Being There is Everything?

Tuition Fees in Austrian Higher Education

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Introduction

Austria stands at the beginning of a transformative higher education reform process. Most controversially, the conservative, right-wing government announced to reintroduce "moderate" tuition fees in Austria (Neue Volkspartei and Freiheitliche Partei Österreichs 2017), galvanising heavy opposition amongst students, trade unions and proponents of free higher education, which used to be the standard in Austria since the 1970s.

Neue Volkspartei, and Freiheitliche Partei Österreichs. 2017. "Zusammen. Für Unser österreich. Regierungsprogramm 2017–2022."

Government officials promise the policy will deter German medical students from taking up studies in Austria and subsequently work in Germany, addressing a much-discussed issue in Austrian higher education policy. The incentive to induce graduates from Austrian universities to stay in Austria after graduation is a later tax rebate amounting to the tuition fees paid (Kroisleitner 2017). Critics highlight the disproportionate nature of the measure on the one hand, given its only declared aim is the disincentive for German medical students to either work in Austria after graduation or stay away from Austrian universities in the first place. On the other hand, tuition fees are considered as reducing social mobility by opponents of the measure (Austrian National Union of Students Federal Body of Representatives 2017).

Kroisleitner, Oona. 2017. "Türkis-Blau Will Studiengebühren Mit Späterem Steuerbonus Für Absolventen - Derstandard.at/2000070372713/Tuerkis-Blau-Will-Studiengebuehren-Mit-Steuerbonus." *derStandard.at*, December. STANDARD Verlagsgesellschaft m.b.H.

Austrian National Union of Students Federal Body of Representatives. 2017. "Pressemappe Pressekonferenz Der österreichischen Hochschüler_innenschaft Zur Hochschulpolitischen Lage in österreich." Vienna.

The latter claim is controversially discussed both in Austrian domestic policy and in the academic literature on this matter. This inquiry aims at contributing to the discussion by shedding light on often overlooked aspects of social selectivity of higher education: Social participation during the studies. It is argued that tuition fees force poor households to shift expenditure to meeting fees and thus reduce other forms of consumption. The reduction in consumption affects spending on social participation in the main. As a consequence, low-income student's opportunities to acquire a certain habitus and build networks are impaired. However, these forms of social capital are crucial when it comes to social advancement after graduation. Therefore, tuition fees have a hampering effect on social mobility on top of the more commonly discussed effect mirrored by changes in the social stratification of graduates.

The empirical basis of the argument made by this contribution is the temporary introduction of tuition fees in Austria in 2001, enacted by a former coalition of exactly the same currently ruling conservative,

right-wing parties. In 2001, the government introduced general tuition fees of € 363,36 (ATS 5,000.-) per semester to all public universities in Austria. For universities of applied science (*Fachhochschule (FH)*) the option to charge fees was given with the introduction of the *FH* in 1993. In 2006, the general tuition fees were transformed. Since then, fees only apply to students taking more time for their studies than what is considered the minimum duration. Also, working students were exempted from the obligation to pay fees, a regulation de facto abolished recently by the current coalition.

The remainder of this treatment is structured as follows. After a discussion of the academic literature on the role of tuition fees as a social barrier both in Austria and on an international level, the theoretical foundations of our approach are set out. Subsequently, methodological issues associated with the empirical investigation are discussed. Then, the results are presented. In a final section, a conclusion and discussion of the results are provided.

State of the literature

Tuition fees and their influence on social and educational inequality have been subject to academic inquiry exhaustively. Empirical evidence is available at both the national and international level.

Austria

In Austria, the main work on the social situation of students is done by the Institute for Advanced Studies (IHS). The IHS publishes the so-called *Studierendensozialerhebung* (*SOLA*) every 4 years. Most relevant to the analysis of tuition fees are the surveys immediately preceding and succeeding the policy measure (Wroblewski, Unger, and Schmutzer-Hollensteiner 1999; Wroblewski and Unger 2003). Each *SOLA* specifically addresses the expenditures of higher education students in Austria. To reflect costs accurately, not only the expenditures by the student directly were recorded but also costs met by parents or partners on behalf of students. In 1998 the total spendings of a average student were € 683.12 (ATS 9,400.-)/month. Crucially, it can be observed that the second but biggest group of spending, following essential expenditures, like nutrition, educational material, mobility and hygiene, are theater/cinema (average: € 21,80/month), newspapers/books (average: € 14,53/month), telefon/tv (average: € 43,60/month) and sports/hobbies (average: € 29,07/month).

Wroblewski, Angela, Martin Unger, and Eva Schmutzer-Hollensteiner. 1999. "Studierenden Sozialerhebung 1998." Vienna: Institute for Advanced Studies (IHS).

Wroblewski, Angela, and Martin Unger. 2003. "Studierenden Sozialerhebung 2002." Vienna: Institute for Advanced Studies (IHS).

The Report by Wroblewski and Unger (2003) was the first one after the introduction of general tuition fees. Due to the relatively short time period between the *SOLA* and the policy implementation in 2001, medium and long-term effects cannot be fully captured. The total expenditures per month were growing since 1998 from € 683,12 to € 880,- in 2002. Besides the new expenditures for tuition fees which sum up to € 54 per month, the expenditures for credit

Wroblewski, Angela, and Martin Unger. 2003. "Studierenden Sozialerhebung 2002." Vienna: Institute for Advanced Studies (IHS).

obligations (+123%) were rising overproportionally. Especially the vast growth in credit obligations suggests that the financial situation of students was deteriorating and more financial pressure followed from the higher education charges. Furthermore, the rate of students having nonzero expenditure was falling in clothes (-3,9 %), newspapers/books (-5,2 %) and smoking (-3,4 %). Overall, it is to be observed that the segments in which fewer students are spending money in 2002 are predominantly leisure expenditures.

International

On the international level, a number of publications address the consequences of tuition fees for social mobility. In contrast to this inquiry, most of them focus on participation rates (Azmat and Simion 2017). Sá (2014) approached the topic tuition fees by observing how application and attendance rates are changing as tuition fees increase. On the one hand, the removal of upfront tuition fees in Scotland and on the other hand the increase in fees in England are taken into account. The results show that a decrease (or removal) of fees is followed by an increase in applications and vice versa. Further, there is evidence that the effects of an increasing fee are smaller in courses with good employment perspectives and a higher average wages. It follows that students give more priority to career prospects if the fees are high. Decreasing differentials in participation between students from different backgrounds were found by Murphy, Scott-Clayton, and Wyness (2017), notwithstanding the introduction of tuition fees. Furthermore, Azmat and Simion (2017) investigate the effect of the tuition fee increases in England. Whereas no widening of social gaps can be found in terms of participation rate, increased dropouts for students from lower socioeconomic backgrounds and marginally worse labour market outcomes for graduates from lower income households are to be observed. Kwong et al. (2002) observe the changes in rates of enrollment to medical schools if fees are raised by more than 100%. Their results show that students from families within the lowest income quarter are those affected most by the policy change. Further, students who are facing the increased fees are more likely to have financial instabilities during their studies and in the first professional years. Even if there is a possibility to evade the fees within a country, as it is possible in Germany where tuition fees are subject to provincial legislateion, Hübner (2012) has proven that the participation rates are decreasing especially in the states which introduced fees.

An approach investigating tuition fees and consumption resembling the strategy applied in this contribution can be found in the economic literature. For example, Souleles (2001) focused on the college fee expenditures and their influence on consumption. He is mainly concerned with empirically testing the Life-Cycle-Theory in consumption and savings. The paper finds that households seem not to react significantly to changes to income shocks in terms of tuition fees.

Azmat, Ghazala, and Stefania Simion. 2017. "Higher Education Funding Reforms: A Comprehensive Analysis of Educational and Labour Market Outcomes in England." *IZA Discussion Paper Series*, no. 11083.

Sá, Filipa. 2014. "The Effect of Tuition Fees on University Applications and Attendance: Evidence from the Uk," no. 8364. London; Bonn: Institue for the Study of Labor.

Murphy, Richard, Judith Scott-Clayton, and Gillian Wyness. 2017. "The End of Free College in England: Implications for Quality, Enrolments, and Equity." National Bureau of Economic Research.

Azmat, Ghazala, and Stefania Simion. 2017. "Higher Education Funding Reforms: A Comprehensive Analysis of Educational and Labour Market Outcomes in England." *IZA Discussion Paper Series*, no. 11083.

Kwong, Jeff, Irfan Dhalla, David Streiner, Ralph Baddour, Andrea Waddell, and Ian Johnson. 2002. "Effects of Rising Tuition Fees on Medical School Class Composition and Financial Outlook." *CMAJ*, no. 166 (April). Toronto: 1023–8.

Hübner, Malte. 2012. "Do Tuition Fees Affect Enrollment Behavior? Evidence from a 'Natural Experiment' in Germany." *Economics of Education Review*, no. 31. Mannheim: 949–60.

Souleles, Nicholas. 2001. "College Tuition and Household Savings and Consumption." *Journal of Public Economics* 77. Philadelphia: 185–207.

It is not until the winter and spring of the first college year, that a small decline in consumption can be seen. Nevertheless "these results do not imply that households find it easy to pay the high cost of college" (Souleles 2001). A quite similar question is elaborated by Shimizutani (2014) for Japan. Tuition payment is viewed as "large and clearly predictable change" (Shimizutani 2014) in the income. The paper tests whether a household can smooth consumption in a month in which the payment is made. If this hypothesis fails tuition fees are affecting household consumption. The results are looking different from those in the USA. The analysis reveals that a decrease in discretionary income by 1 Yen (due tuition fees), is affecting a 0,1 – 0,2 Yen decrease in non-tuition spending. Further, it turns out that many households fail in maintaining their living standards following the tuition fee payment.

Souleles, Nicholas. 2001. "College Tuition and Household Savings and Consumption." *Journal of Public Economics* 77. Philadelphia: 185–207.

Shimizutani, Satoshi. 2014. "College Tuition Payment and Household Consumption in Japan." Tokyo: Springer, 185–207.

Shimizutani, Satoshi. 2014. "College Tuition Payment and Household Consumption in Japan." Tokyo: Springer, 185–207.

Theory and research questions

As emerges from the brief review of the literature, only a few studies examine the consequences of tuition fees on the living conditions of students. Rather, academic investigation focuses on social selectivity in terms of participation rates and access to higher education. The contributions which relate charges to higher education to consumption behavior tend to be concerned with the consumption smoothing hypothesis instead of the effect on social participation. However, we argue, living conditions and spending patterns matter when it comes to social inequality and the selection of elites.

From a theoretical point of view, the lack of research on the impact of tuition fees on social inequality arises from a particular understanding of the role of tertiary education in constituting a determinant of social stratification. In educational sociology, two major theories of educational stratification can be distinguished (Sommerkorn (1997) in Heim, Lenger, and Schumacher (2014)). On the one hand, the functionalist approach considers the education system as a means of social selection, determining the chances of individuals to achieve certain positions in a society according to their educational achievement. Inequalities in outcomes are thus a consequence of differentials in educational participation (Hartmann and Kopp 2001). From this perspective, investigating the impact of tuition fees on educational attainment is fruitful when it comes to understanding the social selection of elites. Educational participation is considered the key source of social inequality. Therefore, there is no need to further investigate the relationship between educational inequality and social selectivity of elites.

Sommerkorn, Ingrid N. 1997. "Soziologie Der Bildung Und Erziehung." In *Einführung in Praxisfelder Der Soziologie*, 29–55. Springer.

Heim, Christof, Alexander Lenger, and Florian Schumacher. 2014. "Bildungssoziologie." In *Bourdieu-Handbuch*, 254–63. Springer.

Hartmann, Michael, and Johannes Kopp. 2001. "Elitenselektion Durch Bildung Oder Durch Herkunft?" *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie* 53 (3). Springer: 436–66.

On the other hand, the conflict theory approach suggests that even though social selectivity is persistent in education systems, social origin has a substantial influence on the chance to acquire prestigious positions in society. The key concept in this regard is *class habitus* (Heim, Lenger, and Schumacher 2014). This refers to a set of personal

Heim, Christof, Alexander Lenger, and Florian Schumacher. 2014.

characteristics suggesting the association with certain classes. If the habitus of those being in charge of filling vacant positions matches the habitus of a candidate, the latter's probability of success increases (Hartmann and Kopp 2001). This is shown empirically by Hartmann and Kopp (2001), who analyses the professional pathways of groups of students with similar qualifications and different social backgrounds.

Given social advancement is determined by class habitus, the effect of tuition fees on social selection is not merely a matter of educational participation. Rather, the impact of tuition fees on the chances to acquire a certain habitus is of interest. In this spirit, the contribution at hand illustrates the relation between tuition fees and spending on goods associated with the acquirement of social capital and bourgeois elitist class habitus. Such goods are primarily defined to be cultural goods as well as spending on restaurants and hotels. Whereas the first expenditure category comprises expenditure on theatres, travel, sports goods and similar leisure time activities, the second constitute expenditure going hand in hand with networking and building social capital, such as having meals in restaurants or going out. In particular, we are interested in the relation between expenditure on social capital formation effected by households and the introduction of tuition fees in Austria in 2001 and how this relation differs between households with different economic endowments as measured by their income.

This investigation sheds light on often neglected effects of tuition fees and provides evidence for their negative impact on social mobility in a conflict theoretical framework.

Data

Investigating the impact of the chargement of tuition fees on consumption structures requires data on consumer expenditure. Furthermore, as an analysis sensitive to the student's economic background is to be carried out, expenditure data should be linkable to income data. Since expenditure data and income data is usually collected on the household level, information on educational status at the personal level is necessary to identify student households.

The primary source for expenditure data in Austria is the *Konsumerhebung*. Data is collected in a five-year interval at the household level. At varying levels of accuracy, the *Konsumerhebung* provides information on income and educational status as well. Overall, the *Konsumerhebung* represents an abundant source of data on a set of socioeconomic characteristics, income and expenditure on both personal and household level, which makes it suitable to the analysis to be conducted. In particular, the surveys of 1999/2000 and 2004/2005 (henceforth KE99/00 and KE04/05 respectively) are relevant to elaborate on the effect of tuition fees, introduced between the two waves. As the KE04/05 follows the policy implementation with a three years time lag, medium-term restructurings of consumer behaviour can be observed.

"Bildungssoziologie." In *Bourdieu-Handbuch*, 254–63. Springer.

Hartmann, Michael, and Johannes Kopp. 2001. "Elitenselektion Durch Bildung Oder Durch Herkunft?" *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie* 53 (3). Springer: 436–66.

Hartmann, Michael, and Johannes Kopp. 2001. "Elitenselektion Durch Bildung Oder Durch Herkunft?" *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie* 53 (3). Springer: 436–66.

Covering 7098 (KE99/00) and 8400 (KE04/09) households respectively, the focus of both surveys lies on the collection of expenditure data. Households are asked to document their consumption spending during two weeks. In personal interviews accompanying the household's documentary activities, information on purchases of long-term consumer goods and household characteristics is gathered. Subsequently, the resulting monetary values are converted into monthly expenditure (Statistik Austria 2004). The two week periods are equally distributed over one year, which does not correspond to the calendar year. The *Konsumerhebung* categorises expenditure data in accordance with the UN's COICOP-nomenclature (United Nations 2000). Consumer spending is grouped by 13 categories, though division 13 is not defined to correspond to consumer expenditure, covering savings, for instance. The remaining 12 categories (two-digit level) are further disaggregated at the three-digit level. In total, six levels of disaggregation exist (Statistik Austria 2006). For example, sportswear for men is part of division 3 (Clothing and Footwear). At the highest level of disaggregation, it is classified 13 – 1 – 2 – 1 – 1 – 3. Primarily, this analysis is carried out at the two-digit level. The main drawback of the expenditure data lies in a biased measurement of certain expenditure categories. This is particularly true for spending in restaurants and hotels, for instance, which is characterised by partly euphemistic underreporting. However, these biases do not jeopardise this analysis as long as biases do not change over time, which is not likely in the case of restaurants and hotels in particular. A discussion on measurement error in the KE04/05 is provided by Statistik Austria (2006).

Statistik Austria. 2004. *Standard-Dokumentation Metainformation (Definitionen, Erläuterungen, Methoden, Qualität) Zur Konsumerhebung 1999/2000*. Wien.

United Nations. 2000. "Classifications of Expenditure According to Purpose: COFOG, Coicop, Copni, Copp." *Statistical Papers*, no. 84. New York.

Statistik Austria. 2006. *Standard-Dokumentation Metainformation (Definitionen, Erläuterungen, Methoden, Qualität) Zur Konsumerhebung 2004/05*. Wien.

In addition to detailed expenditure data, the Austrian consumer expenditure survey gathers data on income. Being collected at the personal level, the KE99/00 offers excellent income data. Since a broad range of income sources where directly addressed in the questionnaire of the KE99/00, specific sources of income are better covered than in the subsequent survey. Note that some degree of underestimation of student subsidies (Studienbeihilfe) is likely to be prevalent among student households (Fiedler, n.d.). In addition, while missing income data has been imputed by Statistics Austria in the KE99/00, the imputation of income data in the KE04/05 has been part of the preparatory work for this analysis. Regression analysis based on a number of households and personal characteristics was used. Regressors include the age of the main earner as well as household facilities such as the presence of a car or the living space.

Statistik Austria. 2006. *Standard-Dokumentation Metainformation (Definitionen, Erläuterungen, Methoden, Qualität) Zur Konsumerhebung 2004/05*. Wien.

Higher education students - who is who

In this study, student households are defined to be all households with at least one member classified as a higher education student. This requires to identify higher education students in the personal file of the survey. The KE04/05, similarly to subsequent surveys, provides for a variable K2 indicating the type of current education programme

of persons classified as being in education or training (KE09/10: PB_09). However, the lack of a variable separating school students from higher education students in the KE99/00 dataset complicates the analysis. The only information we are given in this dataset is the occupational status (P012), which includes the level "student".

Given this situation, an indicator for tertiary education enrolment is estimated for the KE99/00. It derives from the variables P012 and P013 of the KE99/00. Whereas the first reduces the total set of survey participants to both school and university students, the latter further refines the selection based upon highest educational attainment. Thus, only students having passed their *Matura* and graduates from a higher education programme are defined to be enrolled in higher education. This procedure introduces a certain amount of imprecision which should be taken into account when interpreting the results. The degree of imprecision is illustrated in Table 1.

Educational attainment	Current enrolment status	KE04/05	KE09/10
Tertiary Education	Not applicable	11	1
Compulsory Schooling	Tertiary education	11	0
Apprenticeship	Tertiary education	3	3
Technical College	Tertiary education	7	11
Matura	Tertiary education	354	299
Tertiary Education	Tertiary education	26	39
Matura	Not applicable	32	0
Matura	Not answered	8	1
Matura	Compulsory school	1	0
Matura	Apprenticeship	0	1
Matura	BMS	1	5
Matura	AHS/BHS	21	32

Table 1: Students by maximum educational attainment and current education status. The third and fourth column refer to the number of observations characterised by the specified conditions by survey.

For KE04/09 and KE09/10, information on the number of observations for the relevant combinations of highest educational attainment and current enrolment are given. Table 1 refers to household members defined to be school or higher education students by the variables P1 (KE04/05) and PI_12 (KE09/10) respectively. These variables are the pendants of the P012 variable provided by the KE99/00. Crucially, it can be shown that the majority of those students have reached a *Matura* qualification are enrolled in tertiary education within this subset. In turn, only a small proportion of those students currently enrolled in higher education are neither graduates from tertiary education nor have attained *Matura* level. Furthermore, most graduates from universities are either not classified or still participate in higher education.

In order to check the robustness of the student status estimate, Table 2 contrasts the number of tertiary education students resulting from the imputation approach with those implied by the variables variables K1 and K2 of the KE04/05 and KE09/10 respectively. Also, numbers for the KE99/00 are given for comparative purposes. Whereas the first column displays the number of students resulting from imputation in the first consumer expenditure survey and from the respective more detailed variables in the subsequent surveys, the second applies the

imputation to all surveys. By definition, the figures in the first row do not change. The number of persons defined to be higher education students increases by five and seven percent in the surveys where more accurate information on students is available. The third column counts the number of real higher education students in the first column which would also be identified as such when the imputation is conducted. In the KE04/05, their share is 88%, in the KE09/10 96%.

Year	Student Definition Real	Student Definition Imputation	Imputation Matches in Real Set
1999	526	526	526
2004	424	454	376
2009	352	378	338

Table 2: Accuracy of student status imputation. Results are shown for the KE99/00, KE04/05 and KE09/10. *Student Definition Real* refers to higher education students as identified by the respective variable. For the KE99/00, no such vairable exists. Therefore, the number reported is the same as the number resulting from estimation. The number of students as identified by the estimation process is listed in the second column, by survey. The number of cases which are correctly indentified by the estimation are listed in the column *Imputation Matches in Real Set*.

Clearly, the imputation suggests caution when it comes to the interpretation of the results. However, some degree of inaccuracy cannot be avoided given the data availability.

Common trend - household characteristics

Having identified student households, a closer look at their household circumstances is enlightening for several reasons. Firstly, a comparison over time requires controlling for major changes in the characteristics of treatment and control groups before and after treatment. In the case of tuition fees in Austrian higher education, this implies taking changes in the characteristics of both student households and households without higher education students between the KE99/00 and the KE04/05 into account. Changes in household characteristics will be scrutinised with respect to household size, age structure and income. Secondly, checking the household income variable is crucial when it comes to categorising student households by their economic background.

A significant determinant of expenditure patterns, the household structure is a crucial dimension of household characteristics (Sachs, Hoch, and Weinelt 2017). It follows, for example, that a decreasing in the mean expenditure across households might be brought about by an increasing prevalence of single households, exhibiting lower consumption spending on average. Methods to circumvent problems arising from changing household structures include the construction to equivalence scales for expenditure analogous to income equivalence scales (Statistik Austria 2017). However, this approach has a number of drawbacks. On the one hand, it can be argued that equivalence scales distort the analysis of distributions since they are not sensitive to income and other household characteristics (Garbuszus et al. 2018). On the other hand, it is not advisable to apply equivalence scales to different expenditure categories, since the latter differ in economies of scale associated with each category (Becker 2014). Therefore, this analysis draws particular attention to changes in the household structure. In addition, the analysis focuses on shares of certain expenditure types relative to total household expenditure. This

Sachs, Andreas, Markus Hoch, and Heidrun Weinelt. 2017. *Grundbedürfnisse Und Teilhabe in Deutschland: Wer Kann Sich Was Leisten?* Vol. 9. Inklusives Wachstum Für Deutschland. Gütersloh: Bertelsmann Stiftung.

Statistik Austria. 2017. "Verbrauchsausgaben Sozialstatistische Ergebnisse Der Konsumerhebung." Wien: Statistik Austria.

Garbuszus, Jan M., Notburga Ott, Sebastian Pehle, and Martin Werding. 2018. "Wie Hat Sich Die Einkommenssituation von Familien Entwickelt? – Ein Neues Messkonzept." Bertelsmann Stiftung.

Becker, Irene. 2014. *Einkommen, Konsum Und Sparen Nach Quintilen Des Haushaltsnettoeinkommens - Ergebnisse Der*

approach is not sensitive to the OECD standard equivalisation (OECD o.J.), even if the equivalisation was conducted.

The change in the household structure is illustrated in figure 1. The number of households of each type is expressed as its share of total households by year. Household types are defined by the number of household members.

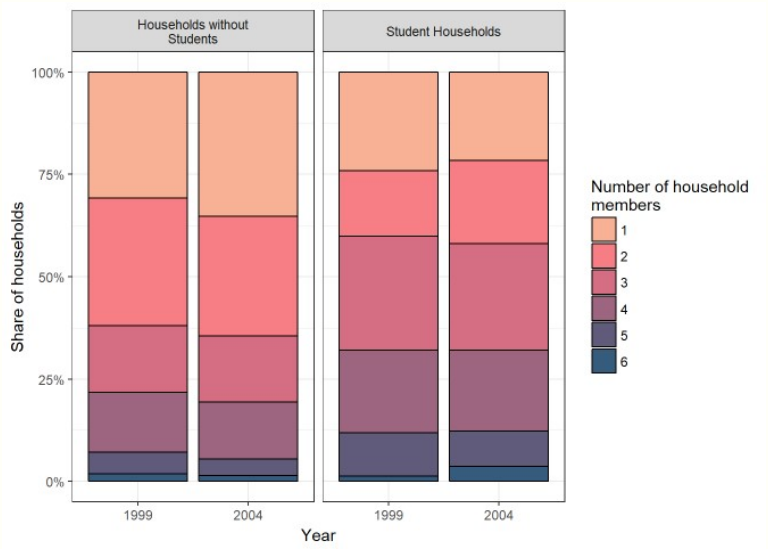

Figure 1: Whereas the left panel represents student households in 1999/2000 and 2004/2005, the right refers to households without students. Each type's frequency as a fraction of the number of total households is plotted on the y-axis. Household types are defined by the number of household members. For instance, in 1999/2000, approximately 24% of all households with higher education students are single households. In 2004/2005, this share amounts to 22%.

Figure 1 reveals substantial differences between student households and households without higher education students in terms of the number of household members. Whereas smaller households are less prevalent amongst students, more than half of the households without students are either single households, couples or single parents with one child. Among student households, the most common household type are households with three members.

Even though the composition is different from the outset, what matters for the analysis are changes in the household structure and the expenditure pattern changes they imply. Common to both groups is an increase in households with one or two members. In contrast to student households, singles become more important among households without students, the control group. More students tend to live in couple households in 2004/05. The increase in one and two person households is compensated by a decrease in households with five members in the case of the control group. As compared to the household composition in 1999/00, fewer students live in single households and households with three members. Also, substitution takes place among the two largest household types illustrated in Figure 1.

In terms of expenditure structures, an increase in households with less than three members implies decreasing spending in categories characterised by the nonexistence or small economies of scale. These are likely to include nutrition, leisure spending, tobacco and alcohol as well as hotels and restaurants. Since both groups exhibit increases in

Einkommens- Und Verbrauchsstichprobe (EVS) 2008. Vols. 2014–2.

households with less than three members, it is helpful to consider the changes in average household size to check for influences of household size on mean expenditure by COICOP-group. As Table 3 reveals, mean household size decreased in non-student households, whereas a slight increase in student households can be identified. This would suggest a decrease in consumption of goods with no or little economies of scale in the control group, relative to the treatment group.

Mean household age shows a moderate increase in both groups, whereas income sees more absolute growth in student households. From this one might deduce a decrease in the relative importance of leisure expenditure and other spending not related to basic needs in households without students.

Year	Group	Mean household size	Mean household age	Mean household income
1999	Non student household	2.43	45.02	2379.28
1999	Student household	2.88	31.89	2676.36
2004	Non student household	2.30	45.86	2523.11
2004	Student household	2.93	32.90	2907.79

Table 3: Household characteristics of student and non-student households. The table presents the means of household size, mean age within households and household net income (excluding imputed rents, not equivalized).

Income of student households

Measuring the economic well-being of students can be problematic, as a significant proportion of students have their own households and report low incomes (Rocha-Akis et al. 2016). However, their parents might command over significant economic resources, transferring income to student households which are not covered by the survey. As the focus of this contribution is to be laid on less affluent households, investigating the extent of this phenomenon is indispensable.

Rocha-Akis, Silvia, Jürgen Bierbaumer-Polly, Martina Einsiedl, Alois Guger, Michael Klien, Thomas Leoni, Hedwig Lutz, and Christine Mayrhuber. 2016. "Umverteilung Durch Die öffentlichen Haushalte in österreich." Österreichisches Institut für Wirtschaftsforschung (WIFO).

Table 4 reveals that student households underreporting their incomes do not appear to cause significant bias in this study when it comes to grouping by household income. The table shows the number and the mean income of student households reporting less than 600.00 Euros in equivalised net income. The threshold at € 600.- derives roughly from the upper-income boundary of the poorest tercile of students in terms of monetary income as shown by Wroblewski and Unger (2003) - € 600.-. From Table 4 follows that only a small proportion of households report less than € 600.- of equivalised income.

Wroblewski, Angela, and Martin Unger. 2003. "Studierenden Sozialerhebung 2002." Vienna: Institute for Advanced Studies (IHS).

Year	Household size	Observations	Mean income
1999	1	30	447.76
1999	2	3	459.18
1999	3	1	572.37
1999	4	1	257.82
2004	1	19	434.52
2004	2	11	452.97
2004	3	3	330.58
2004	4	1	581.75
2004	5	2	536.34

Table 4: Number and mean of equivalised income of households reporting less than € 600.- of equivalised income by year and household size. For instance, in the KE99/00, 30 single households reported an income below € 600, on average amounting to € 447.76.

Results

The descriptive analysis of the consumption structures in Figure 3 already illustrates the relative importance of tuition fees as an expenditure category. Whereas in the KE99/00, both student households and households without students only dedicate a tiny fraction of their spending to education, the KE04/05 panel tells a different story. Households without higher education students maintain an insignificant share of COICOP 10 spending. In contrast, a sharp increase in the expenditure share of education is to be observed among student households. In the KE99/00, the education expenditure share of student households amounted to 0.3%. Five years later, this share peaked at 3%. The share of educational expenditure remained at a level below the one percent boundary. The analysis at a lower level reveals that this increase is mainly due to tuition fees, as the Figure 2 sets out. The graph reveals that the sharp increase in educational expenditure is due to higher spending on ISCED 5 costs, which refers to the cost associated with higher education.

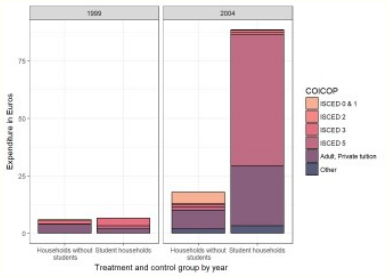

Figure 2: Average absolute spending on education by subcategory. Note that spending on *other*' educational goods was not part of the questionnaire in the KE99/00

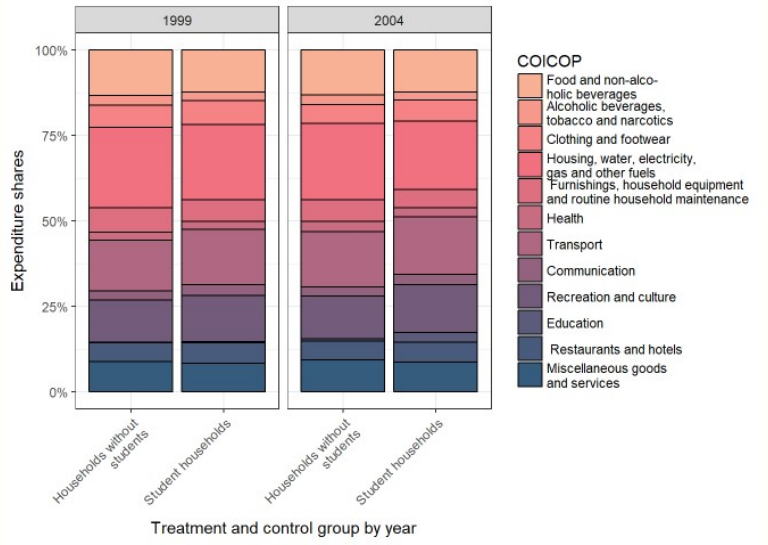

Figure 3: This Graph illustrates the consumption structure of Austrian households. The two panels group the illustration by year. The left hand side refers to the consumption structure before the introduction of tuition fees in 1999/2000 and the right hand side is the consumption structure three years after the fees were charged for the first time. The bars in each panel compare student households and households without students.

Important insights can be gained by analysing the changes in consumption patterns. This illustrates the subsitution effects between different types of expenditure. First, Figure 4 displays the changes in the shares of different consumption categories in percentage points. The changes in the consumption structure of households without students and student households between the KE99/00 and the KE04/05 are compared. The most striking difference between the development of the expenditure patterns between both of the groups is the educational expenditure. On average, households with students spent 2.7 percentage points more on education as a share of their total consumption in the KE04/05 than they did in the KE99/00. This increase is much higher than the growth in educational expenditure shares for households without students. It is noteworthy that the increase in educational expenditure among non-student households derives from increased expenditure on adult education and private tuition, instead of tuition fees paid by university students.

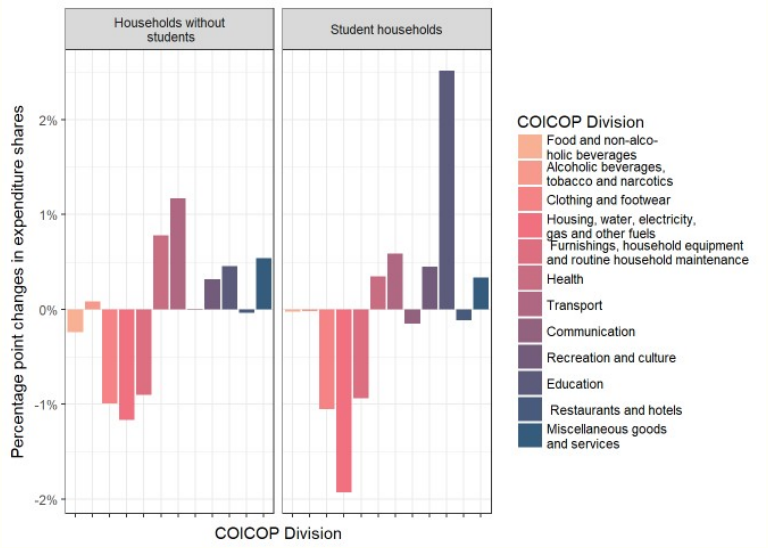

Figure 4: The changes in the consumption structure in the time frame between 1999/2000 and 2004/2005, which includes the implementation of the new higher education financing scheme, are illustrated in this barchart. Values are measured in terms of percentage point changes of the shares of the respective spending categories in the consumption basket of households. Each bar represents the change in the average expenditure share of one COICOP division. The graph spearates student households from the rest of the population. For instance, spending on education increased by roughly 2.7 percentage points on average among student households.

As this contribution aims at identifying the effect of tuition fees on the chances to build social capital of economically disadvantaged households in particular, for this would allow inference on the effects on the social selectivity of the policy measure in question, we draw special attention to economically disadvantaged student households. If they are more adversely affected by tuition fees, a substitution process is to be expected for poorer students who still participate in higher education. They might purchase fewer goods which are not considered as basic needs and shift their consumption to the costs of their education in order to maintain higher education participation.

Figure 5 follows the same principle as Figure 4. The only difference is that this illustration is confined to the restricted sample of households in the poorest tercile of the income distribution. From the descriptive analysis follows, that lower-income student households, just as all other student households on average, increase their share of expenditure on educational goods. However, note that this increase is higher in magnitude as the increase in spending on COICOP 10 for all student households. This follows from the lower level of total expenditure associated with lower income. Most importantly, substitution processes are to be observed. Lower income student households compensate increasing costs of education by reducing expenditure on *Recreation and Culture* as well as *Restaurants and Hotels* in order to maintain participation in higher education. While spending on education increases by 4.1 percentage points for lower income student households between the KE99/00 and the KE04/05, recreational and cultural consumption decreases by 4.2 percentage points. Furthermore, student households spend on average 1.7 percentage points less on the category *Restaurants and hotels*.

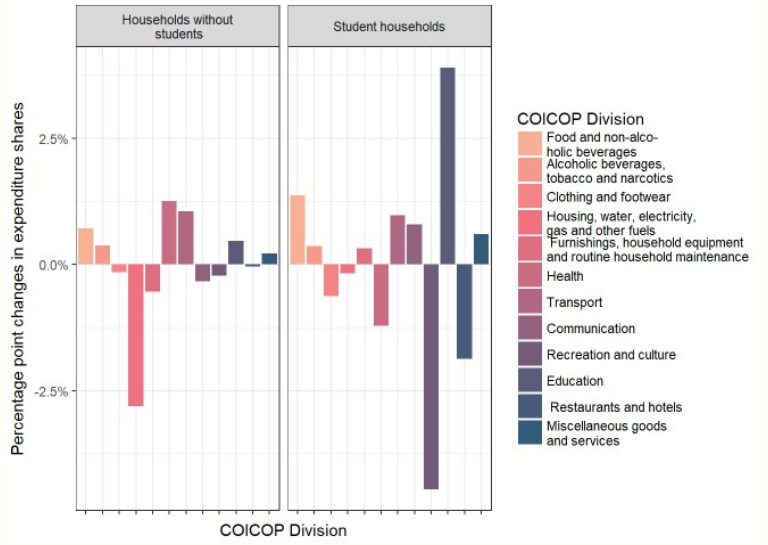

Figure 5: The changes in the consumption structure in the time frame between 1999/2000 and 2004/2005, which includes the implementation of the new higher education financing scheme, are illustrated in this barchart. Only households of the poorest tercile of the income distribution (not equilvalised) are considered. Values are measured in terms of percentage point changes of the shares of the respective spending categories in the consumption basket of households. Each bar represents the change in the average expenditure share of one COICOP division. The graph spearates student households from the rest of the population. For instance, spending on education increased by roughly 4 percentage points on average among student households with relatively limited financial resources.

Our results are supported by a multivariate linear regression model. It assumes the following form, providing information on the statistical significance of the results presented in the descriptive analysis:

$$\sum_{g=1}^{G} EXP_{g,h} = \beta_0 + \beta_1 T_h + \beta_2 STUD_h + \sum_{q=2}^{Q} \beta_{3q} INC_{qh}$$
$$\gamma_1 T_h \times STUD_h + \sum_{q=2}^{Q} \gamma_{2q} T_h \times INC_{qh} + \sum_{q=2}^{Q} \gamma_{3q} STUD_h \times INC_{qh} + \sum_{q=2}^{Q} \delta_{1q} T_h \times STUD_h \times INC_{qh} + \epsilon_h$$

The dependent variable is the sum of the expenditure categories being influenced by the policy implementation. In the framework of this analysis, the relevant expenditure is expenditure on *Recreation and Culture* as well as *Restaurants and hotels*. Therefore, G is the total set of relevant expenditure categories. T_h refers to a dummy variable distinguishing the two waves of the *Konsumerhebung*. The second binary variable $STUD_h$ indicates student households. The sum operator summarises a set of dummy variables INC_{qh} for each but the first quantile, which assume unity if household h belongs to quantile q. The estimators in the table below use terciles, in order to ensure that sufficient observations in each group are available. Whereas the baseline scenario β_0 refers to the average expenditure on divisions nine and ten by non-student households in the KE99/00, $\beta_0 + \beta_1$ yields the average expenditure of non-student households in the KE04/05. β_2 is the difference between the baseline scenario and student households in the KE99/00. The Table *Regression Results* supports our findings, mainly through the γ_1 coefficient. It suggests that on average, the partial effect of the treatment on student households in the first tercile of the income distribution is negative and significant ($\beta_1 + \gamma_1$). While on average for all groups, the decrease in the dependent variable before and after the implementation (β_1) is not significant, the coefficient on the poorest households of the treatment group (γ_1) is significant and negative. As for the other income groups, the partial effect of the implementation of tuition fees is to be calculated by including further interactions. Student households in the third tercile face an increase in the expenditure share on social participation of the magnitude of

$\beta_1 + \gamma_1 + \gamma_{23} + \delta_{13}$. Note that no time indices are used in the specification due to the cross-sectional nature of the data.

Regression Results

	Dependent variable:
	Social Participation Exp. Share
T+1	-0.004
	p = 0.255
STUDENT	0.101
	p = 0.000***
TERC2	0.020
	p = 0.000***
TERC3	0.034
	p = 0.000***
T+1 :: STUDENT	-0.040
	p = 0.011**
T+1 :: TERC2	0.005
	p = 0.336
T+1 :: TERC3	0.010
	p = 0.042**
STUDENT :: TERC2	-0.070
	p = 0.00001***
STUDENT :: TERC3	-0.090
	p = 0.000***
T+1 :: STUDENT :: TERC2	0.025
	p = 0.272
T+1 :: STUDENT :: TERC3	0.045
	p = 0.022**
Constant	0.147
	p = 0.000***
*p<0.1;**p<0.05;***p<0.01	
Observations	15,498
Residual Std. Error	0.111 (df = 15486)
F Statistic	35.276*** (df = 11; 15486)

Both the descriptive as well as the regression analysis provide evidence for a reduction of expenditure on social participation of poor student households as a consequence of the introduction of tuition fees in Austria. This suggests that low-income households reallocate their financial resources in order to maintain participation in higher education. However, their living conditions change due to the policy. This is likely to have adverse effects on the social advancements of the lower income students.

Discussion and Policy Implications

This contribution finds that consumption structures are significantly influenced by the introduction of tuition fees in Austria in 2001. The effects of the policy differ with regard to the economic background of students. Households from lower income classes exhibit significant reductions in spending on social participation in order to maintain participation in higher education. In contrast, more affluent households do not follow the same trend.

The results should be interpreted with reasonable caution, for due to methodological and data reasons limitations exist. Firstly, the income data has not been collected in a similar way in all surveys. Therefore, some degree of bias might arise when grouping households by income groups. Secondly, as a result of a lack of information on personal characteristics in the KE99/00, students are identified based on their highest educational attainment. Therefore, this inquiry incorrectly ascribes the status "student" to some individuals, whilst others cannot be identified.

Even though careful interpretation of the results is advisable, the results suggest that student households will most likely face more obstacles in becoming part of a society's elite if they are charged tuition fees. Less expenditure on travels, cultural events or going out implies, that students from non-bourgeois and affluent households have fewer chances to build networks or acquire the habitus required to enter the elite. Having a cosmopolitan appearance and character, being accustomed to behavioural codes or knowledge on culture are part of this habitus, and correlate with expenditure on social and cultural participation.

These findings result from an understanding of social selection, which is not merely based on educational attainment. Rather, the social stratification of the education system is only a first step in the whole process of differentiation. The second step is selection based on habitus, which is of key importance in the formation of a society's elites. Research overlooks a key social dimension of tuition fees if this second step of social selection is neglected. To develop a more fundamental understanding of the phenomenon observed in this contribution and its long term consequences, more research is necessary in different areas. Firstly, international evidence on the effect of tuition fees on social participation would be enlightening. Secondly, a profound investigation of the association between habitus and consumer expenditure would enhance this contribution. So far, we cannot provide empirical evidence on this relation, though from a theoretical point of view it is fair to assume that a strong correlation exists.

For the Austrian case, one should be aware of the social consequences of tuition fees. There have been rumours that tuition fees of about € 500.- will be introduced. This would roughly correspond to the fees levied in 2001 and subsequent years, adjusted for inflation. Therefore, the expected effects on the expenditure structure are comparable to those illustrated by this inquiry. Even though participation rates by social origin might only be marginally affected, the measure will reduce the mobility of lower-income households. That said, it is strongly advisable to rely on other policies to regulate the in- and outflow of students from neighbouring countries, which do not hamper social mobility in Austria.