social sciences

MDPI

Article

The Effect of Resilience and Gender on the Persistence of Higher Education Students

Tímea Ceglédi *, Hajnalka Fényes * and Gabriella Pusztai *

Center for Higher Education Research and Development, University of Debrecen, 4032 Debrecen, Hungary
* Correspondence: cegledi.timea@arts.unideb.hu (T.C.); fenyes.zsuzsanna@arts.unideb.hu (H.F.); pusztai.gabriella@arts.unideb.hu (G.P.)

Abstract: Based on several studies, after exiting higher education there are serious gender differences in the labor market, and disadvantages of people with worse social background also exist. Research question of this study is whether such inequalities in students' persistence also exist, or not. Based on a survey (n = 2199) conducted in a region of Central and Eastern Europe, we use cluster analysis to characterize resilient students (with unfavorable social backgrounds and good performances), and carry out stepwise linear regression to reveal the effects on students' persistence. We found that persistence is not the highest among resilient students, as presumed. They still cannot break through the glass ceiling set by students from better social backgrounds in relation to persistence. In accordance with the previous research results, however, females' higher persistence can still be shown, despite their less favorable social background.

Keywords: resilience; gender; persistence; postsocialist countries; higher education

check for updates

Citation: Ceglédi, Tímea, Hajnalka Fényes, and Gabriella Pusztai. 2022. The Effect of Resilience and Gender on the Persistence of Higher Education Students. *Social Sciences* 11: 93. https://doi.org/10.3390/socsci11030093

Academic Editor: Nigel Parton

Received: 22 December 2021
Accepted: 16 February 2022
Published: 22 February 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright: © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

1.1. The Background of Persistence. Finding New Links

At the beginning of the 20th century, the participation of women and people from the lower strata of society in higher education was a curiosity and rarity. In contrast, now, it is females who are in the majority in higher education and the number of socially underprivileged higher education students is also on the rise. While their disadvantage was unambiguous before, the links are now increasingly differentiated and not apparent. According to one prediction, students from an unfavorable background are expected to underperform academically. However, there is a growing interest in those who are still successful academically despite their social disadvantages. In the sociology of education, they are called resilient students (Ceglédi 2018; Çelik 2017; OECD 2019; O'Shea 2020; Reay et al. 2009; Wong and Chiu 2019). As for women, the phenomenon that they are in the majority in certain high prestige fields of study (law and economics or business), despite their less favorable social background (Fényes 2010a, 2015), is contrary to expectations.

The combined effect of social background and gender is not analyzed frequently. Women and resilient students, who use education as a channel of mobility, are similar in that they tend to follow the manifest regulations of the education system. This is demonstrated by their effort towards better grades and maximizing class attendance (Ceglédi 2018; Fényes 2010b; Fényes and Ceglédi 2010). The strategy seems effective in public education: females graduate from secondary education with better results and enter higher education in larger proportions, while resilient students, a subset of those who face social disadvantages, can also be regarded successful. After higher education, however, inequalities arise again: the literature shows the glass ceiling phenomenon for both women and disadvantaged graduates compared to less disadvantaged and male graduates, which may materialize in earnings or in the obtained positions (Laurison and Friedman 2016). Thus, the tendency is reversed in higher education: the advantage at entry could become a disadvantage in

the labor market after graduation (even if it can be considered a relative disadvantage compared to males and socially advantaged graduates with the same graduation), which is why it is instrumental to examine this environment, where inequalities among university students become pronounced (e.g., Altbach 2010; Lucas 2001; Róbert 2000; Shavit et al. 2007; Vukasovic and Sarrico 2010).

Our research question is the following: do inequalities in attrition become more pronounced during higher education years; are inequalities in access to degrees shifted upwards (Boudon 1974; Bourdieu and Passeron 1977; Goastellec 2010; Róbert 2000)?

The combined examination of gender and social background differences is also justified by males' better social background upon entry into higher education, which can be observed in the investigated countries and in the US (Fényes 2010b, 2012; Buchmann et al. 2008). In developed countries, females from poor backgrounds are already appearing in higher education, and females have even greater social mobility than men—in this, they resemble resilient students. Females could be at a double disadvantage due to their less favorable situation. Disadvantaged students who have reached higher education have been assisted in compensating their disadvantages by behavioral patterns similar to those of females (diligence, norm-following, etc.) (Ceglédi 2018). In addition, horizontal segregation between genders in higher education is larger among low status students (Seehuus 2019) (in less developed countries, fewer women enter higher education and only those from better backgrounds).

Women and resilient students are also similar in that they strive for good marks, foresee more rigid career paths (e.g., they might plan another degree of the same level but not a higher level qualification), and make use of the extracurricular opportunities of higher education to a lesser extent (publication, participation in student conferences, college for advanced studies, etc.), which could be useful for a potential career in academia (Fényes and Ceglédi 2010).

The investigated countries (Hungary and neighboring countries) may provide an important lesson for international researchers because substantial inequalities in horizontal educational segregation and labor market outcomes are present with respect to gender and parental background (Körtvélyesi 2019; Nagy et al. 2016).

1.2. Resilience

The word is of Latin origin and signifies rebound, spring, elasticity, and the perseverance despite adverse circumstances (Békés 2002; Masten et al. 2008; Sugland et al. 1993; Waxman et al. 2003). There is growing interest in the approach to resilience, wherein the emphasis is on positive outcomes: considering challenges as a learning process, adapting to changes, and overcoming failures in a way that is creative and assists subsequent perseverance (Ceglédi 2018; Endress 2015; Masten et al. 2008; Stark 2014; Wellensiek 2014). In the PISA study, resilient students are defined as those whose social background is in the lowest tercile or quartile but whose achievement is in the highest (Agasisti et al. 2018; OECD 2019).

In previous studies, resilient students were defined as those who perform exceptionally despite their unfavorable social background (Ceglédi 2015, 2018). In a more recent study, the category of 'students with resilience potential' was introduced to refer to those who have entered higher education with the potential for resilience, that is, with outstanding achievements. According to the findings from the above mentioned study, the higher education career path of students with resilience potential diverges from that of students who have entered higher education with similar (good) performance but from a favorable family background (we refer to them as beneficiaries, based on the definition of winners (Bourdieu and Passeron 1977)). Bourdieu and Passeron (1977) have argued that those who start their lives from a favorable background can be considered as winners – beneficiaries. Students with resilience potential are often unable to break through the 'ceiling' set by beneficiaries as regards certain indices of extracurricular performance, such as language certificates and intellectual relationships with professors and fellow students (Ceglédi 2018). As a result, the number of students with resilience potential declines over the years spent

in higher education because only a fraction remains resilient throughout the program (who could be called continually resilient students). The phenomenon of diverging performance in public and higher education is also highlighted in the international literature (Benjamin 2015; Rodgers 2007). Thus, social inequalities reappear, are shifted upwards, and become more pronounced in higher education.

The biographical interviews that were conducted with resilient students reveal that, on account of their unfavorable social background, they have had to face various risk factors; in other words, they have not been shielded from residence related disadvantages, crises of the family structure, and the impact of subpar schools, which would have been atypical but might have explained their resilience. Conversely, the process of overcoming such issues has given resilient students a much greater momentum compared to those who have faced fewer adversities. This has been referred to as the 'springboard effect' (Ceglédi 2018). Resilient biographies often feature the contribution of strong external compensating factors (e.g., parents who assist studies as best as they can, influential teachers, strong peer relationships). In resilient students' lives, the effect of risk factors has been neutralized by internal and external compensating factors (Ceglédi 2018). Perseverance in higher education is one of the internal compensating factors that has allowed them to continue on the path of overcoming difficulties.

1.3. The Background of Gender and Social Inequalities

By and large, female disadvantage in the access to higher education seems to have disappeared and disadvantages due to family background are also equalized in part; but what happens during the years spent in higher education? We can distinguish between two factors. (1) First, the quality of admission (where are females and disadvantaged students admitted to?). (2) Second, the completion of the higher education career path, namely, student persistence (do females and disadvantaged students stay in higher education?).

Inequalities do not arise from the mere fact of admission but rather from the types of institutions, fields, and programs where gender and social inequalities are present. In other words, inequalities of access are replaced by social (Altbach 2010; Goastellec 2010; Hrubos 2014; Lipset and Zetterberg 1970; Lipset et al. 1959; Lucas 2001; Róbert 2000; Shavit et al. 2007; Stich 2018; Vukasovic and Sarrico 2010) and gender (Bradley 2000; Charles and Bradley 2002; 2009; Dryler 1998; Jacobs 1996; Macarie and Moldovan 2015; OECD 2019; Pinker 2008; Seehuus 2019) inequalities through the internal stratification of higher education.

In this study, we examine whether a positive outcome appears in avoiding attrition, that is, in persistence. In our research question, we ask whether nontraditional students who enter higher education with a resilient history or as females display more perseverance, dedication, and persistence.

1.4. Students' Persistence

Student attrition is an unusually difficult phenomenon to measure. Some studies differentiate between persistence and retention. The former is defined as the successful completion of students' individual higher education career upon graduation, irrespective of whether they have switched institutions. In contrast, retention considers the institutional perspective and refers to adherence to one institution (St. John et al. 2001). Analysis of Central European higher education data has shown that transfer students, who change higher education institutions in order to complete higher education studies, are more at risk than students who persist in the same institution, where they started (Pusztai 2015). Looking at institutional data helps identify those who continued their studies in the following year without any interruption, as well as those who left the institution, but it is extremely rare to possess enough data at the institutional level to uncover the reasons for such a crisis. However, individual interviews with students provide information about their assessment of their own graduation prospects, their confidence in successful graduation, and their evaluation of the value and usefulness of their studies; in other words, their persistence.

This also allows the distinction between persistent and nonpersistent (or less persistent) students. Our research center has adapted the statements of the Persistence/Voluntary Dropout Decision Scale (Pascarella and Terenzini 1980) in connection with the commitment to graduate and has measured students' persistence on a four-item Likert scale since 2012. Based on Astin (1993), the scale incorporates students' commitment to successful graduation as well as their efforts to that end.

The likelihood of becoming a persistent student is elevated by strong, multiplex relationships with professors and lecturers (Berger and Braxton 1998; Pusztai 2015; Tinto 1987), but the relationship with one's parents has an even more significant effect (Pusztai 2019).

It is important to examine how student persistence is affected by social and demographic background variables and by students' educational career. It is often presumed by education policy and institutions that less persistent students are probably not sufficiently prepared. The review of the literature shows that many studies find a correlation between lower entry scores and failures in the first academic year, whereby a low level of persistence is developed due to poor academic performance (Kabathova and Drlik 2021; Reason 2009). In contrast, the first successful entry, favorable exam results, and good grades in the initial years all increase persistence.

However, it is a known fact that social inequalities are reflected in academic performance. In a similar way to varying competence levels and educational careers, differences in student persistence can also be traced back to factors of status. To make the correct decision in connection with higher education, information is needed, the access to which also displays social inequalities: socioeconomic status correlates with career orientation based on the realities of the education offered (Nakajima et al. 2012). This is perhaps why one can observe higher persistence among students at institutions that provide an opportunity to correct misguided decisions, set flexible requirements, and assist the improvement of disadvantaged students (Heublein 2014).

The link between persistence and social background has also been studied extensively from another approach (Alexeevna et al. 2017; Altbach 2010; Ceglédi 2018; Vukasovic and Sarrico 2010). It is widely accepted in the literature that parents' low educational attainment could be accompanied by the absence of extensive intellectual knowledge and that low status and first generation students are less persistent, as they do not see an example in the family, which would secure their conviction about the usefulness of their studies (Hernández et al. 2017; Stinebrickner and Stinebrickner 2014). It is revealed in Pusztai's analysis (2019) that high parental status does not affect persistence directly, but comparatively high status students at selective institutions are indeed more persistent. Interactions between institutional and social variables may also arise (Peltier et al. 2000).

Many have found a positive link between persistence and the financial resources directed towards the children's education by the family (Alon 2011; Chen 2012). Pusztai's analysis (2019) found that financial affluence rather decreases persistence. We explain this by the fact that financial security allows for greater educational experimentation and selection, which is why an above average financial status diminishes the importance of higher education studies in status acquisition (Pusztai 2019). In other words, cultural capital from the parents increases and financial capital decreases persistence. We may conclude that the effect of social background is somewhat ambiguous. In addition, individual performance might outweigh the effect of one's background, as evidenced by socially disadvantaged but high achieving resilient students (Ceglédi 2018).

Persistence also varies as a function of gender and age (Aina 2013; McNabb et al. 2002). Tinto (1987) highlights that older students are less persistent, but the findings with respect to gender are mixed because of frequent interactions with other variables; for example, older female students are less persistent and females are more sensitive to unfavorable results and professors' indifference (Casanova et al. 2018; Leppel 2002; Reason 2009). It is also established that women are more committed to their educational objective; what is more, some even argue that the declining attrition trends of the 1970s were caused by females' large scale higher education entry (Pusztai 2019; Wolter et al. 2014). In sum,

20th-century studies mostly point to females' lower persistence, while evidence on females' advantage has been increasingly common since the 2000s (St. John et al. 2001; 2013).

The fact that persistent students are underrepresented in certain (STEM) fields of study, which are traditionally male dominated, is not unrelated to gender differences. Whether such differences are caused by the alienating effect of the institutional culture or the pull of the labor market is debated (Lassibille and Gómez 2008; Maltese and Tai 2011).

In conclusion, higher education attrition has been studied for various decades, during which the student body has gone through significant transformations, new risk groups have emerged, and previously nontraditional groups are now dominant, so the link between persistence and certain background variables does not remain constant.

1.5. Hypotheses

The social background of the students' family affects both performance and higher education persistence. Previous studies have shown that children of parents with low educational attainment are less persistent (Hernández et al. 2017; Stinebrickner and Stinebrickner 2014). This is mostly explained by the lack of parental higher education experience, the reluctance to make long term educational investments (by deeming them too risky compared to available resources, which would be used appreciably), and the overvaluation of minor setbacks in the educational career (Bocsi et al. 2019; Ceglédi 2018; Tóth et al. 2019). At the same time, a recent study shows that a favorable financial situation in the family is also associated with lower persistence, which was explained by the phenomenon of 'experimenting socialization' (Pusztai 2019; Pusztai et al. 2019). In other words, the family's cultural capital increases but its financial capital decreases persistence. However, the link between social status and persistence is further convoluted by the experience acquired during the educational career: for instance, persistence is enhanced by students' favorable academic performance (Reason 2009).

H1. *Based on previous findings, we hypothesize that the impact of social background on persistence is indiscernible (as positive and negative effects neutralize one another), while good academic performance is presumed to increase persistence among the examined students.*

However, our study focuses on resilient students, so we are mostly interested in the interaction between the effects of social background and performance on persistence. The potential negative effect of unfavorable background might be offset if it correlates with elevated academic performance (Boudon 1974).

H2A. *According to our hypothesis, it is possible that resilient students, who attend classes more regularly and are likelier to follow the norms (see Ceglédi 2018), are also more committed to graduate (that is, more persistent) than their peers from better backgrounds.*

H2B. *According to our alternative hypothesis, it is possible that resilient students' persistence remains below that of their affluent peers. Their commitment is 'emptier' and more 'ritual' compared to students from better backgrounds, which is in connection with how they confront their realistic future prospects (e.g., glass ceiling effect in earnings) (Ceglédi 2018, 2019).*

The next topic we examine is the presence of gender differences in student persistence. Recent studies reveal stronger higher education persistence among women (Casanova et al. 2018; Leppel 2002; Pusztai 2019; Reason 2009; Wolter et al. 2014). According to our observations on male educational plans, the threshold in social background to planning long term higher education studies is significantly higher for men than for women because their ambitions to establish financial status are also stronger (Fényes 2012, 2015). Consequently, men are likely to be discouraged by minor academic setbacks (unsuccessful exams, prolonged duration of studies, transfer to self-funded status) and are thus less persistent. In our study among dropouts, males were also in the majority (Pusztai et al. 2019).

H3. *Based on the above, we hypothesize that females are more persistent than males, despite their less favorable social background.*

2. Materials and Methods

2.1. Materials

The database consists of a large sample student survey[1] (n = 2199), conducted in the academic year 2018/19. The sample consists of full time bachelor's students in their second year and of second year or third year students from undivided programs which offer a master's degree. The survey was carried out at higher education institutions in eastern Hungary and in four other countries[2] (Slovakia, Romania, Ukraine, Serbia). The latter institutions are similar in that they are all located in areas with a significant Hungarian minority (a total of about two million Hungarians reside in the listed four countries). Pusztai and Márkus (2019) showed that students' social status in the examined regions is the best in Hungary and the worst in Romania and Ukraine. It is also important to highlight that students' social status at the investigated Hungarian institutions is below the national average, mostly due to the composition of the catchment area (Kozma et al. 2014).

The Hungarian subsample was collected using quota sampling and is representative with respect to faculty, field of study, and form of funding. At institutions outside Hungary, the aim was probability sampling: groups of students in university/college courses were selected and surveyed exhaustively. Of all students, 47.2 percent studied in Hungary, 33.4 percent in Romania, 8.6 percent in Ukraine, 5.8 percent in Slovakia, and, finally, 4.4 percent in Serbia.

2.2. Methods

Our method is quantitative. First, cluster analysis was carried out based on performance and social background variables to characterize four student groups. Second, the principal component created from persistence indicators was used as dependent variable in linear regression models to test our hypotheses. The included explanatory variables were the following: three dummy variables indicating the respective cluster and gender. The variables were included in two steps due to potential multicollinearity among explanatory variables.

2.3. Explanatory Variables

2.3.1. Social Background and Performance

Based on previous studies, resilient students and their control groups were identified based on social background and academic performance.

In establishing the groups, we utilized Beck's (1983) theory on the individualization of risks and their combination to treat social background indicators as risk factors through index creation. This helps identify students who struggle the most with disadvantages of background, allowing the disadvantages to materialize in any combination. Our approach is most closely comparable with the diversity of nontraditional groups in higher education (Engler 2019; Hrubos 2014; Pusztai 2015) and with the multidimensional individualized disadvantage concept (Ceglédi 2018; Mayer and Müller 1971; Vukasovic and Sarrico 2010).

We created an index based on nine social background variables (which were standardized, summed, and then standardized again) (Table 1). Variables recorded the father's or mother's employment status at the time of the survey (1: employed, 0: not), the parents' level of education (the father's and mother's years of education), and the place of residence at the age of 14[3] (1: urban, 0: rural). Four indicators of financial status were also included in the index of social background. The family's financial situation was measured by the possession of durable consumer goods[4] and by a subjective financial situation indicator, which compares the family's financial situation to the student's peers (on a 1–5 scale with 3 as the average situation). To capture the individual financial situation objectively, we created a composite index indicating the possession of durable goods[5] and a subjective indicator of individual financial situation,[6] exploring whether the student can afford a significant purchase or is unable to cover even the basic expenses.

Table 1. Descriptive statistics of the 9 items of the social background index.

Items	Descriptive Statistics
father's employment status	employed 88.5%, not employed 11.5%
mother's employment status	employed 83.9%, not employed 16.1%
father's years of education (6–20)	mean = 12.66 standard deviation = 2.54
mother's years of education (6–20)	mean = 12.91 standard deviation = 2.6
place of residence at 14	urban 62.3%, rural 37.7%
family's objective financial situation index (0–9)	mean = 5.93 standard deviation = 2.09
family's subjective financial situation index (1–5)	mean = 3.32 standard deviation = 0.77
student's objective financial situation index (0–6)	mean = 1.69 standard deviation = 1.5 [1]

[1] Source: Persist 2020 (n = 2199).

Most of the respondents' parents were employed at the time of the survey (88.5 percent of fathers and 83.9 percent of mothers). On average, the years spent in education amounted to 12.66 for fathers and 12.91 for mothers, indicating that parents in the sample usually graduated from secondary education. At the age of 14, most respondents resided in a larger town or city (62.3 percent) and only 37.7 percent lived in a rural area. The mean values of composite indicators measuring the family's financial situation were slightly above a moderate level, while the students' individual financial situation was ambiguous (the low mean value of the objective indicator could have been the result of the index components, which mostly included luxury goods which were not yet widespread in the region). Since the standardized index values of social background varied substantially by country (see Table 2), the indicator was adjusted by the mean of the respective country.

Table 2. Mean and standard deviation of the standardized social background index by country.

Country	Mean	Standard Deviation	*n*
Hungary	0.22	0.96	943
Romania	−0.17	1.02	615
Ukraine	−0.31	1.05	148
Slovakia	−0.13	0.83	98
Serbia	−0.52	0.87	79 [1]

[1] Source: Persist 2020 (n = 1883).

To achieve a single indicator of performance, we used a series of items[7] measuring academic performance, which was transformed into an index (mean = 2.66; standard deviation = 2.64). In addition, we also utilized an internationally comparable scale reflecting the student's self-evaluation with respect to academic performance[8] (1–5, mean = 3.68; standard deviation = 0.73). The performance index and the subjective assessment of student performance were then standardized and combined to create a principal component, with 64.14 percent of the total variance explained.

Table 3 reveals that student performance was above the average in Serbia, Romania, and Ukraine and below the average in Hungary and Slovakia. This could be the result of differences between the institutional settings of higher education in certain countries, which might affect students' activity as regards research or scholarships, for example. In addition, the programs are also different because teacher education is overrepresented among the institutions outside Hungary. To identify resilient students and correct for differences between countries, the principal component of performance was also adjusted by the mean of the respective country.

Table 3. Mean and standard deviation of the principal component of performance by country.

Country	Mean	Standard Deviation	*n*
Hungary	−0.14	0.94	1010
Romania	0.15	1.08	701
Ukraine	0.13	1.02	187
Slovakia	−0.06	0.9	125
Serbia	0.18	0.87	92 [1]

[1] Source: Persist 2020 (n = 2115).

2.3.2. Gender

In the sample, 70 percent of respondents were female and 30 percent were male. Based on data from the Higher Education Information Centre (FIR 2020), the females share in Hungary in 2018 amounted to 55 percent. The higher female share in the sample is most likely due to the overrepresentation of teacher education students, most of whom are women, at institutions outside Hungary.

2.3.3. Dependent Variable

In the regression models, the dependent variable was the principal component of persistence, which was created from the following four items: my studies will be useful in my professional career; I am very committed to graduate; I aim for the best academic results possible; I do everything in my power to attend lectures, seminars, and practice sessions (Likert scale 1–4, Cronbach's alpha is 0.74). The questions were adapted based on French et al. (2005). The principal component explained 56.7 percent of the total variance.

3. Results

To start, we conducted cluster analysis with respect to the social background index and the principal component of performance, whereby the clusters were created and named based on previous analyses (Ceglédi 2015, 2018).

Some 472 students constituted the cluster of resilient students, with a high cluster center for performance and a low one for background (Figure 1).

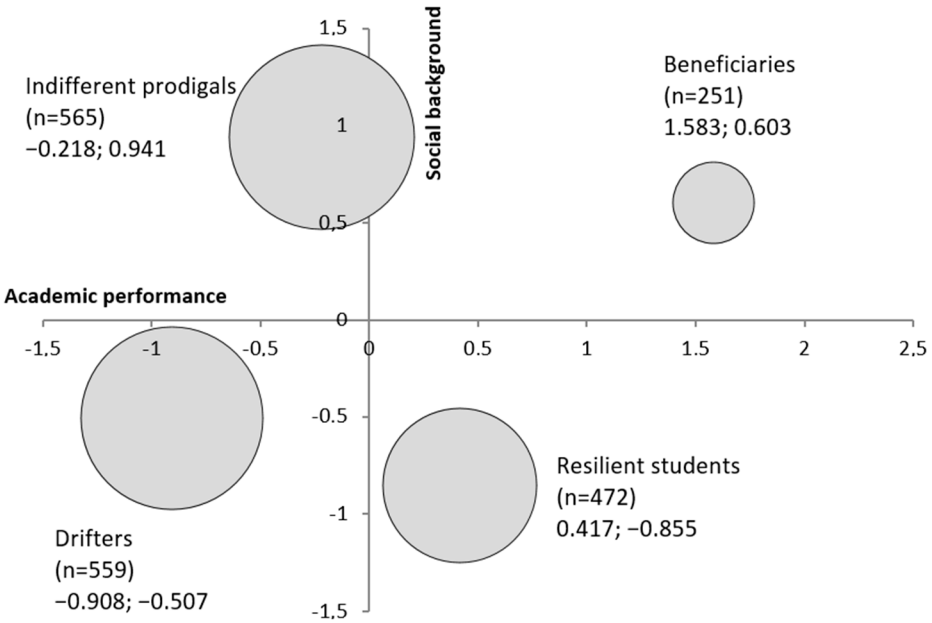

Figure 1. Clusters with respect to the social background index and the principal component of performance. [1] Source: Persist 2020 (n = 2199).

Some 251 students displayed good performance, in accordance with what is predictable from their favorable background. We referred to them as beneficiaries according to Bourdieu and Passeron (1977)—see above. In previous studies, where clusters were identified based on performance at entry, beneficiaries and resilient students performed in a very similar way, so they could be compared as two high achieving groups. In this case, however, we examined performance in the course of higher education, whereby the affluent cluster performed extraordinarily well, while the disadvantaged ones performed above the average but not as well as beneficiaries. This might show how difficult it is in higher education to compete with the most advantaged group in society.

Drifters (559 students) had an unfavorable background and poor performance. They displayed the determining effect of social background on performance. They served as a control group for resilient students with respect to background; in other words, it was possible to compare the two clusters that have similar background but distinct performance, to uncover the existence and magnitude of differences in persistence. What is especially interesting is how resilient students, who have overcome their disadvantages, had an even less favorable background than drifters. The springboard effect of resilience (progressing from below to above), presented in the theoretical section, might be at play here. Risk factors can also be interpreted as occasions for the individual to overcome difficulties and learn successful coping strategies (Ceglédi 2018).

The largest group consisted of indifferent prodigals (565 students), who underperformed in higher education despite their favorable social background. Consequently, they were the inverse of resilient students. It is possible that they only took part in higher education to maintain or avoid a descent in their social status, to preserve social prestige, or on account of its consumption value (Lipset and Zetterberg 1970). However, we must be careful when making assumptions about indifferent prodigals' values because we only had data on their performance.

To continue, we used the method of linear regression to uncover the effect of belonging to a cluster and gender on higher education students' persistence. Before including the cluster variables, we included in the regression model the social background index and the principal component of performance separately, whereby the effect of background was not significant but performance increased persistence, in accordance with the literature and our first hypothesis (H1).

We also looked for potential multicollinearity between explanatory variables. Cluster dummies were correlated with gender (the significance of Chi-square test was 0.029). The female share was the following, by cluster: indifferent prodigals, 67.4 percent; drifters, 71.5 percent; beneficiaries, 68.9 percent; resilient students, 75.6 percent; average, 71 percent. Clearly, females are overrepresented among resilient students and underrepresented among indifferent prodigals. However, there is no definite overlap between resilient students and females, which is why it is interesting to investigate the two indicators jointly as factors behind persistence. Stepwise inclusion of explanatory variables was used to treat multicollinearity in the regression model[9] (Table 4).

Table 4. Coefficients of linear regression models with the principal component of persistence as dependent variable.

	Model 1 Beta (Sign.)	**Model 2 Beta (Sign.)**
cluster dummy variables (ref.: drifters)		
-resilient students	0.174 ***	0.170 ***
-beneficiaries	0.206 ***	0.209 ***
-indifferent prodigals	0.11 ***	0.115 ***
gender (1: male)	-	−0.135 ***
Adj. R-squared	0.04	0.058 [1]

[1] Source: Persist 2020 (n = 2199); *** marks significance below 0.001.

After the inclusion of the cluster variables based on background and performance, it was beneficiaries who showed persistence the most, followed by resilient students and indifferent prodigals. Once gender was included, the effects changed only slightly, if at all. Compared to drifters (reference category), all three other cluster dummies increased persistence in a significant way. The fact that beneficiaries surpassed resilient students in persistence mostly strengthens our H2B alternative hypothesis and is partly a consequence of our H1 hypothesis, namely, that performance affects persistence more substantially than background does and resilient students lag behind beneficiaries in academic performance during higher education (see Figure 1). In contrast, females' higher persistence could be shown, in accordance with our third hypothesis (H3). The inclusion of gender did not alter the effect of clusters significantly.

4. Discussion and Conclusions

The international literature uses different concepts to approach access to higher education and access to degrees (Goastellec 2010). There are various factors that affect whether someone is persistent or not. Of these factors, family background and academic performance seem highly important. With regard to academic performance and social background indicators, we characterized four student groups through cluster analysis: resilient students (unfavorable background, good performance), beneficiaries (favorable background, good performance), drifters (unfavorable background, poor performance), and indifferent prodigals (favorable background, poor performance). Among factors behind persistence, we also examined the effect of gender through a stepwise regression model.

Based on previous literature and the results of this paper, the following overall conclusions can be drawn about the rise of social and gender inequalities in higher education: There is no discernible female disadvantage at entry; in fact, most higher education students are now female. Although the entry is more difficult for the underprivileged, there are some disadvantaged students who display similar academic performance to those from favorable backgrounds (students with resilience potential).

Once they are admitted, they study in less favorable higher education programs, so horizontal segregation exists.

In previous analyses of the years spent in higher education, the academic extracurricular underperformance of females and disadvantaged students was interpreted as the materialization of increasing inequalities.

The importance of this paper is that it has investigated persistence during higher education years: the two variables in question (gender and social resilience) were different, however.

Although resilient students displayed higher persistence than drifters or indifferent prodigals, they encountered the glass ceiling set by students from a favorable background when compared to beneficiaries. Thus, the first hypothesis (H1) could be partly accepted. The potential negative effect of unfavorable background correlated with elevated academic performance (Boudon 1974), but performance could not entirely compensate for the negative impact of background. These results are also consistent with hypothesis H2B: resilient students' persistence remained below that of their affluent peers, which can be explained by their 'emptier' and more 'ritual' commitment compared to students from better backgrounds, which can be connected to how they confront their realistic future prospects (e.g., glass ceiling effect in earnings) (Ceglédi 2018, 2019).

These findings contain an important message to international academic readership and practitioners dealing with higher education: the results imply that social inequalities affect not only the access to higher education but also the access to degrees.

This inequality was not discernible in females' attrition risk. Despite their less favorable social background, females' higher persistence can still be shown. It seems that the turning point for women could appear later, in the labor market (Nagy et al. 2016), just before motherhood (Combet and Oesch 2019). Thus, our third hypothesis (H3) was confirmed.

The findings are also important for education policy: the mere entry to higher education does not compensate disadvantages of background in itself, and the first traces of the subsequent glass ceiling for women can be found in higher education as well.

Among the factors behind social and gender inequalities (the quality of admission and attrition), there is a third consideration to be examined in the future, namely, how the time spent in higher education is characterized with respect to career building and academic achievements (what females and disadvantaged students do during their time in higher education and how much it is affected by male or female dominance in the field).

Author Contributions: T.C., H.F. and G.P. discussed the results and implications and commented on the manuscript at all stages. The article was written equally by the three authors. All authors have read and agreed to the published version of the manuscript.

Funding: This paper has been implemented with the support provided by the Research Programme for Public Education Development of the Hungarian Academy of Sciences and the ÚNKP-20-4-II. New National Excellence Program of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund. Project no. 123847 has been implemented with support provided from the National Research, Development and Innovation Fund of Hungary, financed under the K_17 funding scheme. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results. The publication was supported by the University of Debrecen Faculty of Humanities Scholarly Fund.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data are contained within the article.

Conflicts of Interest: The authors declare no conflict of interest.

Notes

1 Project titled 'Social and institutional factors of student dropout in higher education'.

2 University of Debrecen, University of Nyíregyháza, Debrecen Reformed Theological University, Saint Athanasius Greek Catholic Theological College, Babeş-Bolyai University (BBTE), Emanuel University of Oradea, Ferenc Rákóczi II Transcarpathian Hungarian College of Higher Education, Constantine the Philosopher University in Nitra, Mukachevo State University, University of Oradea, Partium Christian University (PKE), Sapientia Hungarian University of Transylvania, J. Selye University, University of Novi Sad, Uzhhorod National University.

3 The place of residence at the age of 14 was asked in order to get to know the data recorded at a fixed time in childhood. The same question is used in several sociological studies of the researched countries, e.g., standard questionnaire of Hungary's graduate career tracking system.

4 Components of the index: Does the family possess an own apartment or house, a five year old car or newer, a flat screen television, a personal computer or laptop with broadband internet access at home, a tablet or e-book reader, mobile internet (on the phone or computer), a dishwasher, an air conditioner, and a smartphone?

5 Components of the index: Does the student possess an own apartment or house, an own car, an above average smartphone (e.g., iPhone), an above average computer or laptop, a tablet or e-book reader, and savings for house purchase?

6 1: Often I do not have enough money for basic everyday necessities. 2: Sometimes I do not have enough money for everyday expenditures. 3: I have everything I need but cannot afford larger expenditures. 4: I have everything I need and can also afford larger expenditures.

7 The items were the following: I have joined a student research group. I have written a student research paper. I have participated in the National Scientific Students' Associations Conference. I have prepared a presentation or poster for a conference (excluding the former). I have been a teaching assistant. I have an intermediate or professional language certificate. I have an advanced language certificate. I have a CV in Hungarian. I have a CV in English. I have been a representative of my group or cohort. I have a scientific publication. I have been awarded a sports scholarship. I have been awarded an art scholarship. I have been awarded a traineeship. I have an own creation (e.g., programme, application, invention, piece of art). I have been included in a higher education talent scholarship programme. I have been a member of a college for advanced studies. I have been awarded the highest possible amount of academic stipend. I plan to apply to a doctoral (PhD/DLA) program.

8 The question was the following: How good of a student are you? 5: Very good. 4: Good. 3: Average; neither good, nor bad. 2: Below average. 1: Very bad.

[9] In the linear regression models, the explanatory power is relatively low. However, we did not attempt to create a comprehensive model by including all explanatory variables; instead, our intention was to investigate the direction and significance of effects exerted by certain featured variables (Moksony 2006). In our regression models there are relatively small effects (the betas close to 0) but they are significant due to the large sample size.

References

Agasisti, Tommaso, Francesco Avvisati, Sergio Longobardi, and Francesca Borgonovi. 2018. *Academic Resilience. What Schools and Countries Do to Help Disadvantaged Students Succeed in PISA*. Paris: OECD Publishing. [CrossRef]

Aina, Carmen. 2013. Parental Background and University Dropout in Italy. *Higher Education* 65: 437–56. [CrossRef]

Alexeevna, Mariya Abramova, Galina Savitovna Goncharova, and Vsevolod Grigorevich Kostyuk. 2017. Parents' Education Level and Youth Educational Strategy. *Hungarian Educational Research Journal* 7: 46–57. [CrossRef]

Alon, Sigal. 2011. Who Benefits Most from Financial Aid? The Heterogeneous Effect of Need-Based Grants on Students' College Persistence: Who Benefits Most from Financial Aid? *Social Science Quarterly* 92: 807–29. [CrossRef]

Altbach, Philip. 2010. Access Means Inequality. *International Higher Education* 61: 1–5. [CrossRef]

Astin, Alexander W. 1993. *What Matters in College: Four Critical Years Revisited*. San Fransisco: Jossey-Bass.

Beck, Ulrich. 1983. Jenseits von Stand Und Klasse? Soziale Ungleichheiten, Gesellschaftliche Individualisierungsprozesse Und Die Entscheidung Neuer Sozialer Formationen Und Identitäten. In *Soziale Ungleichheiten*. Edited by Reinhard Kreckel. Göttingen: Verlag Otto Schwartz und Co., pp. 36–74. Available online: https://fis.uni-bamberg.de/handle/uniba/27747 (accessed on 22 December 2021).

Békés, Vera. 2002. A Reziliencia-Jelenség, Avagy Az Ökologizálódó Tudományok Tanulságai Egy Ökologizált Episztemológia Számára. In *"Tudomány és Történet"—Tanulmánykötet Fehér Márta Tiszteletére*. Edited by Gábor Forrai and Tihamér Margitay. Budapest: Typotex, pp. 215–28.

Benjamin, Roger. 2015. *Leveling the Playing Field from College to Career*. New York: Council for Aid to Education. [CrossRef]

Berger, Joseph B., and John M. Braxton. 1998. Revisiting Tinto's Interactionalist Theory of Student Departure through Theory Elaboration: Examining the Role of Organizational Attributes in the Persistence Process. *Research in Higher Education* 39: 103–19. [CrossRef]

Bocsi, Veronika, Tímea Ceglédi, Zsófia Kocsis, Karolina Eszter Kovács, Klára Kovács, Anetta Müller, Katalin Pallay, Barbara Éva Szabó, Fruzsina Szigeti, and Dorina Anna Tóth. 2019. The Discovery of the Possible Reasons for Delayed Graduation and Dropout in the Light of a Qualitative Research Study. *Journal of Adult Learning, Knowledge and Innovation* 1: 27–38. [CrossRef]

Boudon, Raymond. 1974. *Education, Opportunity, and Social Inequality: Changing Prospects in Western Society*. New York: Wiley-Interscience.

Bourdieu, Pierre, and Jean-Claude Passeron. 1977. *Reproduction in Education, Society and Culture*. London and Beverly Hills: Sage Publications.

Bradley, Karen. 2000. The Incorporation of Women into Higher Education: Paradoxical Outcomes? *Sociology of Education* 73: 1–18. [CrossRef]

Buchmann, Claudia, Thomas A. DiPrete, and Anne McDaniel. 2008. Gender Inequalities in Education. *Annual Review of Sociology* 34: 319–37. [CrossRef]

Casanova, Joana R., Antonio Cervero, José C. Núñez, Leandro S. Almeida, and Ana Bernardo. 2018. Factors That Determine the Persistence and Dropout of University Students. *Psicothema* 30: 408–14. [CrossRef]

Ceglédi, Tímea. 2015. Resilient Teacher Education Students. In *Professional Calling in Higher Education*. Edited by Gabriella Pusztai and Tímea Ceglédi. Oradea and Budapest: Partium, PPS and Új Mandátum, pp. 61–75.

Ceglédi, Tímea. 2018. *Ugródeszkán. Reziliencia és társadalmi egyenlőtlenségek a felsőoktatásban*. Debrecen: CHERD-Hungary.

Ceglédi, Tímea. 2019. Potyázók, anómiások, rituális perzisztensek és célorientált perzisztensek. A hallgatói lemorzsolódás szokatlan veszélyei. *Acta Medicinae et Sociologica* 28: 45–62. [CrossRef]

Çelik, Çetin. 2017. Parental Networks, Ethnicity, and Social and Cultural Capital: The Societal Dynamics of Educational Resilience in Turkey. *British Journal of Sociology of Education* 38: 1007–21. [CrossRef]

Charles, Maria, and Karen Bradley. 2002. Equal but Separate? A Cross-National Study of Sex Segregation in Higher Education. *American Sociological Review* 67: 573–99. [CrossRef]

Charles, Maria, and Karen Bradley. 2009. Indulging Our Gendered Selves? Sex Segregation by Field of Study in 44 Countries. *American Journal of Sociology* 114: 924–76. [CrossRef]

Chen, Rong. 2012. Institutional Characteristics and College Student Dropout Risks: A Multilevel Event History Analysis. *Research in Higher Education* 53: 487–505. [CrossRef]

Combet, Benita, and Daniel Oesch. 2019. The Gender Wage Gap Opens Long before Motherhood. Panel Evidence on Early Careers in Switzerland. *European Sociological Review* 35: 332–45. [CrossRef]

Dryler, Helen. 1998. Parental Role Models, Gender and Educational Choice. *British Journal of Sociology* 49: 375–98. [CrossRef]

Endress, Martin. 2015. The Social Constructedness of Resilience. *Social Sciences* 4: 533–45. [CrossRef]

Engler, Ágnes. 2019. Non-Traditional Students in Higher Education. *Hungarian Educational Research Journal* 9: 560–64. [CrossRef]

Fényes, Hajnalka. 2010a. School Efficiency of Boys and Girls in a Borderland Region of Hungary. *Review of Sociology* 6: 51–77.

Fényes, Hajnalka. 2010b. Horizontal and Vertical Segregation in Education by Gender in the Hungarian-Romanian-Ukrainian Border Region (Partium). *Journal of Social Research & Policy* 1: 49–68.
Fényes, Hajnalka. 2012. Gender Inequalities in Higher Education. Evidence from the 'Partium' Region. *Corvinus Journal of Sociology and Social Policy* 3: 3–34. [CrossRef]
Fényes, Hajnalka. 2015. Gender Differences in Higher Education Efficiency and the Effect of Horizontal Segregation by Gender. *Journal of Social Research and Policy* 6: 21–42.
Fényes, Hajnalka, and Tímea Ceglédi. 2010. Fiúk És Lányok Iskolai Eredményességének Különbségei. In *Interdiszciplináris Pedagógia, Tanárok, Értelmiségiek*. Edited by András Buda and Endre Kiss. Debrecen: Debreceni Egyetem Neveléstudományok Intézete, pp. 276–85.
FIR. 2020. Felsőoktatási Információs Rendszer. *Felvi*. Available online: https://www.felvi.hu/felsooktatasimuhely/fir (accessed on 22 December 2021).
French, Brian F., Jason C. Immekus, and William C. Oakes. 2005. An Examination of Indicators of Engineering Students' Success and Persistence. *Journal of Engineering Education* 94: 419–25. [CrossRef]
Goastellec, Gaële. 2010. Introduction. The Complex Issue of Inequalities in, Through and by Higher Education. In *Understanding Inequalities in, through and by Higher Education*. Edited by Gaële Goastellec. Rotterdam, Boston and Taipei: Sense Publishers, pp. XI–XVI.
Hernández, Ana, Cristina Aguilar, Èrica Paradell, María R. Muñoz, Louis-Charles Vannier, and Frédérique Vallar. 2017. The Effect of Demographic Variables on the Assessment of Cognitive Ability. *Psicothema* 29: 469–74. [CrossRef] [PubMed]
Heublein, Ulrich. 2014. Student Drop-out from German Higher Education Institutions. *European Journal of Education* 49: 497–513. [CrossRef]
Hrubos, Ildikó. 2014. Horizontal Diversity of Higher Education Institutions. The Case of Hungary—In European Context. *Journal of the European Higher Education Area* 2: 75–94.
Jacobs, Jerry A. 1996. Gender Inequality and Higher Education. *Annual Review of Sociology* 22: 153–85. [CrossRef]
Kabathova, Janka, and Martin Drlik. 2021. Towards Predicting Student's Dropout in University Courses Using Different Machine Learning Techniques. *Applied Sciences* 11: 3130. [CrossRef]
Körtvélyesi, Zsolt. 2019. Enforcing Equality? *Intersections* 5: 4–10. [CrossRef]
Kozma, Tamás, Magdolna Rébay, Andrea Óhidy, and Éva Szolár. 2014. *The Bologna Process in Central and Eastern Europe*. Wiesbaden: Springer.
Lassibille, Gérard, and Lucía Navarro Gómez. 2008. Why Do Higher Education Students Drop out? Evidence from Spain. *Education Economics* 16: 89–105. [CrossRef]
Laurison, Daniel, and Sam Friedman. 2016. The Class Pay Gap in Higher Professional and Managerial Occupations. *American Sociological Review* 81: 668–95. [CrossRef]
Leppel, Karen. 2002. Similarities and Differences in the College Persistence of Men and Women. *The Review of Higher Education* 11: 433–50. [CrossRef]
Lipset, Seymour Martin, and Hans L. Zetterberg. 1970. A Theory of Social Mobility. In *Readings on Social Stratification*. Edited by Melvin Marvin Tumin. Englewood Cliffs: Prentice-Hall, pp. 435–54.
Lipset, Seymour Martin, Reinhard Bendix, and Hans L. Zetterberg. 1959. *Social Mobility in Industrial Society*. Berkeley: University of California.
Lucas, Samuel R. 2001. Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects. *American Journal of Sociology* 106: 1642–90. [CrossRef]
Macarie, Felicia Cornelia, and Octavian Moldovan. 2015. Horizontal and Vertical Gender Segregation in Higher Education: EU 28 under Scrutiny. *Managerial Challenges of the Contemporary Society* 8: 162–70.
Maltese, Adam, and Robert H. Tai. 2011. Pipeline Persistence: Examining the Association of Educational Experiences with Earned Degrees in STEM among U.S. Students. *Science Education* 95: 877–907. [CrossRef]
Masten, Ann S., Janette E. Herbers, J. J. Cutuli, and Theresa L. Lafavor. 2008. Promoting Competence and Resilience in the School Context. *Professional School Counseling* 12: 76–84. [CrossRef]
Mayer, Karl Ulrich, and Walter Müller. 1971. Progress in Social Mobility Research? *Quality and Quantity* 5: 141–78. [CrossRef]
McNabb, Robert, Sarmistha Pal, and Peter Sloane. 2002. Gender Differences in Educational Attainment: The Case of University Students in England and Wales. *Economica* 69: 481–503. [CrossRef]
Moksony, Ferenc. 2006. *Gondolatok és Adatok*. Budapest: Aula.
Nagy, Beáta, Gábor Király, and Zsuzsanna Géring. 2016. Work-Life Balance and Gender Regime After the Economic Transition. *Intersections. East European Journal of Society and Politics* 2: 5–20. [CrossRef]
Nakajima, Mikiko A., Myron H. Dembo, and Ron Mossler. 2012. Student Persistence in Community Colleges. *Community College Journal of Research and Practice* 36: 591–613. [CrossRef]
O'Shea, Sarah. 2020. Crossing Boundaries: Rethinking the Ways That First-in-Family Students Navigate 'Barriers' to Higher Education. *British Journal of Sociology of Education* 41: 95–110. [CrossRef]
OECD. 2019. *PISA Results 2018*. Paris: OECD Publishing, Available online: https://www.oecd.org/pisa/publications/pisa-2018-results.htm (accessed on 22 December 2021).

Pascarella, Ernest T., and Patrick T. Terenzini. 1980. Predicting Freshman Persistence and Voluntary Dropout Decisions from a Theoretical Model. *The Journal of Higher Education* 51: 60–75. [CrossRef]
Peltier, Gary L., Rita Laden, and Myrna Matranga. 2000. Student Persistence in College: A Review of Research. *Journal of College Student Retention: Research, Theory & Practice* 1: 357–75. [CrossRef]
Pinker, Susan. 2008. *The Sexual Paradox: Men, Women and the Real Gender Gap*. New York: Scribner.
Pusztai, Gabriella. 2015. *Pathways to Success in Higher Education: Rethinking the Social Capital Theory in the Light of Institutional Diversity*. New edition. Frankfurt am Main: Peter Lang.
Pusztai, Gabriella. 2019. The Role of Intergenerational Social Capital in Diminishing Student Attrition. *Journal of Adult Learning, Knowledge and Innovation* 3: 20–6. [CrossRef]
Pusztai, Gabriella, and Zsuzsanna Márkus. 2019. Paradox of Assimilation among Indigenous Higher Education Students in Four Central European Countries. *Diaspora, Indigenous, and Minority Education* 13: 201–16. [CrossRef]
Pusztai, Gabriella, Hajnalka Fényes, Fruzsina Szigeti, and Katalin Pallay. 2019. Dropped-out Students and the Decision to Drop-out in Hungary. *Central European Journal of Educational Research* 1: 31–40. [CrossRef]
Reason, Robert D. 2009. Student Variables That Predict Retention: Recent Research and New Developments. *NASPA Journal* 46: 482–501. [CrossRef]
Reay, Diane, Gill Crozier, and John Clayton. 2009. 'Strangers in Paradise'?: Working-Class Students in Elite Universities. *Sociology* 43: 1103–21. [CrossRef]
Róbert, Péter. 2000. Bővülő Felsőoktatás? Ki Jut Be? *Educatio* 9: 79–94.
Rodgers, Timothy. 2007. Measuring Value Added in Higher Education: A Proposed Methodology for Developing a Performance Indicator Based on the Economic Value Added to Graduates. *Education Economics* 15: 55–74. [CrossRef]
Seehuus, Sara. 2019. Social Class Background and Gender-(a)Typical Choices of Fields of Study in Higher Education. *The British Journal of Sociology* 70: 1349–73. [CrossRef]
Shavit, Yossi, Richard Arum, and Adam Gamoran, eds. 2007. *Stratification in Higher Education: A Comparative Study*. Stanford: Stanford University Press.
St. John, Edward P., Shouping Hu, and Jeff Weber. 2001. State Policy and the Affordability of Public Higher Education: The Influence of State Grants on Persistence in Indiana. *Research in Higher Education* 42: 401–28. [CrossRef]
St. John, Edward P., Nathan Daun-Barnett, and Karen Moronski-Chapman. 2013. *Public Policy and Higher Education: Reframing Strategies for Preparation, Access, and College Success*. London: Routledge. [CrossRef]
Stark, David. 2014. On Resilience. *Social Sciences* 3: 60–70. [CrossRef]
Stich, Amy E. 2018. Stratification with Honors: A Case Study of the 'High' Track within United States Higher Education. *Social Sciences* 7: 175. [CrossRef]
Stinebrickner, Ralph, and Todd R. Stinebrickner. 2014. A Major in Science? Initial Beliefs and Final Outcomes for College Major and Dropout. *The Review of Economic Studies* 81: 426–72. [CrossRef]
Sugland, Barbara W., Martha Zaslow, and Christine Winquist Nord. 1993. *Risk, Vulnerability, and Resilience among Youth: In Search of a Conceptual Framework*. Washington, DC: Child Trends, Inc.
Tinto, Vincent. 1987. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago: University of Chicago Press.
Tóth, Dorina Anna, Marianna Szemerszki, Tímea Ceglédi, and Barbara Éva Szabó. 2019. The Different Patterns of the Dropout According to the Level and the Field of Education. *Hungarian Educational Research Journal* 9: 257–69. [CrossRef]
Vukasovic, Martina, and Claudia S. Sarrico. 2010. Inequality in Higher Education: Definitions, Measurements, Inferences. In *Understanding Inequalities in, through and by Higher Education*. Edited by Gaële Goastellec. Rotterdam, Boston and Taipei: Sense Publishers, pp. XI–XVI. Available online: http://hdl.handle.net/1854/LU-4352104 (accessed on 22 December 2021).
Waxman, Hersh C., Jon P. Gray, and Yolanda N. Padron. 2003. *Review of Research on Educational Resilience*. Berkeley: Center for Research and Education, Diversity and Excellence, Available online: https://escholarship.org/uc/item/7x695885 (accessed on 22 December 2021).
Wellensiek, Sylvia Kéré. 2014. *Handbuch Resilienztraining*. Weinheim and Basel: Beltz Verlag.
Wolter, Stefan C., Andrea Diem, and Dolores Messer. 2014. Drop-Outs from Swiss Universities: An Empirical Analysis of Data on All Students between 1975 and 2008. *European Journal of Education* 49: 471–83. [CrossRef]
Wong, Billy, and Yuan-Li Tiffany Chiu. 2019. 'Swallow Your Pride and Fear': The Educational Strategies of High-Achieving Non-Traditional University Students. *British Journal of Sociology of Education* 40: 868–82. [CrossRef]