



# The Possible Use of Akerlof and Kranton's Utility Model in Higher Education

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## Abstract

**Background:** The identity and utility research carries significant role in the modern economics. There are financial outputs, if we can moderate appropriate the student's and worker's identities. **Objectives:** The paper examines the possible use of the utility model and theoretical principles of Akerlof and Kranton (2000, 2002) in higher education. The examined aspects are utility, identity and role. **Methods/Approach:** The paper aims at employing the model of Akerlof in higher education and how the terms identity and utility can be interpreted in this environment. **Results:** To sum up, we can say that while case studies and certain experiments seem to justify the model of Akerlof and Kranton, there are few scientific results in higher education to rely on that prove the relationship between identity and utility. **Conclusions:** It can be deduced that the identity of students has some economic impacts. Institutional policy can increase not only the success of its students but also their income through identity changes.

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## Introduction

*Identity* is one of the most studied topics nowadays, as it is frequently used when interpreting different situations. It is not only used in psychology and sociology purely in a scientific sense, but it also appears in economics as a moderating factor of economic processes (Akerlof et al., 2000; Akerlof et al., 2002; Akerlof et al., 2005; Adler, 2014). The explanations of identity and 'ideal' as well as 'social category' are closely related to supply side of psychology and sociology and on the demand side of economics (Aaker et al., 2009; Aaker, 2010; Aaltio et al., 2015). The interpretations offered by each faculty can be extremely complex; thereupon we have to clarify the definitions under the given circumstances in order to be able to assess their impact. Most of the non-economist scholars interpreted the formation of identity and its aspects in different theoretical frameworks, such as psychoanalytical and

developmental psychological theories that resulted in the following issues and difficulties: (i) How can we compare and coordinate the different interpretations of identity?; (ii) How can we operationalise the theoretical terms?

In this respect, Abdelal et al. (2005) made headway when they incorporated the definitions of identity and the scientific methods, as well as results of their research, into a unified framework (and the other researchers of identity were encouraged to make further unifications and comparisons between their results). In their study, they separated personal and social identity and within the latter one four kinds of identity contents were defined. Their work contributes a lot to find the missing link that would connect the theoretical economic and psychological/sociological rationale in connection with identity to provide an opportunity for reliable empirical works.

Akerlof et al. (2002) created a theoretical model that examines how belonging to a certain social category (social identity) and rules of that category affect the school performance and the utilities of the person and the institution. Furthermore, they also examined how the school can influence the category/identity selection of students.

The goal of this paper is to propose a framework that can address in a methodological manner the question: Can the model of Akerlof et al. (2002) be employed in higher education? Additionally, the paper identifies how the terms social identity and utility can be interpreted in this environment. The results of the study described in this paper can be applied to construct better management systems that focus on the identity formation opportunities in higher education institutions, which in turn can lead to better utilities for students and their identities.

## Social Identity and Utility

### *Social Identity*

One of the most significant economic theoretical approaches related to identity is provided by the works of Akerlof et al. (2000, 2002, 2005, 2008, 2010). In their financial analysis (2002), the sociological approach of education was applied in secondary and primary schools when the terms of ideal, identity and social category are taken over to classical utility models (Akerlof et al., 2002). In the classical educational-economic model (1) the students can choose the degree of their efforts, i.e. time spent on studying, so that it balances the discounted dividend; (2) the resources determine the quality of the school.

According to the critics of the authors, economists can explain the effect of increasing expenditure on qualification, but they are unable to determine when and why these expenditures are effective (Friedman, 1957; Modigliani, 1988). Therefore, it is necessary to take into account the moderating impact of the terms introduced by them. If they fail to do so, only partial responses could be given to such important questions, such as: How the method of allocating funds for schools can influence the chances of earning an academic degree? In order to obtain a PhD degree, what school reforms must be implemented? The model can resolve these questions and can provide guidelines to empirical applications. According to one of their most important hypotheses, the efficiency of funds does not only depend on the quantity of funds used but also on the identity of students in connection with the studies and the relationship between these two attributes. Further, identity and efforts do not only determine the future chances of the students (utility) but also the long-term quality of the school.

The next part of the paper interprets the term of utility in higher education, and presentation of the model of Akerlof and Kranton follows. Then, the use of their

assumptions in the Hungarian higher education system is presented with some limitations. The psychological and sociological definitions of utility in the model are enlisted. Finally, the paper is concluded with several questions that follow its analysis.

### *Utility*

The key factor of the study is the utility of students pursuing their academic studies. Literature reviewing and interpreting utility in its classical economic sense is too large to review to be repeated in this paper, and yet a new, improved version of utility that assists in interpreting the term in the domain of education economics is described. The following parts of this section include such student 'utilities' that exist in reality but are not considered in economic calculations as far as we know.

According to Samuelson et al. (1995) utility is 'total satisfaction deriving from consumption, subjective pleasure, usefulness'. These economists gave up the ideal of measuring utility (cardinal approach), but instead re-formulated the theory of consumer behaviour with the help of the category of consumer preferences, regarding utility as a suitable way of describing preferences (ordinal approach). The utility function is a procedure in which values are assigned to consumer baskets in a way that the more preferred baskets are given bigger values, while the less preferred are assigned lower values. In the classical utility function, the beneficial effect is derived directly from the consumption of goods, while others such as Lancaster (1971) argue that it is the goods themselves and not the assembly of their characteristics that define utility. The theory implicitly promises that by using formulae we can predict what level of utility each group can reach with a given amount of goods. In the case of two or more goods provided, we know how they are related. It does not take into consideration the fact that individuals assess the value of the same goods differently, depending on their personality, experience, the given situation, time, etc. For example, obtaining a certain degree at the age of 23 and 63 is different. Another problematic part of the theory is that it disregards the fact that the value of the goods does not only derive from their characteristics but also from the added value assigned to them by the society. Recently, economists have adopted from psychologists the idea that utility depends on how the situation is reflected (Kahneman et al., 1979). Identity is one of the major ways that reflects the situation of people.

To summarize, we cannot discuss preferences and their predictability in general, due to individual varieties and the social embeddedness of goods. This mode of reference can only work in a homogeneous population. However, it can also be debated whether formulae can be used in every scenario to express the utility of a given object or a service. Obviously, the physiological phenomena in the mind or the impact generated by a certain situation, such as the process of generating happiness/usefulness cannot be described by formulae. In this case, the mathematical and numerical representation of economics can hardly lead to a better understanding of reality. However, interpreting the factors in the formulae and understanding their relations is much more sensible.

### *Utility in Education*

Different utilities can be distinguished in education. We can differentiate them on the basis of who is the 'beneficiary' of each type of utility and when each type of utility is 'realised'. The utility of the provision and 'consumption' of educational services can be interpreted in time: short-term (current /perceived) and long-term utility. Further, we can also differentiate between the utilities of the student, the institution and the society. To summarize, there are four types of utilities:

- the short-term utility of the higher education institution
- the long-term utility of the higher education institution
- The short-term utility of the students (subjective, objective).

*The short-and long-term utility of higher education institutions.* In the case of higher education institutions, we can differentiate between tangible and less tangible utilities - those that can only be assessed in the end (and, of course, expenses that can affect the previous one, though they are not within the scope of this paper). Tangible utilities are identified as income in education, which can be expressed by money realised through the educational policy of the institution (e.g. alumni donations). Income derived from state grants, leasing of buildings, etc. are excluded. The term intangible utilities describes items with valuation that can hardly be expressed in monetary terms, such as the quality of the institution and its reputation. The impact of these latter aspects on attracting new students and the financial advantages can hardly be presented, but it is certain that the efficiency of working on human capital generates long-term utility.

*The short-and long-term utility of students.* Before analysing these two definitions, it is important to note that education is interpreted as goods in its 'Lancastrian' meaning (1971), i.e. the assembly of its characteristics is regarded to define utility. Following this theory, partial utilities are identified with partial satisfaction. Subjective short-term utility, such as the opinions of students about the service that they receive can serve as a satisfaction indicator (such as satisfaction with the infrastructure of education, the level of quality etc.) and objective short-term utility are differentiated. This latter one is offered in the form of different opportunities as a by-product to the consumer by the institution. Their advantages derived from the nature of the educational process may not have any future gains at all (availability of free-time activities below the market price, time management on their own, etc.)

*The long-term utility of the students.* A difference can also be made between the subjective and the objective utilities, though the boundary is less obvious. For example, when reflecting upon his life, an experienced expert (in a subjective way) can think that it served him well - it made him happy, satisfied and resulted in utility when deciding upon graduating in medical sciences at a young age. However, we do not know for sure whether his happiness derives from the fact that he could help many people or whether his career increased his quality of life (or the combination of those two aspects, etc.).

The *theory on human capital* condemns the latter one and its results can be identified with objective, long-term utilities with certain limitations (Akerlof et al., 2002). The theory on human capital assumes that people invest in their own productivity by education and training. These investments can enhance their productivity, productiveness and increase the market value of their work (Schultz, 1961). Therefore, their future salary will be higher. Investments in human capital are not restricted to formal education. 'All investment forms that improve productivity can be regarded as an investment' (Varga, 1998). In connection with the theory of human capital two theories were born to assess the economic value of people. One of them is the 'approach based on productivity costs' that was represented by E. Engel (1884), who counted expenses of such nature till the age of 27, as he assumed that this was the time for education to be over. The other is the 'theory of capitalised payment' that calculates the economic value of people by disregarding all previous costs and takes into consideration only the current and the expected market value of the individual. When measuring human capital it is supposed that 1. People only calculate the monetary yield of the school that they are going to maximise 2.

Individuals know all the alternatives of decision making, so they are entirely informed. 3. They do not have salary while studying (the current value of the profit of human capital equals the discounted cash flow).

These approaches, based on human capital, put an emphasis on the direct financial returns of education. However, several attempts were made to assess the non-financial and external gains of education (Le et al., 2003). Garai (2003) raises the question and also tries to answer it: Who invests in human capital: the individual or the society? Another question presented in this study is: What proportion of the education can be regarded as investment and what proportion is consumption? According to his study, the response depends on income, social situation and abilities. He also estimated the level of education necessary to maximise the assets of individuals. Varga remarks that the allocation of educational expenditure on investment and consumption is not carried out. Allocation by all means that it is discretionary (Varga, 1998). It is very unpredictable to calculate future gains regarding the changing business environment and the all-time changes in individual preferences. According to Thurow (1970): (1) Future preferences are not known when deciding on investment. The human capital investment systematically changes preferences. It can also be assumed that over time that participation in education appears as an investment rather than consumption in the minds of students, so the change in this preference system will also alter the relative importance of money, which also affects satisfaction. Further, changes in preferences will also change the importance of financial and non-financial utilities.

The examination of making sensible investments in human capital is not a new phenomenon in economics, as the results of the related observations and studies are directly used in institutional policy. Using the results of social psychology in analysing economic processes is becoming more and more popular nowadays (although several techniques for influencing have long been used in practiced on purpose. An example is increasing the level of loyalty and commitment to the company by using different techniques that increase the efficiency of the working group and the profit of the organisation. The relevant list of literature is too broad to be included.)

Akerlof et al. (2002) created a theoretical model that examines how belonging to a certain social category and rules of that category affect school performance. Further, their study also examines how the school can influence the category/identity selection of the students. Prior to their studies, the sociological interpretations and schools as community institutions were missing from the economic analyses of education and terms such as identity, social category etc. were not used. In the next chapter after presenting the model of Akerlof and Kranton, its applicability in higher education is also suggested.

## The model of Akerlof and Kranton

It is understood that schools do not only improve skills but also educate. In this process the identity of students shows whether they accept or reject the value system of the school. According to Akerlof et al. (2002), schools have a chance to shape the students' ideals or approach the economically useful cultural standards and skills.

One of the bases of our theory is Coleman's examination (1961) of the social 'formation' of adolescents. Coleman's questionnaires reflect that students put one another in social categories, which are nerds, soldiers, leaders and burnt-outs. In each category an ideal form that includes certain characteristics and patterns of behaviour is fixed. Coleman experienced that belonging to single social category can influence school performance and the formation of self-image. Akerlof et al.

(2002) used this result in their utility model. They argued that students can influence their current and future utility by making two choices: they can select their social category and the effort they make (how much they study). After selecting the category, the students try to fit in by considering the possible fit between their characteristics, efforts and the ideal of the selected category. According to their hypotheses (from 1 to 4): 1. Schools do not only develop skills but also provide implicit examples in the form of categories and ideals that can influence their efforts at school and also have an impact on long-term utility. 2. Schools can create such an identity whose long-term development can maximise their own interests as well as the economic interests of students. 3. It is also assumed that students of different backgrounds can differently identify with the identity targeted by the school. 4. The heads of these institutions must address the possibilities of substituting the offering of one single ideal (social category) for offering alternatives. The study also suggests that more students of different backgrounds will find their way to identify with school by having the opportunity of selection. The downside of this opportunity is that the standard of average skills will become lower.

The authors also studied school reforms, as well as the similarities and differences between the private and public schools financed by the state. They identified with the sociological view according to which the most important differences between public and private schools can be derived from the effect of peers. According to it, one of the advantages of private schools is that they have limitless freedom to invest in the identity of their students, which enhances the success of both the institutions and their students. The authors illustrate with examples (Harlem, New Haven) that investment into identity was not impossible for certain public schools. They invested into the self-image of their students through different programmes and they increased the level of identification with school values. As a result, the schools have reduced internal social differences between the students and increased the chances of further studies. The authors have created the following economic model based on this experience and observations.

### *The standard and supplemented model*

In the standard model of education, utility depends on the efforts made at school and on the financial returns of these efforts: (1)  $U_i = U_i(w \cdot k(e_i), e_i)$ . This is supplemented by the identity variable: (2)  $U_i = U_i(w \cdot k(n_i, e_i), e_i, l_i)$ , where  $l_i = l_i(e_i, c_i; \varepsilon_i, P)$ . ( $e_i$  = I's efforts at school;  $k(n_i, e_i)$  = i's skills (human capital) that depend on efforts and abilities ( $n_i$ );  $w$  = wage;  $P$  = ideal characteristics and behaviour within a category;  $c_i$  = the category of the person concerned;  $l_i$  = identity – depending on how well I's characteristics fit the ideal characteristics of the category;  $\varepsilon_i$  = the individual's characteristics, e.g. sex, race.) In their model, identity depends on efforts in studying, category at school (what category they are enlisted and they enlist themselves), certain characteristics and how well i's characteristics fit the ideal characteristics of the category. Further, it is also assumed that the students change both the category and the strength of their efforts more or less consciously to maximise utility. The obstacles of identity change can be appearance, accent, etc., so identity depends on the fit between the individual's characteristics and the ideal characteristics of the category selected and also on how the individual's and the others' behaviour fit the ideal behaviour of the category. Utility can appreciate or depreciate depending on the fact whether gains or losses occur in identity. Following the classification of Coleman (1961), three categories are made: leaders (L), nerds (N) and burnt outs (B). There are rules governing the ideal characteristics of these social categories: (Ideal L:  $l_i = 1$  ( $l_i$  = physical appearance); the skills of ideal N

$n=1$ ; the burnt-outs have no ideal; both can be interpreted on a scale from 0 to 1. The financial costs of effort:  $\frac{1}{2} (e_i)^2$ . Rules also cater for the extent of ideal efforts:  $e(N) > e(L) > e(B)$ . The self-image of the student depends on their category ( $c_i$ ) and how their behaviour and characteristics fit the ideal of the category. For example,  $c_i = L$  profit from identity  $l_i - t(1 - l_i)$  where  $t$  is such a positive number which indicates how much  $l$  loses if they stand too far from the ideal of their own category ( $t$  also indicates how difficult it is to fit in a category with characteristics that are different from the group). In some research  $l_L > l_N > l_B$  which means that a student in the leader group is more likely to have a more beneficial self-image. The self-image of the burnt out is 0 by the authors:  $l_B = 0$ . The student loses benefits if they divert from the effort fit for their category  $\frac{1}{2} (e_i - e(c_i))^2$ . According to the utility of leaders is as follows:

$$U_i(L) = p [w \cdot k_i - 0.5 e_i^2] + (1 - p) [l_i - t(1 - l_i) - 1.5 (e_i - e(L))^2] \quad (1)$$

We have to notice that this formula does not distinguish between current and future utilities. The student's utility is calculated so that the moderating effect of effort-making is added to the long-term financial returns of the current efforts and also the factor saying how well the individual fits into the group. The model is based on the assumption that learning a skill does not flexibly react to wage but it does react to social differences. If someone stands aloof from the given category-(high level of  $t$ ) - for example, due to their unfavourable physical appearance or skills, it is difficult for them to integrate into the group of nerds or leaders. With these characteristics more and more are likely to enter the burnt-out category, where individuals make slight efforts.

### *Institutional policy based on the model*

The theory based on the model above assists institutional policy that is supposed to influence the creation of social categories and 'rules' (e.g. the proper extent of efforts). If the institutional policy can influence social parameters, then it can also affect the outcomes of education. The authors justify this statement by several examples. They analyse the athletic programme of an American high school that changed the social patterns of the students in a way that many of them became 'leaders'. Formerly, the prerequisites of entering this group were good appearance and skills supplemented by athletic membership due to the school policy so the opportunity for acquiring skills was 'democratised'. The authors supported their hypotheses by data from a database whose name is 'The group of adolescents, the high school and what is behind'. The four groups were also discernible here: 'nerds', 'athletes', 'leaders', and 'burnt-outs'. One of the interesting results gained from the data analysis is that the leaders and the athletes have a much more positive attitude to school than those who were not in these categories. In this way, the data are consistent with the hypothesis of the authors that the leaders and the athletes identify with the school, while the others do not. Usually, the 'burnt-outs' belong to the lower 1/5 economic-social class, while the above-mentioned three other categories to the upper 1/5. The authors present several other studies in their paper that prove that the social background does have an impact on the ability to identify with the school, hence children of workers or immigrants often find themselves in the group of 'burnt-outs' (e.g. Willis, 1977).

According to the authors, schools should be reformed so that they could spend their funds on creating a community. A further example is set by Central Park East Primary and Secondary School, where it was also proved that it is worth forming a community and make students identify with their school. The management of the

institution tried to disjoin their students from their problematic background and tried to 'isolate them in another world'. To this end, different techniques were used, e.g. regular student-teacher meetings were organised, they worked with classes of a few students and uniforms were a must in order to decrease the visible differences between those of different background. Teachers had to do courses where they could learn how to manage the feelings and rhythm and explore the reasons of the behaviour of those who do not fit, etc. However, the most important thing is that teachers set rules for the children alongside which they could interpret the situation and themselves.

Investment in identity has sometimes some obvious and instant utilities. Especially, it can be seen in trainings on national defence. In this case, one of the objectives of the school is to change the identity of the soldiers and would be policemen in such a way so that they see themselves as 'defenders' of the given nation. In contrast to the original economic model, the change in preferences (by identity change) can also modify utility. If the between the altered identity (I am a soldier) and the soldier ideal of the army gap is too large, the individual loses utility and their self-image will be damaged. Additionally, the interests of the nation are also curbed as in this case the would-be soldiers may identify with other ideals and make fewer efforts at work, which can be especially risky in warfare (just think about Captain Yossarian, the main character of Joseph Heller's brilliant novel, *Catch 22*).

## The employability of Akerlof and Kranton's model in higher education

In other trainings, lack of identity (with the faculty/study programme, profession) can also result in utility loss. The individual will have another identity than expected by the school and identifies with another ideal and their efforts are decreasing in studying. It will do harm not only themselves but also the institution and society in a broader sense. The three cases below present some variations of this situation.

### *Contraproductive behaviour of the students*

There was a rumour among the (not self-financing) students of Debrecen University (Hungary) majoring in History 20 years ago that it is worth to postpone graduating from university. There were two reasons for this: on the one hand, they enjoyed the many benefits offered by the university (a lot of free time, exciting programmes, etc.-consumers' attitude); and they were also afraid to enter the labour market knowing that even if they manage to find a job, their standard of living will be lower due to low payment. To translate this to the term of Akerlof: many could not identify with their study programme or future profession and made an effort to reach a kind of hedonistic lifestyle (burnt out). Accordingly, they usually underperformed and extended their stay at university by several years and decreasing the years of earning money (it can also be assumed that their self-image also negatively changed, provided they did not succeed to persuade themselves that it is wise to conserve 'youthful freedom' and consume the university and the parents). The institution did not profit, either as these students are likely 1. to 'ruin' the other identification efforts of other students with the university ideal; 2. to become dissatisfied, which could generate negative word-of-mouth; 3. to incur extra costs to university thorough the lessons, exams and administrative fees.

There are students who apply for higher education institutions not to satisfy their interests, but rather to obtain the advantages of the identity that accompanies having a degree. Some institutions satisfy this need by becoming 'degree



manufacturers', which can have negative consequences both for the individuals and for the society. (Szigethy, 2005; Kjelland, 2008). The individuals can obtain their identity longed for in the end, but they do not acquire skills that would help make a career in the labour market. In many cases, there are no scientific jobs and professions in accordance with the study programme. Producing these graduates puts a burden on the society in the form of high costs and a further cost can be paid for their possible further training and unemployment benefit. Higher education institutions can play other foul plays with their would-be students. After improper selection they accept students whose abilities do not predestine them to graduate from the course. It is done so that more and more state subsidies could be obtained by the institution. The students are unable to meet the requirements and as a result of their failures they leave.

To what extent can the model of Akerlof et al. (2002) be applied to these examples and do we get closer to understand the nature of utilities in higher education? Let us list again the statements on which the model relies on.

1. There are different social groups within the school.
2. The individuals gain or lose utility if they belong to a social category and they are of high or low social status.
3. If the characteristics and the behaviour of the individual fit the ideal of the category, utility is gained.
4. The individuals gain utility if their and others' actions reinforce their self-image.
5. The members of the different social groups have different rules. One of the consequences is that efforts in studying also differ from group to group.
6. School policy can change the breakdown of the groups, the rules and accordingly, the behaviour and efforts in studying.
7. The efficiency of utilising funds does not only depend on the amount of financial sources but also the identities of students and their relationships. Under the term fund we mean the financial investments of the institution in the students' education. Efficiency refers to further success (chances of going on studying). The quality of the school is thus influenced by the identity of students.

### *Applicability of the model in higher education*

The implication to single statements is marked by points in the following part. The first two statements correspond with our experience by all means. Forgas (1985) tried to isolate the prototype of the target person while carrying out interviews with university students on the one hand, and the feelings students have toward a prototype. He found 16 distinctive types (categories). When perceiving the types, the main determinants were study performance, extroversion, social status and political radicalism. One of the categories was 'lazy rednecks' that was described as follows: 'They are lazy, untidy and they are here just to spend the time. They are bored, impassive, they like sunbathing on the grass, they do only the minimum they miss the lectures, fail, and have no idea why they go to university. They are careless parasites. By all means, we also could identify this type whose members have low social status and do not make efforts in studying. However, we must note that the group membership assigned by others is not equal with the individual's group identity as the members of the group can have different opinion on the group and themselves. The different ideas of the content of identity must be considered when examining the meaning of identity.

Akerlof et al. (2002) mention both long-term and short-term utilities in connection with the self-image simultaneously, which, in a life of a young man often do not serve

long-term utilities. In some cases, for example, 'the lazy redneck' feels good by drinking beer every night and missing their assignments at school, but after coming out of the protective shield of the school this form of behaviour does not promise many benefits (disregarding those of social capital). A perfect positive self-image may hide current utilities and the personality development of such a student can be more balanced in certain sense than that of an all-time worried and anxious 'nerd' although the financial gains of the time spent at school is likely to be slighter. The person can feel good in a company that likes drinking, as far as they enjoy total 'isolation' in their band, i.e. they do not have to face the judgement of the others who belong to other categories and can set off their long-term losses that derive from this current way of living. The distorting effect of the situation can eventually reduce the feeling of loss but this will not change the objective facts after all. Unfortunately, no such longitudinal examination is known that would have examined how the representatives of the single categories perform in life and what losses, gains and utilities occur. An interesting research topic could be to explore the relationship between academic results in higher education and student identity in relation with the position and salary in the future.

We suppose that the counterparts of 'nerds', 'geniuses', 'burnt out' etc. from secondary school also exist in higher education. The ideal appearance of the category is also guided by rules (dress, behaviour etc.) and the extent of the effort expected in the category. However, it is not practical to fully adapt the model, the identification of ideals as well as the distance of proximity to them as in higher education, looser connections to studying exist, and due to the different subject criteria, the transition between the groups is naturally given. An effort by a young man to identify with the school model is less prominent than at a primary or secondary school.

### *Institutional changing in the identity forms*

The transition from elite training to mass training in the past few decades in Hungary serves as a good example of how can a school policy change the breakdown between the groups, the rules and accordingly, patterns of behaviour and efforts in studying. While in the PhD training teachers still have small groups and there is a possibility of creating a teacher-student relationship and working out a professional identity in connection with a scientific career, etc., in forms of education at lower levels there is usually no chance for the students to deepen their knowledge through the personal relationship with the teachers or orienteer in certain issues in order to maintain or create their professional dedication. In many cases, it is not only the lack of such relationships, but also the identification with the university is rather loose and it is not possible to create such an identity and pride that characterise the students of the American elite universities. One of the slogans of Yale is 'For God, for country, and for Yale'. This kind of 'enthusiasm' and the related forms of behaviour are consciously strengthened. As one of the former students of law at Harvard said: 'I have been transformed, I have become another man...' The institutions regularly organise alumni meetings and their Alma Mater delivers such a university newspaper to them that shares news about the successes of the graduates and ask them to financially support the school. The 'elite' institutions of education are likely to earn this prominent title because they can integrate effective studying into the decisive factors of identity. It is not by chance that the American universities compete for the Nobel-prize winner professors, as they know their attraction to students can make the competition for being admitted fiercer and the tuition fees to a considerable extent

To summarize, we can say that while case studies and certain experiments seem to justify the model of Akerlof and Kranton, there are few scientific results in higher education to rely on that prove the relationship between identity and utility. However, it can be deduced that students' identity has some economic impacts, which would be worth examining empirically.

## Conclusion

This paper aims at answering whether the model of Akerlof et al. (2000, 2002, 2005) can be employed in higher education and how the terms effort and utility can be interpreted in this environment. An attempt was also made to conceptualise the latter one and a suggestion was made to identify subjective utility as satisfaction. Objective utilities should be assessed by payment and position at work efforts are identical with efforts in studying like in the model of Akerlof et al. (2000, 2002, 2005), while its parts can be the number of hours spent on studying; the lectures and seminars visited, and other.

Comparison with previous research and some experience show that significant similarities can be detected in elementary, secondary and higher education in connection with the system of relations between identity-effort-utility. There are profound differences, but it may even be more important to realise that empirical results are missing in higher education.

It is necessary to make up for this loss as it was hypothetically proved by both the literature review and certain empirical knowledge that institutional policy can increase not only the success of its students but also its income (and quality by knowing the effect mechanism of the factors examined and influencing the students' identity. A questionnaire with the help of previous quantitative interview can quantitatively demonstrate the presumed relationships. Students' effort can be measured by the number of hour learned during a week and their academic achievements. Student identities and adaptation to an ideal can be mapped through focus group inquiries and then questionnaires and earnings. Other factors of the utility model are also suitable for operationalization. The further examination of the nature of relations between these terms is essential making better advices for institutional managers. Hopefully, the study assisted in it by posing some questions and issues that can be argued.

The limitations of the paper are the unanswered following question: How can students' identification with the university and their future profession be created/strengthened within the form of mass education? Can the identity forming techniques of the elite universities be applied, and if so, in what form at a poor university of Central East Europe? Will not the bad chances of getting a job and/or disappointing standards of living for the future of the graduates in a country of insecure economic situation counter-balance the positive impacts of identity with a strong university and professional identity? Can the positive word-of-mouth advertising and increased alumni donations change quality in a positive direction? Furthermore, it is not a negligible methodological problem, either, if a student's identity is based on the ranking of others or their self-description.

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