

ECONOMICS OF EDUCATION REVISITED – NEW INSIGHTS FROM IDENTITY AND BEHAVIORAL ECONOMICS

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Abstract

This paper reviews the economic literature on education along with the attempts to integrate sociological and psychological views of education into standard economic models. The analysis points to the key concepts from sociology and behavioral economics that are translated into inputs to economic models of education, in order to improve the understanding of the economists' fundamental concern – resource allocation. By extending economic models that capture the relation between investing efforts and expected returns to education, insights from identity economics and behavioral economics shed light to the following question: when and under what circumstances are investments in education effective? Identity economics implies that educational efforts are not perfect determinants of the economic returns to education, taking into account that investments in education are determined by students' social norms, ideals and identities. Behavioral economics focuses on behavioral biases that affect the individuals' decisions on investing efforts in education and consequently, their long-term welfare. This novel framework contributes to education research by specifying policy interventions that could mitigate identified behavioral barriers that constrain decision making concerning educational pathways.

Key words: education, human capital, identity, identity economics, behavioral economics.

ПРЕИСПИТИВАЊЕ ЕКОНОМСКЕ ТЕОРИЈЕ ОБРАЗОВАЊА – УВИДИ ИЗ ЕКОНОМИЈЕ ИДЕНТИТЕТА И БИХЕВИОРАЛНЕ ЕКОНОМИЈЕ

Апстракт

Рад представља преглед економске литературе о образовању, као и покушаја да се у стандардне економске моделе интегришу социолошка и психолошка схватања образовања. Анализа је усмерена на кључне концепте из социологије и бихевиоралне економије, који се преводу у улазне параметре економских модела образовања, како би се суштински економски проблем – проблем алокације

ресурса у области образовања – подробније сагледао. Проширењем економских модела који испитују однос између улагања у образовање и очекиваних приноса од образовања, увиди из економије идентитета и бихевиоралне економије расветљавају одговоре на питања када и под којим условима инвестирање у образовање постаје исплативо. Економија идентитета указује на то да улагање напора у образовање није у савршено сразмерном односу са приносима од образовања с обзиром на то да су одлуке о улагању у образовање условљене друштвеним нормама, идеалима и идентитетима појединаца. Бихевиорална економија усмерена је на истраживање пристрасности и баријера у понашању које утичу на одлуке појединаца у вези са улагањем у образовање, а последично на њихово благостање у дугом року. Овај иновативни приступ доприноси научним истраживањима образовања осмишљавањем мера образовне политике и интервенција које би могле да ублаже постојеће баријере у понашању појединаца које ометају процес одлучивања о образовању.

Кључне речи: образовање, људски капитал, идентитет, бихевиорална економија.

INTRODUCTION

Since the seminal work of Theodore Schulz (1960) and Gary Becker (1964), the economic research of education has predominantly been based on the human capital theory. The traditional view of educational attainment considers education as the main element of human capital, implying that the most important research subject in the economics of education is the relation between resource investments and returns to education. Human capital theory indicates that individuals choose the amount of resources (time, effort, money) to be invested in education, based on the expected returns on education – increased cognitive skills, productivity and consequently, future income. Economic models explain the allocation of resources in education, based on the decisions of rational individuals, weighting the costs and benefits of additional investments in education. Economic analysis has played an important role in the research on education, and economic concepts have for decades been corner stones for designing and evaluating education policies. The theory of human capital has provided important insights for the analysis of macroeconomic aspects of education - the relation between education and economic growth, explanation of labor market tendencies as well as exploring the effects of investing financial resources in the public education.

However, in recent years, we have witnessed the increasing dissatisfaction with the contributions of economics of education from the education researchers belonging to other disciplines. The criticism is basically directed at the restrictive assumptions that economic models are built on. The main assumption of economic models of education is the individuals' *unbounded rationality* that refers to their ability to perform complex calculations, based on perfect information regarding all relevant alternatives, taking into account the expected utility of the possible

outcomes. This makes economic theories of education divert from reality and neglect possible sociological, political and psychological elements that affect the behavior of rational individuals concerning education.

This paper reviews some insights from several areas of education research that cut across disciplinary boundaries with economic theory. A sociological view of education and its integration into economic models is offered within *identity economics* - the discipline that integrates key sociological concepts, such as social categories, ideals and identities into the education utility functions of individuals. This line of thought incorporates the sociological view of the students as primary decision makers and schools/universities as the social institutions that determine the effectiveness of resources invested in education. On the other hand, extending economic models of education with psychological knowledge about human behavior falls within the field of *behavioral economics*. As student decision making is prone to various behavioral biases, behavioral economics contributes to the understanding of education related decision making by creating more realistic models and explaining the patterns of deviations from rational behavior.

The aim of the paper is to draw attention to the alternative views of the issues of investments in education. The review of the economic literature on education, along with the new insights from borderline disciplines, points to the importance of multidisciplinary research on education, in the sense of broadening the existing economic theories of education. Extending economic models of education by incorporating sociological and behavioral perspectives does not question the basic assumption that investing resources improves educational attainment. These new insights offer explanations not provided or partially explained by economic models, regarding the circumstances under which the investment of resources in education will be effective.

THE THEORY OF HUMAN CAPITAL

Economic theory of education focuses on the link between the resources invested into education and the education outcomes. Classic economic models imply that students, as rational individuals, balance the efforts invested in education (in terms of opportunity cost) with its discounted returns. This implies that the education outcomes, mainly in terms of earnings, are determined by the resources devoted to education.

The notion of human capital has first appeared in the writings of classical economists, and has also been present in the work of a number of prominent economists prior to 1950's (Kiker, 1966). Adam Smith has considered the knowledge and the skills embodied in the employees to be a part of the total amount of the capital available in the economy. By the early XX century, similar considerations have appeared sporadically in

the economic literature (von Thunen, 1875; Fisher, 1906). In essence, from the perspective of economic theory, knowledge and skills embodied in the individuals affect their productivity levels and consequently, their earnings. Therefore, education is considered to be an investment, rather than the expenditure, affecting not only individuals' well-being, but also determining the economic growth of a country (Tan, 2014).

Human capital has formally been introduced into economic literature by the neoclassical economists, within the analytical framework of methodological individualism. According to the rational choice theory, individuals invest in education in order to maximize their economic interests. The investments in acquiring knowledge and skills that increase their productivity are realized until the private benefits of such investments (higher income in the future) equal the private costs, implying that the stock of human capital is formed as the consequence of the rational individuals' decisions. The early studies of human capital, therefore, regard education as the key component of the human capital. Deliberate investments in human capital have been defined as the determinants of the personal income distribution (Mincer, 1958). Johnson (1960) argued that employees do not become capitalists due to the diffusion of ownership through share capital, but as a result of acquiring knowledge and skills that have economic value. Those employees that have more high-quality skills and knowledge can demand higher wages. In other words, their knowledge and skills allow one hour of their labour to be worth more on the market than the labour of those who do not possess such knowledge and skills.

The explicit treatment of human resources as a form of capital, a factor that can be produced and a result of investment, in the theoretical work of Schultz (1961), directly contradicts the classical understanding of labour as the ability to perform physical job requiring little knowledge and skills, which are relatively uniform among workers. Treating education as an investment into an individual, Schultz proposed the term *human capital*. This way, the human capital concept has been transformed from a mere metaphor to a viable research subject in economic science and the main framework for creating education policies. From this time on, human capital has been put in the forefront of economic debates aimed at determining the *residual* – the unknown or unmeasured determinants in the models of economic growth.

After the publication of Robert Solow's article *A Contribution to the Theory of Economic Growth* (Solow, 1956), an increasing number of empirical studies based on the aggregate production function (Barro, 1991) tried to ascribe the differences in income per capita among countries to the accumulation of physical capital, human capital and productivity. These studies have confirmed that higher levels of human capital fuel economic growth (Mankiw, Romer & Weil, 1992; Barro, 1997; Krueger & Lindhal, 2001). There are two approaches that link human capital and economic

growth. The first one explores the connection between the rate of economic growth and the rate of human capital accumulation (Lucas 1988). The second connects the rate of economic growth with the available amount of human capital (Aghion & Howitt, 1998). Most of the empirical analyses that dealt with the link between human capital and economic growth were largely focused on education, while health, as another component of human capital, has been devoted less attention.

According to Gary Becker (1964), human capital is the value added that brings benefits to an enterprise or individual in the process of production and exchange, operationalized and expressed through education, training and work experience. Investing in human capital by the employee benefits not only the companies, but also the employees themselves. Such investment increases the value of the labour, and part of this increased value can be attributed to the employee through higher wages and various benefits, which are above the existential minimum. Based on the model of individual optimization, Becker has developed a general theory of investment in human agents. According to this model, human capital is directly included in the production function, increasing worker's productivity.

Introducing the concept of human capital has initiated a vast amount of empirical research of the relation between the resources invested in education and education outcomes. A number of empirical studies have explored the effects of education expenditures, teacher efforts, parent involvement and teacher-student ratios on the returns to education (Card & Krueger, 1992; Hoxby, 2000; Chetty, Friedman, & Rockoff, 2014; Jackson, Rockoff, & Staiger, 2014). There is recent evidence on a rather large rate of returns to education in terms of life-time earnings (Heckman, Lochner, & Todd, 2006; Bhuller, Mogstad & Salvanes, 2017). On the other hand, the accumulation of human capital causes significant externalities, especially in the field of technology and innovation, indicating that social returns to human capital outperform private yields. Education is linked to better health of the population, the transmission of cultural values, political participation, and the reduction of crime rates (Lochner, 2011). These externalities are often the main reason for state subsidies in the field of education.

IDENTITY ECONOMICS AND EDUCATION

Economic literature on education focuses solely on the balance between the resources invested in education and its discounted returns, without accounting for social interactions that shape educational outcomes and determine the effects of resources on the returns to education. This is the reason why economic models often cannot explain the variations in educational outcomes that result from the similar amounts of invested

resources. Fresh insights for the economic research of schooling and education were offered within the framework of *identity economics* – a line of thought that introduces key sociological concepts into economic models of education. Traditional sociological theories explain the notion of *identity* as something that allows for a unified experience of oneself as *the same* over time (Erikson, 1992). According to Beck (2000), Bauman (2000) and Giddens (1991), identity represents a concept necessary for a deeper understanding of modern societies. They argue that modern culture does not provide ready-made identities, as was the case in pre-modern societies. Therefore, creating and re-making of *self-identity* becomes an exclusive job of the individual.

Identity economics can be briefly described as an attempt of broadening economic science by incorporating the concept of *identity* into economic models. The foundations of this discipline lie in seminal work of George Akerlof and Rachel Kranton (Akerlof & Kranton, 2000; 2002; 2005). The core idea of this line of research is that social norms affect agents' economic decisions and behavior (Austen-Smith & Fryer, 2005; Bénabou & Tirole, 2011). Namely, traditional economic explanations deal with rational agent' preferences and their utility functions, without explicating the origin or configuration of such preferences. Identity economics suggests that individuals tend to place themselves into certain *social categories*. Each social category is defined by prevailing norms or *ideals*, determining desired behavior within that category. Individuals experience gains when conforming with those norms and ideals, or losses that derive from the non-conformance. That is how membership in social groups affects individuals' preferences – individuals face losses if their behavior deviates from the group's norms.

As agents' preferences are determined by their identities, the utility functions are broadened by preferences specific for agents' social categories, besides universal and norm-independent preferences, such as wealth maximization (Akerlof & Kranton, 2010). Identity economics enables the analysis of economic outcomes by considering not only pecuniary incentives, but also identities as primary motivations (Kranton, 2016). This framework refines the understanding of the utility function, explaining the utility that individuals pursue as dependent on their identity. Consequently, the choice of identity is regarded as *potentially most important economic decision that an individual would ever make* (Akerlof & Kranton, 2010).

Identity creates a specific type of externalities, since the status of the group an individual belongs to is endogenous – it is affected by the behavior of the individuals that identify with it. Individuals' actions therefore change the group's stereotypes (Akerlof & Kranton, 2002).

The model of utility enriched with social differences and norms can be applied in many different settings. Such models can be used in

explaining work efficiency affected by the workgroup identity (Akerlof & Kranton, 2008) or gender and race discrimination in work organizations (Akerlof & Kranton, 2010). A specific model includes the identity into the *education utility function* (Akerlof & Kranton, 2002). This model implies that educational efforts are not perfect determinants of the economic returns to education. In other words, more abundant school resources are not robustly associated with superior educational outcomes. Students' utility function does include costs of making an effort and returns on education in terms of future income based on the effort, but it also includes their identity. This implies that the students derive their motivation from the social setting of the school as a social institution and from the extent to which their personal norms and ideals adhere to the school ideals (Koch, Nafziger, & Nielsen, 2015). Identities are determined by the social categories the students choose based on the level to which their personal norms and values conform to the norms and values of the social category. When chosen, the social category determines the student's behavior as he or she tries to conform to the ideal characteristics promoted by that category.

The students' decision on the level of educational effort is thereby determined by the ideals of their group and the level of effort that is considered to be acceptable within the group. This way, the efforts are not chosen strictly under the assumption of rational choice, but the decision on investing the efforts in education is dependent on the students' identity. Consequently, this will affect their school performance. For example, conforming to the norms of a social category that nurtures a defiant attitude towards school authorities will affect the relation between students and teachers, leading to students' lower commitment to school obligations and worsening their school performance (Reyes, Brackett, Rivers, White, & Salovey, 2012). In other words, if the prescribed norms of the student's social category differ from the norms of the school (ideal school effort), students will suffer identity loss and underinvest in human capital. In order to preserve their self-image, the students reject the school mission and underinvest in education.

High schools represent the typical social setting where students tend to distinct themselves by identifying with specific groups, according to their norms and ideals concerning dress code, gender, race or educational expectations. Students choose their social identities and define themselves and relationships with other students. This way, students that adhere to groups that align with the mission of the school may achieve solid performance. On the other hand, students identifying with an outside mentality will turn to underperformance as their ideal effort. The problem arises when schools promote *a single ideal type* of student among students from a number of different social backgrounds (Contreras, Elacqua, Martinez, & Miranda, 2016). In such cases, it is advised that schools

promote more than one ideal, so that a number of student groups (social categories) can find a way to identify with the school norms and find motivation for improving their performance (Akerlof & Kranton, 2002). The schools should “build” more than one identity, through investing resources into creating communities within the school that would promote school norms. Promoting more than one ideal makes schools more inclusive and serves the purpose of accommodating various students’ backgrounds. However, this collides with the schools’ attempts to promote particular skills, favoring certain social groups. Therefore, the schools often face trade-offs between creating an inclusive identity, that will conform to many different students’ backgrounds and investing into developing particular skills.

Basically, the implications of the identity theory of education can be summarized in the following way: increasing resources in education may be ineffective, if students’ backgrounds do not allow them to identify with the academic values that schools promote. This view does not diminish the importance of resources (high quality teaching, for example), quite the contrary. However, the sociological perspective highlights the fact that student achievement is to a certain extent dependent on the gap between their self-images and persons the school wants them to be (Akerlof & Kranton, 2002). So the main question does not refer to whether resources improve educational outcomes, but to explain why and when these resources are effective. This represents the rationale to create appropriate education policy measures whose main aim is to promote identities that are in line with the mission of improving educational outcomes. The main contribution of identity economics to the research of education is the theoretical model of the *optimal ideal* the schools should promote and the optimal amount of resources that schools should invest in creating school identities, depending on the extent of student population diversity.

BEHAVIORAL ECONOMICS OF EDUCATION

Taking into *account* that the decisions about educational pathways are made in the early stages of individuals’ lives, there is a significant probability of individuals making poor decisions with long-run consequences. These once-in-a-lifetime choices are by rule particularly difficult to make, which is why individuals tend to be bad at making them (Benartzi & Thaler, 2007). A prominent field of social science research, behavioral economics, is investing growing efforts to explain behavioral barriers in long-run decision making in order to better predict individual outcomes (DellaVigna, 2009). Behavioral economics, integrating insights from psychology, neuroscience and sociology into economic models, is finding its way into the research of education, by exploring why the young and their parents make suboptimal decisions regarding education opportunities. In other words, since it is obvious that

education improves a number of individual outcomes, it is puzzling how individuals invest too little efforts in education (Steel, 2007), or why drop-out rates are increasing (Bridgeland, Dilulio & Burke Morison, 2006). Behavioral science therefore extends the economics models of education, integrating behavioral factors that determine the students' decisions on investing efforts in education and consequently, their long-term welfare. This approach ensures a better understanding of the complexity of the relation between educational efforts and outcomes. The results of research in this emerging field are expected in the domain of developing policies that could mitigate such barriers. In the following sections we provide a brief overview of behavioral economics of education and then we point to the possible interventions aimed at improving individual decision-making in the field of education.

Behavioral barriers to education

The specificity of decision-making regarding education reflects in the fact that decisions on educational investments are made in stages of life when decision-makers have not yet reached the desired level of maturity and are therefore exposed to a scope of behavioral and psychological factors that affect their education decisions (Jabbar, 2011; Koch, Nafziger, & Nielsen, 2015). As human capital theory indicates, individuals make decisions on further education steps at each stage of education, based on the comparison of the costs of education (time, money, effort) and the benefits deriving from it (knowledge, skills, prospects for higher earnings). The literature from behavioral economics implies that students, parents and teachers are affected by behavioral barriers when making educational decisions (Lavecchia, Lui & Oreopoulos, 2016).

The concepts explored in behavioral economics relate to the so-called *soft skills*, which have recently begun to be considered equally important for educational outcomes as cognitive skills (Koch, Nafziger, & Nielsen, 2015). Standard economic models of education have until recently focused on how educational efforts improve individual outcomes mostly through enhancing students' cognitive skills (Arcidiacono, Bayer, & Hizmo, 2010). In the standard model of educational production function (Todd & Wolpin, 2003), student achievement in terms of test scores is determined by students cognitive skills and abilities, in addition to family, school and peer inputs. Soft skills cannot be measured by test scores and they refer to personality traits, beliefs and preferences (Eckstein & Wolpin, 1999; Oreopoulos, 2007; Heckman & Kautz, 2012). Behavioral economics of education focuses on exploring soft skills and their impact on the relation between educational investments and outcomes. It enriches the standard economic theory of education, by adding more realistic assumptions on human behavior, emphasizing *non-standard preferences* and *non-standard beliefs* that affect decision making (Camerer & Loewenstein, 2004).

An important concept in behavioral economics that is considered to significantly affect education-related decisions relates to *time-inconsistent preferences*. Namely, decisions about investing in education are most often accompanied by a trade-off between immediate costs (foregone earnings, learning efforts, boredom) and vague future benefits, in the form of higher earnings. Therefore, individuals are affected by present-biased preferences when weighing the costs and benefits of education (Laibson, 1997). In the absence of self-control, individuals tend to fail in aligning their present behavior with the long-term goals which results in educational under-achievements (Steel, 2007). For example, many empirical studies confirm that present-biased preferences represent a significant factor of drop-out rates (Oreopoulos, 2007; Cadena & Keys, 2015). The mechanism of such influence is explained in the following way: adolescents facing self-control issues often tend to underinvest efforts in studying or procrastinate on important tasks. They also tend to put off important decisions, and are more patient when thinking about decisions that have to be made in distant future than when they have to make them at present. Although graduation seems like a preferable option, these students do not have the ability to sustain effort and resist doing more pleasant activities than attending class, which leads to decreasing class participation (Evans, Baker & Dee, 2016). Time inconsistent preferences are also found to affect student grades, since impatient students are not able to put in consistent effort and resist distractions. It is expected that parents could compensate for the lack of their children's self-control, but research evidence indicates that both parents and children with low social-economic status lack the self-control mechanisms (Golsteyn, Grönqvist, & Lindahl, 2014).

Another form of behavioral bias exists in the form of reference-dependent preferences (Kahneman & Tversky, 1979). According to *prospect theory*, individuals behave differently when facing probable gains opposed to probable losses. In conditions of uncertainty, individuals tend to be risk-averse, but when a probable gain is expected, the risk aversion is higher than in the case of probable losses. Applied to decision-making in the area of education, this means that uncertain gains from investing in education can affect students to underinvest in education. This theory explains that individuals evaluate the outcomes of their decisions relative to a certain reference point. Such reference points (for example, highest educational achievement of the parents) affect students' decisions about enrolling to higher levels of education (Page, Garboua & Montmarquette, 2007). When the status-quo serves as a reference point, individuals often prefer the status-quo as the most familiar option, even though some more attractive options are available (Benartzi & Thaler, 2000). This *default-bias* (Kahneman, Knetsch, & Thaler, 1991) can explain why some high school graduates do not deliberately decide not to enroll into college, but fail to enroll due to minor hurdles, such as missed deadlines (Avery & Cane,

2004). This kind of bias is more pronounced within the social groups of lower socio-economic status, since enrolling to college is not the default option for them.

Paradox of choice is another concept explained in the behavioral economics as a barrier in decision making. First, unlike economic theory assumes, individuals are not in disposal of perfect information about the returns to education (Oreopoulos & Dunn, 2013), nor are they equally capable of processing all relevant information in order to make an informed decision. Cognitive abilities and attentional limitations affect individuals' decision making (DellaVigna, 2009). Furthermore, when faced with a large set of options, individuals often tend not to make any kind of decision, meaning that complexity of information causes poor decision making (Hastings, Van Weelden, & Weinstein, 2007). In such situations, decision makers tend to overestimate the most salient aspects or information. For example, as educational cost in terms of tuition fees are clearly observable before the enrollment, opposed to benefits in distant future, prospective students may make a decision based only on the available information.

Behavioral economics points to the importance of *non-standard beliefs* as barriers to sound decision making. Most of these beliefs relate to individuals' own abilities, in the sense that people tend to be overconfident when their abilities are concerned (Bénabou & Tirole, 2002). Although it is expected that self-confidence can serve as an important determinant of intrinsic motivation, it is not clear whether overconfidence in one's abilities can have a positive effect on educational efforts. For example, if ability and effort are complementary, positive view on abilities can have strong motivational effects on effort. Self-confident students may believe that their efforts will be productive, so they engage in studying with more effort (Chen and Schildberg-Hörisch, 2018). In different settings, when ability and effort are substitutes, overconfident students tend to invest less effort, falsely believing that their ability can substitute for low effort. Empirical studies indicate that small initial differences in self-confidence account for significant variations in human capital accumulation (Filippin and Paccagnella, 2012). The importance of self-confidence in behavioral economics research stems from the fact that it represents the main source of individuals' intrinsic motivation and internal drives. However, when combined with various forms of extrinsic motivation (monetary or non-monetary rewards, grades and ranking), it can produce mixed results on educational efforts and achievements. Namely, intensifying external incentives for the individuals that are already intrinsically motivated can *crowd-out* intrinsic drive (Ariely, 2009).

Behavioral economics and interventions in education policy

The review of behavioral economics concepts that are likely to advance our understanding of educational issues has some important implications for education policy. Introducing psychological aspects of human behavior in education research, behavioral economics starts from more realistic assumptions about human behavior, so the policies based on behavioral economics insights may be more successful in inducing the desired educational outcomes (Jabbar, 2011). As understanding of behavioral mechanisms in place is crucial for a deeper understanding of the complexity of decision-making related to education, experimental studies and empirical evidence provided by this field helps to identify the areas where educational interventions can be successful. For example, educational interventions based on behavioral economics can be designed to affect self-control issues, simplify choice options or reduce the status-quo bias (Lavecchia, Liu & Oreopoulos, 2016). Educational policies, in order to be effective, need to be targeted depending on the particular behavioral barriers affecting individuals' educational decisions (Damgaard, & Nielsen, 2018).

The basic policy tool suggested by the behavioral economics mostly relates to gently pushing the individuals in the desired direction without imposing explicit limitations – the so-called *nudging* (Thaler & Sunstein, 2008). In the area of education policy, this would mean nudging students and their parents toward better decision making concerning education, based on understanding specific behavioral barriers in place. The types of nudging interventions in education depend on: 1) whether they affect active or passive decision making, and 2) whether they are aimed at changing the decision environment or making additions to it. The main differences along these two dimensions are the following ones: an active decision making requires well informed, skilled and motivated individuals, whereas it is not needed for the passive decision making. Also, interventions aimed at changing decision environment are aimed at removing limitations that inhibit the desired behavior, while additions to the decision environment are aimed at compensating the missing ingredients which constrains the desired behavior.

The type of educational interventions aimed at affecting passive decision making by changing the conditions in which the decisions are made refers to *pure nudges*. They include default effects (Thaler & Benartzi, 2004), aimed at changing defaults that individuals are most likely to choose (Johnson & Goldstein, 2003); framing interventions, that represent small changes in decision environment, such as presenting different aspects of already available information (Benhassine, Devoto, Duflo, Dupas, & Pouliquen, 2015) or gain/loss prospects (Levitt, List, Neckermann, & Sadoff, 2016); and peer group manipulations, that facilitate peer interaction in order to create a sense of social belonging or group identities (Carrell, Fullerton & West, 2009). A number of nudging interventions aimed at

passive decision making uses small additions in the decision environment in terms of adding information that could potentially alter the students' behavior, by improving their self-confidence or self-images, consequently inducing better educational outcomes. For example, they include creating a sense of social belonging (Walton & Cohen, 2011), building identities (Chande et al., 2015) or the so-called *mindset* interventions, that explain the students that their ability to learn is not fixed but malleable (Yeager et al., 2016).

The other line of nudging interventions is aimed at influencing active decision making, by adding information, capacity or skills necessary for making decisions about education. These interventions are effective in situations when parents or students are missing important information, although it is publicly available, about child behavior, efforts or attendance (Rogers & Feller, 2016), returns to schooling (Fryer, 2016) or financial aid (Hoxby & Turner, 2015). Providing basic assistance to individuals with attention or cognitive limitations (for filling forms or college applications) is also found to induce better educational outcomes (Oreopoulos and Ford, 2016). Finally, individuals with self-control problems may benefit from nudging interventions that boost their skills, that would enable them to mitigate the behavioral barriers, such as forward-looking or goal setting skills (De Paola and Scoppa, 2015). The effectiveness of each of these interventions is dependent on whether it is targeting the particular constraining factor for making a decision.

CONCLUSION

This paper provides an overview of interdisciplinary research on education, meant to explain *the black box* of educational issues, by extending economic research on education in new directions. It aims to draw attention to the concepts from neighboring social disciplines that could shed a new light on the education research and suggest directions for further research. The insights from identity and behavioral economics challenge conventional economic reasoning, broadening the economic models by introducing norms, social differences and mechanisms of human behavior.

Identity economics offers an insightful framework that synthesizes economic and sociological views in the attempt to determine how to effectively deploy resources in education. This line of research enriches the economic models with social differences and norms, and implies that investing additional resources in education may be ineffective if student's social norms do not allow them to identify with the school values. Education policy implications that can be derived from this research relate to the need for promoting identities that are aligned with the ideal of improving educational outcomes. Resources invested for this purpose are a function of student population diversity.

Behavioral economics contributes to the research on education by focusing on the behavioral barriers that students as decision makers are exposed to. Starting from realistic assumptions on human behavior, insights from behavioral economics complement economic models in order to enhance our understanding of behavioral responses that affect long-run educational decisions. The amount of resources invested in education falls within the non-standard decision making, which adds to the complexity of educational decisions. Behavioral economics offers a wide range of policy interventions, targeted at the particular behavioral barriers that constrain individual decision making.

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ПРЕИСПИТИВАЊЕ ЕКОНОМСКЕ ТЕОРИЈЕ ОБРАЗОВАЊА – УВИДИ ИЗ ЕКОНОМИЈЕ ИДЕНТИТЕТА И БИХЕВИОРАЛНЕ ЕКОНОМИЈЕ

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Резиме

Образовању као истраживачкој теми у оквиру економске науке углавном се приступа са аспекта теорије људског капитала, која имплицира да појединци одлуке о томе колико ће ресурса (времена, напора, новца) уложити у образовање доносе на основу очекиваних приноса од образовања. Међутим, овакав приступ занемарује могуће утицаје социолошких, политичких и психолошких фактора на одлуке рационалних појединаца у вези са образовањем. Рад представља преглед новијих увида, проистеклих из истраживања образовања у оквиру других дисциплина, а која се простиру дуж интердисциплинарних граница са економском теоријом. Ови увиди нуде разјашњења околности под којима улагање ресурса у образовање може бити исплативо, а која постојећи економски модели не пружају или само делимично објашњавају.

Социолошко схватање образовања и његово укључивање у економске modele приказани су у оквиру економије идентитета – дисциплине која кључне соци-

олошке концепте, попут друштвених категорија, идеала и идентитета, укључује у индивидуалне функције корисности од образовања. Економија идентитета укључује социолошку перспективу, која студенте сагледава као примарне доносиоце одлука, а школе и универзитете као друштвене институције које утичу на ефикасност инвестирања ресурса у образовање. Овакав концептуални оквир омогућава прецизније дефинисање функције корисности, указујући на то да је корисност коју појединци остварују, између осталог, функција њиховог идентитета. Идентитети су одређени друштвеним категоријама за које се студенти опредељују на основу тога у којој су мери њихове вредности и норме усклађене са нормама и вредностима друштвене категорије. Након избора друштвене категорије, понашање појединаца одређено је припадношћу друштвеној категорији, у смислу да појединци усклађују своје понашање са идеалима које дата категорија охрабрује. Растућа улагања у образовање могу да буду неефикасна уколико појединци због свог друштвеног порекла не могу да се идентификују са академским вредностима које промовишу школе. Кључни допринос економије идентитета истраживању образовања представља теоријски модел којим се утврђује које идеале школе треба да промовишу, као и оптимална количина ресурса које школе треба да инвестирају у стварање школских идентитета, у зависности од степена диверзификације студентске популације.

Са друге стране, проширење економских модела увидима из психологије који се тичу људског понашања спада у домен бихевиоралне економије. Како доношење одлука у вези са образовањем подлеже различитим пристрасностима којима су појединци изложени, бихевиорална економија доприноси потпунијем разумевању начина на који се доносе одлуке у вези са образовањем тако што ствара реалистичне моделе понашања и објашњава обрасце одступања од рационалног понашања. Бихевиорална економија образовања усмерена је на истраживање личних особина и вештина (тзв. *soft-skills*) и њиховог утицаја на однос између улагања у образовање и образовних исхода. Овај приступ обогаћује стандардну економску теорију образовања тако што полази од реалних претпоставки о људском понашању, наглашавајући нестандартне преференције и уверења која утичу на доношење одлука. Основна мера образовне политике коју сугерише бихевиорална економија односи се на благо усмеравање појединаца у жељеном правцу, без успостављања експлицитних ограничења – тзв. гуркање (*nudge*). Типови оваквих интервенција у образовању разликују се у зависности од тога да ли утичу на активно или пасивно одлучивање, као и од тога да ли су усмерени на измену окружења у коме се доносе одлуке или на његову допуну. Ефективност оваквих интервенција зависи од тога да ли су усмерене на конкретан ограничавајући фактор рационалног одлучивања.