicit and opportunity costs into consideration.

This economically logical assumption has far-reaching implications and impacts on the strategic management of the university, on the character and structure of its study programs and on the level of tuition fees. Let us, therefore, explain the fundamental economic reasons for this functional linkage.

Creation of the brand and study program value and relevant value drivers

Private universities generally operate as for-profit business entities. Their products are their range of study programs and/or course offerings. The relevance and quality of these offerings enable the universities to sell knowledge for a profit, creating one part of the value of the university know how (or intangible assets in general).

The second part of the value created by a university is its brand. The more reputable a brand, the higher the perceived quality of education and overall credibility, which creates value for graduates (a typical example is the conflation of ŠKODA AUTO UNIVERSITY study programs with ŠKODA brand credibility).

The cost of study programs and the investments in brand value (or the implicit license fee that the university would pay to the provider of a credible brand) are then reflected in tuition revenues earned through a sales strategy.

Tuition revenues are produced not only by the tuition fees charged to students (price effect), but also by brand awareness and the effectiveness of the sales strategy (volume effect).

The issue of the discount rate for the long-term capital employed in the context of university activities requires a separate deeper analysis.

VALUE OF EDUCATION FROM A STUDENT PERSPECTIVE

From a student perspective, the value of education can be seen as an investment. The calculation of the return on investment includes the pre-investment and investment period of the duration of the study as well as the future acquisition of economic benefits in the form of better career opportunities as a result of the better education, which is measured by the perceived quality of the program and possibly the credibility of the school brand. The discount rate will be affected by the cost of student loans and opportunity costs.

We can summarize that the program and the brand of the university will create value for students only if the benefits are demonstrated in the positive wage differential compared to non-branded study programs (taking all student costs of studies into consideration).

METHODOLOGY AND DATA

VALUE OF THE PROJECT OF PRIVATE UNIVERSITY STUDIES FROM A STUDENT PERSPECTIVE

From a student perspective, taking economic logic into consideration, private university studies make sense only if the present value of the benefits generated in the future outweighs the present value of the investment. Higher education is, therefore, a project that must generate a positive net present value. The life cycle of this project has three phases. In the pre-investment phase, information and transaction costs are incurred related to the selection of an appropriate private university, the preparation for the admissions procedure, the transfer of the student to the relevant locality and the acquisition of tangible and intangible assets necessary for enrollment (computer equipment, software, preparation courses, etc.). The second phase can be described as an investment phase, when students carry the costs of studies, i.e. particularly tuition fees, cost of accommodation and the costs of tangible and intangible assets (books, computer technology, tutoring, etc.). During this phase, the student also records opportunity costs related to the inability to generate income from employment (full or part-time, depending on the demanding nature of the studies). In the third phase, the project generates (or should generate) benefits that take the form of cash inflows from employment or doing business in the relevant field. The higher the costs spent in the pre-investment and investment phases, the higher benefits need to be generated to make the investment profitable. Higher benefits can be understood in particular as higher and more stable income.

$$NPV\ of\ the\ investment\ in\ studies = \sum_{a=0}^{m} \frac{CF_a}{(1+i_Z)^a} + \sum_{b=m+1}^{n} \frac{CF_b}{(1+i_I)^b} + \sum_{c=n+1}^{N} \frac{CF_c}{(1+i_P)^c}$$

Where:

- m length of the pre-investment phase;
- n last year of the investment phase;
- N total length of the project in years (from the year zero of the pre-investment phase to the last year of the phase when the project creates benefits);
- CF_a cash flow in the year a of the pre-investment phase;
- CF_b cash flow in the year b of the investment phase;
- CF_c cash flow in the year c of the phase when the project creates benefits;
- i_Z required rate of return in the pre-investment phase;
- i_I required rate of return in the investment phase;
- i_P required rate of return in the phase when the project creates benefits.

It is always necessary to respect the principle that only incremental cash flow can affect the calculation of the net present value – that is, the cash inflows and outflows that occur solely as a result of studies at the private university and which would not occur if the student did not study at the private university. Alternative options include situations where the student chooses to study at a public university or when the choice is made to forego higher education and instead transfer directly into the workforce. For the purpose of the following empirical research, this assumption will always be a priori defined.

VALUE OF THE STUDY PROGRAM FROM A UNIVERSITY PERSPECTIVE

The value of the study program for a university is, in terms of the income valuation approach, given by the present value of the future benefits generated by the investment in the study program and its administration and operation. If the private university is successful and creates value for its owner through its study programs, it then generates the financial benefits over the liquidation value of the identifiable tangible and intangible assets. Successful study programs are reflected in the financial value drivers (sales and their growth, profit margin, investments into long-term assets and net working capital, required rate of return, capital structure and time). The overall value of the study program from the perspective of a private university can be calculated using the following formula:

$$Value\ of\ the\ study\ program = \sum_{t=0}^{T} \frac{OR_t - OC_t - ILTA_t - INWC_t}{(1+i_U)^t}$$

Where:

T length of the economic life of the university (the period of economic benefits creation)

OR_t operating revenues in the year t consisting mainly of the tuition revenues;

OC_t operating costs in the year t consisting mainly of the personnel costs;

$ILTA_t$ investments into long term assets, including intangible assets (brand and brand related assets) in the year t;

$INWC_t$ investments into net working capital in the year t;

i_U is the required rate of return from the perspective of the university owner or founder.

Market equilibrium

The market equilibrium occurs when the value of a degree program from the perspective of a private university corresponds to the total aggregate net present value of a degree program at a private university from a student perspective. Thus, the following relationship applies at the point of market equilibrium:

$$Value\ of\ the\ study\ program = \sum_{t=0}^{T}\sum_{x=1}^{X} NPV\ of\ the\ investment\ in\ studies_{x,t}$$

Where:

T length of the economic life of the university;

X total amount of the students at the university during its economic life (T);

NPV of the investment in $studies_{x,t}$ net present value of the investment in studies from the perspective of student x in the year t.

Conclusions

For reasonable structuring of the study programs and courses and for creating a profitable business and marketing strategy, it is necessary for the university to:

1) Understand the creation of the value of the institution‘s intangible assets;
2) Understand the relation of those intangible assets to the value of the investment in higher education from a student point of view.

These two points represent two sides of the market that are interconnected. Having a good grasp of their functional relationships is, therefore, crucial to understanding the answers to the following questions. When does it make sense to increase tuition? When does it make sense to study at a public university in order to save money on tuition costs? Does it make economic sense to pay tuition and work at the same time? What needs to be offered by a private university to make an investment in its study programs beneficial?

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