

Kłobuszewska, Małgorzata

## Article

# Demand for additional foreign language activities in Poland

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Małgorzata Kłobuszewska

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Małgorzata Kłobuszewska 

Educational Research Institute (IBE), Education Research and Analysis Department

Górczewska 8, 01-180 Warsaw, Poland

corresponding author: m.klobuszewska@ibe.edu.pl

## Demand for Additional Foreign Language Activities in Poland

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### Abstract

This paper addresses the issue of participation in additional activities in foreign languages among Polish students aged 7–15. Foreign language skills are important in recruitment to secondary school and university. In the labour market, there is also a considerable wage premium for foreign language skills. Participation in such activities is therefore a form of investment in human capital. In this work we distinguish two kinds of additional foreign language activities: paid and free, and we show their different characteristics, which is our contribution to the literature. We check whether the key factors on the demand and supply side of additional activities such as family socio-economic status (SES) and size of the place of residence affect the participation in paid and free activities in a similar way. We also examine gender differences in additional foreign language activities participation. For the purpose of our analysis, we use data from the second round of the Determinants of Educational Decisions study (UDE) and apply the multinomial logit regression model. Our results indicate that family SES and size of the place of residence are important factors for probability of participation in paid foreign language activities. For participation in free activities, family SES does not matter. Therefore, these classes can contribute to equalising educational opportunities. We also find that girls are more likely to participate in both paid and free activities in foreign languages.

### Keywords

additional activities | family SES | foreign language activities | gender | multinomial logit

### JEL Codes

I20, I24, J16

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## 1. Introduction

Participation in additional activities is a very popular form of investing in education. Parents believe that such activities will help their children achieve educational success and develop valuable skills. In Poland, students most often participate in additional activities in foreign languages and sports (Badora, 2021). In this article, we focus on the probability of participation in the former. We use a broad definition of additional foreign language activities. These can be both paid and free classes, private tutoring, classes organised at school after the bell, or by private language schools.

Foreign language activities are quite a conscious investment of parents in their child's human capital. Mastering foreign languages, apart from the fact it gives an advantage in recruitment to subsequent educational stages, is extremely valuable on the labour market. Research shows that the command of foreign languages among native employees is associated with

higher earnings (Asadullah & Xiao, 2019; Di Paolo & Tansel, 2015; Liwiński, 2019). There is also a belief among Polish parents that it is difficult to learn a foreign language at school. In fact, the skills taught at school are not sufficient to master a foreign language, as suggested by Gajewska-Dyszkiewicz et al. (2014). The insufficient teaching of foreign languages in the public system and selective schooling is also the reason why students from other countries decide to take additional foreign language classes, e.g. in Greece (Tsiplakides, 2018) and in South Korea (Exley, 2020).

There is a large body of literature on all kinds of extracurricular activities (Bray & Kwok, 2003; Covay & Carbonaro, 2010; Kim & Lee, 2010). Researchers analyse the determinants of participation in extracurricular activities (Heath et al., 2022), private lessons (Matsuoka, 2018), tutoring (Hawrot, 2022; Safarzyńska, 2013), and learning assistance (Hawrot, 2018). Others analyse parents' expenses for this type of activity (Tansel & Bircan, 2006). In this article, we

focus on the probability of participating in additional foreign language activities among Polish students. The novelty of this study is that we consider two forms of foreign language activities: paid classes (a private initiative of the parents and the student) and free additional classes (usually organised at school after lessons). We examine whether the key characteristics of demand and supply for such additional activities affect the participation in paid and free activities in a similar way. If so, it would indicate that both types of foreign language activities will increase and maintain educational inequality. As far as we know, no previous research has investigated this issue. We also examine gender differences in additional activities participation. The predominance of girls in participation in academically oriented classes and the predominance of boys in sports is an issue that has long been noticed in the literature on the subject (Fletcher, Nickerson & Wright, 2003). In our analysis, we check whether gender differences are also visible among Polish students and whether it applies to both types of foreign language activities, paid and free.

In our analysis, we use data from the second round of the Determinants of Educational Decisions (UDE), which was carried out by the Educational Research Institute (IBE) in 2014. To address our research problem, we apply a multinomial logit regression model.

The remainder of the paper is structured as follows. First, we identify possible determinants of participation in paid and free additional foreign language activities based on previous empirical studies. In Section 3, we describe data used in this research. We then present the methodology adopted to verify our hypotheses and discuss the results. In the last section, the summary and conclusions are given.

## 2. Literature Review

Additional activities are a very heterogeneous category, as indicated, *inter alia*, by Park et al. (2016). These may include tutoring, private lessons, but also additional classes organised by schools outside of school hours. There are also many types of non-academically oriented activities that are related to a child's interests. Additional activities can fulfil various functions. They can help students with some difficulties to master skills required by schools. The additional activities' programme can also extend

beyond the school curriculum. In this way, it can increase the student's chances of recruitment at subsequent stages of education, which is particularly important in countries with an external examination system (Exley, 2020; Kim & Lee, 2010; Tansel & Bircan, 2006). Additional activities can also be completely unrelated to the school curriculum and serve only the child's development and interests. However, they can, like academically oriented extracurricular activities, contribute to a better situation on the labour market and higher earnings by developing cognitive and non-cognitive skills (Liwiński & Bendyk, 2016; Lleras, 2008).

Tutoring, which is often the subject of research, is a special form of additional activities. Bray (2021) underlined that private tutoring has become increasingly evident in Europe. Private lessons are very common in Southern Europe, especially in Greece and Cyprus. In Western Europe, we have seen the increase in tutoring participation over the last decade as a result of increasing competitiveness in the labour market. In the post-socialist countries of Eastern Europe, the scale of tutoring is also increasing and is driven by economic pressures. In Scandinavian countries, private tutoring is also visible. However, it seems that public schools can offer sufficient support for both lower and higher achievers and parents are convinced that public school meets students' needs. Bray (2021) also noticed that contrary to common beliefs, tutoring does not serve the weakest students. It is aimed rather at those who are already performing well (especially in East Asia, but also in Europe).

This article focuses on participation in foreign language activities by Polish students. Poland is an example of a Central and Eastern Europe post-socialist country with a growing popularity of additional activities, including tutoring. Public opinion polls in Poland show that interest in paid additional activities was growing between the 2009/2010 and 2018/2019 school years. However, since the 2019/2020 school year, we have been observing a small decrease in participation in paid extracurricular activities (Badora, 2021). Students most often participate in additional activities in foreign languages and sports. In the 2021/2022 school year, 32% of families with school-age children paid for their participation in foreign language activities, and 31% of families paid for participation in sports (Badora, 2021).

In Poland, as well as in other countries, students pass external examinations in a modern foreign language. Exam results are taken into account

when enrolling in secondary school and university. However, learning a foreign language in a public education system is not always enough to increase student's recruitment chances. According to the results of a Polish study (Gajewska-Dyszkiewicz et al., 2014), communication skills, essential for the efficient use of a foreign language, are rarely practised during school lessons. More attention is paid to grammar and vocabulary learning. Tsiplakides (2018) showed, for Greece that ineffective teaching of foreign languages in public schools is the reason why students decide to take additional foreign language classes. In South Korea, the extremely selective education system forces the use of English tutoring also by highly achieving students (Exley, 2020). The style of teaching also matters. Guill, Lüdtke, and Schwanenberg (2020) showed, for Germany, that a more individualised support for students in the classroom reduces the probability of participation in private tutoring in English.

On the labour market, language skills are very valuable. As Di Paolo and Tansel (2015) conclude, knowledge of foreign languages influences earnings through several channels. Good command of a foreign language affects an employee's productivity as it contributes to efficient communication in the workplace between co-workers, but also with customers and business partners. It also increases the chances of employment in better-paid occupations. Knowledge of a foreign language might also play a role as a signal of other cognitive and non-cognitive skills valued by employers.

Studies show a significant wage premium from foreign language skills among native employees. Di Paolo and Tansel (2015) showed that knowledge of English and Russian are associated with higher earnings in Turkey. For the People's Republic of China, the estimated wage premium from good knowledge of English is about 30% (Asadullah & Xiao, 2019). For Poland, Liwiński (2019) found that advanced command of a foreign language increases wages by 11%. A higher wage premium was related to the knowledge of Spanish (32%) and French (22%) than English (11%).

High foreign language skills bring benefits in the short term, increasing the chances of entering a better secondary school or a chosen field of study, which has further positive consequences. Knowledge of foreign languages is also rewarded in the labour market. These might be the reasons why some parents decide to enrol their children in foreign language classes and other additional activities.

## 2.1. Determinants of children's participation in additional classes

There is relatively little research devoted to participation only in foreign language activities. Therefore, distinguishing possible determinants of participation in such classes, we will use conclusions from a slightly broader literature. Even though additional activities are so diverse, and their function can be very different, many of the factors that determine participation in them should be similar.

**Family SES.** The large body of literature shows that the socio-economic status (SES) of the family influences participation in additional activities of different types. The SES in these studies is operationalised by the wealth of the household, the education of the parents, or a composite measure.

Covay and Carbonaro (2010) showed that students from a higher SES background more often participate in structured extracurricular activities than students from lower SES backgrounds. According to the authors, participation in structured activities contributes to the acquisition of non-cognitive skills and explains some of the variation in children's achievements due to family SES. Their findings are in line with work of Lareau (2003), who described the differences in ways of spending leisure time by children in the U.S. from different social classes. Participation in private tutoring also depends on the SES of the family, as shown by Bray and Kwok (2003) for Hong Kong, Dang and Rogers (2016) for Vietnam, Hawrot (2022) for Germany (tutoring in German, but not in math), Kim and Lee (2010) for South Korea, Matsuoka (2018) for Japan, Safarzyńska (2013) for Poland, and Tsiplakides (2018) for participation in tutoring in English by Greek students. Zwier, Geven, and van de Werfhorst (2020), analysing the Programme for International Student Assessment's (PISA) 2012 data from 54 countries noticed also that external examinations amplify the positive relationship between family SES and participation in private tutoring. In Poland, there were external examinations after lower secondary school (*gimnazjum*), also in a foreign language. The results of empirical research are in line with the human capital theory, according to which parents with a higher economic status invest more in their children's education than poorer ones (Becker & Tomes, 1979).

Research related to extra activities in Poland confirms these results. Kłobuszewska (2019) showed that the probability of participation in additional classes depends on the wealth of the family and parents'



education. Safarzyńska (2013) obtained such a result for participation in tutoring. Rokicka and Sztanderska (2013) showed that the expenses of households with children for tutoring and courses depend on parents' education and income. Hawrot (2018) showed that Polish students with learning difficulties from wealthier families used paid out-of-school learning assistance more often than their poorer peers. We also identified other studies for Poland with consistent results (Długosz, 2016; Kotarski, 2020).

The relationship between family SES and participation in free additional activities seems to be an interesting topic. The sociology of education suggests that the SES of the family also plays an important role in making educational choices not related to financial investments. Parents with a lower SES have lower educational aspirations and less knowledge about the benefits of education compared to parents with a higher SES (Domański, 2007; Sadura, 2017). Socioeconomically disadvantaged parents who do not have a higher education experience may support their children, but they are not aware of what skills are relevant for educational success (Lucas, 2001). Sociological theory of relative risk aversion (Holm & Jæger, 2008) assumes that educational investments are motivated by fear of downward social mobility rather than the desire to move upward in the social structure. Hence, children wish to attain at least the level of their parents' education and have fewer incentives to attain higher levels of education, especially since it involves their effort and other costs. Children from different social backgrounds have also different thresholds where these costs outweigh future benefits. This may result in less interest, even in the free academically oriented additional activities by students from lower SES families. Kłobuszewska (2019), in a qualitative study for nine counties in Poland, showed that students from families with a lower SES are rather indifferent to the offer of such activities, despite their availability. Park et al. (2016) mentioned that in the U.S., there are programs of extra activities and summer schools aimed primarily at students from disadvantaged backgrounds. However, not all eligible students participate. This is partly due to transportation problems but also to the parents' lack of awareness of the available services.

**Degree of Urbanisation.** Bray (2021) points out that differences in participation in private tutoring between students from urban and rural areas are the result of factors on both sides: demand and supply. The supply of additional activities obviously affects the

possibility of participating in them. The availability of different kinds of additional activities is significantly related to the degree of urbanisation. In urban areas, the choice of various types of additional activities organised by private companies (such as language schools and sport clubs) and public institutions (such as community centres) or private tutor's services is significantly greater than in rural areas. Cities are also more competitive and may have a higher share of families with a higher SES than in rural areas. A positive relationship between participation in various types of additional activities and degree of urbanisation/community size has been demonstrated in previous studies, e.g. Dang and Rogers (2016) for Vietnam, Safarzyńska (2013) and Kotarski (2020) for Poland, Silova (2010) for 12 countries in Eastern Europe and Central Asia, and Štátný (2016) for the Czech Republic. Hawrot (2018) also obtained such a result for the use of paid out-of-school learning assistance by Polish students.

The relationship between the degree of urbanisation and participation in additional activities is also mediated by the degree of concentration of families with a higher SES. Matsuoka (2018) noticed that the neighbourhood SES can be important for participation in additional activities, as it can shape educational expectations. High expectations towards children's education together with a high share of higher SES families could cause some social pressure on students to perform well academically. According to his study, higher SES students from the higher SES schools in Japan used tutoring more often than their counterparts from more socially diverse schools. This 'hothouse' effect was first described by Smyth (2009). In Poland, in rural areas, the schools are diverse in terms of the SES of their students, while in urban areas, schools are more socially polarised (Dolata, 2011). In places where higher-SES students are concentrated, the pressure to participate in additional activities (such as private tutoring or foreign language classes) may be greater.

**Gender.** The students' gender may be important for participation in additional activities. Differences in participation patterns by gender results from cultural conditions and stereotypes. In the U.S., girls are more likely to participate in structured additional activities than are boys (Fletcher et al., 2003), especially in the arts and academic clubs (Meier, Hartman & Larson, 2018), while boys are more likely to engage in sports activities (Heath et al., 2022). Molinuevo et al. (2010) noticed the same trend among primary school students

in Spain. Girls more often than boys participated in dance, workshops, music, and languages, while participation in sports was more common among boys.

The report from the PISA 2006 study (OECD 2011) analysed the time students spend learning science, math, and language of instruction in regular school hours and in out-of-school-time lessons. The findings are that in most countries, girls spend more time in individual study in science, math, and language of instruction than boys. Female students tend to participate in individual out-of-school-lessons with non-school teachers (probably in tutoring) than do male students. Boys are more involved in all kinds of additional lessons with school teachers than are girls (probably remedial classes and interest circles). For Polish students, there was no difference between girls and boys in participation in out-of-school-time lessons in science, math, or language of instruction.

Using more detailed data and controlling for other factors, Safarzyńska (2013) noticed that in Poland, female students in lower secondary schools more often participated in tutoring in maths, while male students did so in Polish and preparatory courses. During education in the upper secondary schools, female students again used tutoring in maths more often. This could be due to the stereotypical belief that girls are less good at mathematics. Hawrot (2022) received a similar result for Germany. Her analysis indicates that girls are more likely to participate in tutoring in math than boys, while gender does not matter for participation in tutoring in German. Zwier et al. (2020), using PISA 2012 data for 54 countries in a multilevel analysis, found that girls are more likely to participate in lessons with a personal tutor and in commercial company lessons than boys. Šťastný (2016), for the Czech Republic, showed a significant advantage for girls in tutoring participation.

The prevalence of girls participating in structured, academically oriented extra activities may result from the fact that boys in general are less interested in learning and less hardworking than girls, and therefore they decide less often on activities that require a greater amount of work (Gromkowska-Melosik, 2011, p. 56–76). It is also possible that girls, knowing about the more difficult situation of women in the labour market, invest more in their education to increase their chances of success.

The reviewed literature suggests that the size of the place of residence is related to the availability and size of the market of additional activities; therefore, it

is a supply-side factor that influences participation in foreign language additional classes. The factors lying on the side of the student's family are wealth, education of parents, and cultural capital. The wealth of the family makes it possible to participate in paid additional activities. The parents' education and cultural capital shape their attitudes towards education, influence the propensity to invest in their children's human capital, and set the level of social status that their children will strive to achieve. Parents with a higher social status, thanks to their own experience, will also make greater use of what is offered by public education (e.g. free additional activities). The concentration of higher SES families in urban areas might also influence the demand for foreign language activities, as there is more social pressure to invest in children's education. The prevalence of girls is not visible in all types of extracurricular activities. However, research suggests that girls are more likely to participate in academically oriented additional classes, which the foreign language activities are.

Based on the above, we formulate the following hypotheses for the likelihood of participation in foreign language additional activities by students in Poland:

1. Students from higher SES families are more likely to participate in paid foreign language additional activities.
2. Students from lower SES families are less likely to participate even in free foreign language additional activities.
3. Students from urban areas are more likely to participate in paid foreign language additional activities than students from rural areas.
4. As foreign language additional activities are academically oriented, girls are more likely to participate in them.

### 3. Data and Methodology

#### 3.1. Data

The analysis used a collection from the second round of the UDE study carried out by the IBE between July and November 2014.<sup>1</sup> The UDE survey was a nationwide

<sup>1</sup> More information is available on the website <http://eduentuzjasci.pl/ude>

survey representative of households. The collection includes, among other information on the characteristics of people living in the household, a description of the household's income situation, as well as information on the education of children aged 0–15. The sample used in the study included children attending primary or lower secondary schools (aged 7–15). Information about children's education are included in a separate data set that can be linked, via a household ID, to data on the household and its other members. Since the kinship of household members was determined only in relation to the head of the household, it was not possible to identify the parents of all children in the set (however, the percentage of such cases was negligible). Therefore, for the purposes of this study, the sample was limited to the sample of children attending primary or lower secondary school for whom it was possible to identify the parent (i.e. when the parent was the head of the household). Thus, we obtained the set with the number of observations equal to 7,787. Due to the missing data in several variables, the final sample used in the model was 7,342 records.

For the purposes of the study, it was also assumed that the spouse or partner of the head of the household is the second parent of the examined child. It was not possible to define the biological bond between children and these people. In a situation where the head of the household did not have a spouse or a partner in his/her household, it was assumed that the child had only one parent. The head of the household was the respondent in this study.

**Dependent variable.** The dependent variable was created on the basis of several questions. The first question was: *In the 2013/2014 school year, did [CHILD'S NAME] participate in any additional activities or other activities related to developing interests (e.g. sports, music, language, scouting or oasis movement)?* The answers 'yes' or 'no' concerned 7,608 children (98% of initial sample, 'I don't know' replies and a refusal to answer were coded as the missing data). Almost 52% of children in this group (3,929) participated in any kind of additional activities. Then, the records corresponding to the students participating in the foreign language activities were extracted (1,368 children). The last question was whether the language classes were paid or free. The answer 'paid' was chosen by 917 people (12%), the answer 'free' by 447 people (almost 6%), and 4 people answered 'I don't know'. The latter have been coded as the missing data. The dependent variable has three values: 1 for those who participated in paid foreign language additional activities, 2 for those

who participated in free foreign language additional activities, and 0 for those who did not participate in any language activities and at the same time had no missing data in any of the questions used.

**Independent Variables.** The independent variables were selected on the basis of the conclusions of the literature review. In order to investigate the impact of family SES on participation in paid and free language extra activities, measures related to parental education, household wealth, and household cultural capital were used.

**Parental Education.** In the analysis, the mother's education and the father's education were taken into account. The level of education was divided into three categories: lower education (from the answer: never studied to no more than primary, lower secondary or basic vocational education); secondary (general secondary, technical, and post-secondary); and tertiary education (completed studies at bachelor's or master's degree or academic degrees and titles).

**The wealth of the household (ability to make ends meet)** was established on the basis of the question: *Are you able to make your ends meet with your current income?* The possible answers were:

1. *With great difficulty*
2. *With difficulty*
3. *With some difficulty*
4. *Fairly easy*
5. *Easy*
6. *Very easy*

**HH buys books** is a binary variable, constructed on the basis of the question of whether the household had purchased at least one book every three months during the year (excluding school textbooks). The variable takes the value of 1 when books were purchased and 0 when no such purchase was made due to financial reasons or the lack of such need.

In order to verify the influence of the **size of the place of residence** on participation in extra activities, the degree of urbanisation (DEGURBA) classification was used. The DEGURBA is used to classify local administrative units as 'cities', 'towns and suburbs', or 'rural areas' based on the measurement of population density. Appropriate classes were assigned based on the county ID (from National Official Register of the Territorial Division of the Country - TERYT).



**Table 1.** Descriptive statistics for dependent and independent variables. Participation in foreign language additional activities

	Non-participating (81.97%)	Paid activities (12.04%)	Free activities (5.99%)	Whole sample (100%)
Gender: girl	46.61%	52.38%	54.77%	47.79%
Child's age	11.31	11.34	11.92	11.35
Child in the last grade	14.37%	19.12%	16.14%	15.05%
Mother's education: below secondary	42.74%	10.63%	35.68%	38.45%
Mother's education: tertiary	19.69%	58.37%	24.77%	24.65%
Father's education: below secondary	50.25%	22.17%	47.50%	46.70%
Father's education: tertiary	10.67%	35.07%	11.82%	13.67%
Number of children in HH	2.26	1.83	2.14	2.20
Single-parent family	16.38%	14.14%	17.27%	16.17%
Ability to make ends meet (1–6)	3.01	3.66	3.18	3.10
HH buys books	38.68%	67.87%	47.50%	42.73%
Rural area (DEGURBA)	36.77%	16.97%	41.14%	34.65%
City (DEGURBA)	30.84%	47.74%	30.68%	32.87%
Number of observations	6018	884	440	7342

Base category: for gender, boy; for parental education, secondary education; for single-parent family, complete family; for buying books, books are not bought by the household; for size of the place of residence, towns and suburbs.

Source: own calculations.

An important variable in this study is also the **child's gender**. This is a binary variable that takes the value 1 for girls and 0 for boys.

The following characteristics were also controlled: the child's age, child in the last grade of primary or lower secondary school, single-parent family, and number of children up to 18 in the family. In the year when the UDE study was conducted (2014), there was a 6-year primary school and a 3-year lower secondary school; both ended with external examinations. However, students from primary school went to lower secondary school without selection. The result of the exam after primary school was only taken into account in very exceptional circumstances. On the other hand, the exam after lower secondary school was also an entrance exam to upper secondary schools. The single-parent family is a binary variable that takes the value 1 when the head of the household does not have a spouse or a partner in the household. The variable takes value 0 otherwise.

In the UDE questionnaire, there are many interesting questions about the proximity of various educational institutions and the travel time to urban

centres. On the one hand, these factors approximate the size of the supply of additional activities and, on the other hand, the ease of access to it. Unfortunately, these variables are strongly correlated with the size of the place of residence and their use in the model causes problems with the model fit. Thus, we decided not to include such variables.

Descriptive statistics of variables used in the analysis are presented in Table 1. They show that the vast majority of children in our sample did not participate in any additional foreign language classes (almost 82%). Paid classes in foreign languages were chosen more often than free classes (12% vs. 6%). Descriptive analysis suggests that children who participated in paid additional classes in a foreign language were clearly different from the other children (including those who participated in free additional classes). They attended the last grade more often and had parents with higher education more often than their peers. On average, they had a smaller number of siblings, more often came from complete families, and their families were, on average, in a better financial situation. These children, less often than their peers

lived in rural areas, and more often in large cities. The differences between children who participated in free additional foreign language classes and those who did not (and the entire sample) are not so notable. What is noteworthy, however, is the higher share of girls among children who participated in both paid and free foreign language classes than among those who did not. Children who participated in free foreign language activities are, on average, slightly older than those who did not participate in foreign language activities.

It appears that foreign language additional activities are not a homogeneous category. Among students from cities who used this form of additional activity, participation in paid classes prevailed. Of the students who attended additional classes in foreign languages and took part in paid classes, 76% of students were from cities and 72% students were from 'towns and suburbs'. Among students from rural areas, it was 45%, while 55% participated in free classes. The availability of different types of activities may therefore vary depending on the size of the city. Almost 95% of students who participated in free additional foreign language activities attended them in their school. Other places or ways of attending, such as community centres and private lessons, were rare. Among students who participated in paid activities, 22% attended them in their school (unfortunately, we are unable to identify the organiser of these activities), 18% in language schools, 42% attended private lessons, and 9% attended classes organised by private companies. Other forms were chosen by only a small percentage of the students. Unfortunately, the questions included in the UDE questionnaire did not allow us to identify which of these activities were group and which were individual.

### 3.2. Empirical framework

In our study, each student in the sample could be in one of the three situations: no participation in foreign language additional activities, participation in paid foreign language additional activities, and participation in free foreign language additional activities. A similar problem was investigated by Šťastný, Greger, and Soukup (2021). They analysed the probability of attendance in additional instruction in science that take place in the school building and those that take place outside of it. They built two logistic models in which they analysed separately the probability of participation in activities in a school

building and participation in activities outside a school building. This way they compared the situation in which student had participated in one kind of activity to the situation in which student had participated in another kind of activity or had not participated at all. Hence, their reference groups are heterogeneous, which complicates the interpretation of results.

We assume that student could choose one of the three options: not to participate in foreign language additional activities, participate in paid foreign language additional activities, and participate in free foreign language additional activities. In our study, we propose to take into account three possible options in one model and relate the probability of participation in activity of one kind to the probability of non-participation. However, we are interested in the effect that each of the independent variables has on the probability of a single outcome. Therefore, we use a multinomial logit model with cluster robust standard errors (as in one household, more children may qualify for the analyses). Then, we compute the marginal effects to evaluate the effect of changes in the values of covariates on the probability of each outcome.

Our dependent variable takes values from the set of alternatives: 0, not participating; 1, participating in paid activities; 2, participating in free activities. The probability of choosing one of the alternatives is as follows:

$$1) \quad \Pr(y = j | x) = \begin{cases} \frac{1}{1 + \sum_{h=1}^2 e^{x\beta_h}} & \text{for } j = 0 \\ \frac{e^{x\beta_j}}{1 + \sum_{h=1}^2 e^{x\beta_h}} & \text{for } j = 1, 2 \end{cases}.$$

The relative probability of  $y = j$ , for  $j = 1, 2$  to the base outcome is

$$2) \quad \frac{\Pr(y = j)}{\Pr(y = 0)} = e^{x\beta_j}$$

Our model was estimated using the `mlogit` command in STATA.

## 4. Empirical Results

In the following chapter, we describe the results of the multinomial logit regression model. We estimated

the influence of our independent variables (the child and its family characteristics) on the probability of participating in paid and free language additional activities compared to not participating at all.

Some of our variables are correlated (such as education of mother and father or parents' education and ability to make ends meet). This may result in higher standard errors. Most of the independent variables were not strongly correlated with each other. However, the correlation between the education of mother and father was stronger than between these variables and our outcome. Therefore, we decided to carry out an additional estimation without the father's education. This change did not affect the significance of the estimates. Moreover, the outcome of the likelihood ratio test suggests that removing two variables describing the father's education significantly worse model fit (LR test statistics = 37.32, 2 degrees of freedom,  $p < 0.001$ ).

The relative risk ratios from the multinomial logit and average marginal effects are presented in Table 2. No participation in language activities is our base alternative, for which we do not estimate the vector of parameters. Relative risk ratio allows us to compare the probability of an outcome only in relation to the base outcome, not the probability of an outcome as such. However, for each outcome we can compute marginal effects. It is the way to evaluate the effect of changes in the values of covariates on the probability of each of the outcomes and thus verify our hypotheses. Therefore, if the marginal effect is statistically significant, we can talk about the significant impact of a given variable on the probability of an outcome.

First, we can notice that the probability of participating in free additional foreign language activities is less determined by the controlled characteristics of the child and his or her family. The average marginal effects computed for the probability of participation in the free foreign language activities show that variables related to the family's SES, such as the education of the mother and father and ability to make ends meet, are not associated with a higher probability of participating in these activities. Buying books by the family is associated with significantly higher probability of participation in free additional activities in foreign languages over not participating in any language activities. However, the average marginal effect of buying books is not statistically significant. Therefore, these results do not confirm hypothesis 2: *Students from lower SES families are less likely to participate even in free language additional activities.*

In the case of participating in paid language activities, the situation is different. According to our expectations (and in line with hypothesis 1) having a mother with tertiary education significantly increases the probability of participating in paid activities, while having a mother and father with education below the secondary level reduces this probability. Thus, children of mothers with tertiary education have on average about 8 percentage points higher probability of participating in paid language activities than children of mothers with secondary education. And children of mothers with education below secondary have almost 7 percentage points lower average probability of attending such activities. In families where it is easier to make ends meet, students are more likely to participate in paid language activities. Similarly, students from families who buy books (not school textbooks) have 4 percentage points higher probability of participating in paid classes than students from families which do not buy books regularly. The main components of the family's SES are therefore important for the likelihood of participating in paid classes, which allows us to confirm hypothesis 1: *Students from higher SES families are more likely to participate in paid foreign language additional activities.*

The likelihood of participating in both free and paid classes does not differ significantly between students who live in cities and 'towns and suburbs'. However, among those living in rural areas, the average probability of attending paid foreign language classes is significantly lower (by 5 percentage points) than among those living in 'towns and suburbs'. Interestingly, students living in rural areas are more likely to participate in free foreign language additional activities than their counterparts from cities. The average probability of students' participation in such classes is 2 percentage points higher than for students from 'towns and suburbs'. Apparently, free classes in foreign languages are more often organised in rural areas. These results allow us to confirm hypothesis 3: *Students from urban areas are more likely to participate in paid foreign language additional activities than students from rural areas.*

In all specifications, the gender variable is statistically significant. In line with hypothesis 4, girls are more likely to attend both paid and free language activities than are boys. Girls, on average, have 2 percentage points higher average probability of attending paid classes, and almost 2 percentage points higher average probability of attending free language classes, while they have 4 percentage points

**Table 2.** Multinomial logit results: relative risk ratio and average marginal effects

VARIABLES	No participation in foreign language activities (base outcome)		Paid additional foreign language activities		Free additional foreign language activities	
	coeff.	dy/dx	coeff.	dy/dx	coeff.	dy/dx
Gender: girl	.	-0.040***	1.331***	0.024**	1.397***	0.017**
	.	(0.009)	(0.106)	(0.007)	(0.141)	(0.006)
Child's age	.	-0.009***	1.041*	0.003	1.122***	0.006***
	.	(0.002)	(0.018)	(0.002)	(0.023)	(0.001)
Child in the last grade	.	-0.025	1.382**	0.032**	0.906	-0.008
	.	(0.013)	(0.152)	(0.011)	(0.127)	(0.007)
Mother's education: below secondary	.	0.071***	0.441***	-0.065***	0.814	-0.007
	.	(0.012)	(0.062)	(0.010)	(0.106)	(0.007)
Mother's education: tertiary	.	-0.081***	2.204***	0.077***	1.192	0.004
	.	(0.013)	(0.230)	(0.011)	(0.173)	(0.009)
Father's education: below secondary	.	0.021	0.758*	-0.025*	1.044	0.004
	.	(0.012)	(0.091)	(0.010)	(0.140)	(0.008)
Father's education: tertiary	.	-0.026	1.387**	0.032**	0.936	-0.006
	.	(0.015)	(0.165)	(0.012)	(0.179)	(0.010)
Number of children in HH	.	0.024***	0.763***	-0.024***	0.967	0.000
	.	(0.006)	(0.046)	(0.005)	(0.053)	(0.003)
Single-parent family	.	-0.005	0.962	-0.005	1.179	0.010
	.	(0.015)	(0.130)	(0.012)	(0.194)	(0.010)
Ability to make ends meet	.	-0.023***	1.253***	0.020***	1.096	0.003
	.	(0.005)	(0.054)	(0.004)	(0.062)	(0.003)
HH buys books	.	-0.057***	1.660***	0.044***	1.323*	0.012
	.	(0.010)	(0.154)	(0.008)	(0.147)	(0.006)
Rural area (DEGURBA)	.	0.033**	0.539***	-0.054***	1.317*	0.021*
	.	(0.012)	(0.066)	(0.009)	(0.176)	(0.008)
City (DEGURBA)	.	-0.010	1.074	0.006	1.088	0.004
	.	(0.011)	(0.106)	(0.009)	(0.149)	(0.008)
Constant	.		0.050***		0.010***	
	.		(0.016)		(0.004)	
Observations	7,342					
Pseudo R2	0.113					

Note: Standard errors (adjusted for 5,530 clusters in household ID) in parentheses.

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .

Base category: for gender, boy; for parental education, secondary education; for single-parent family, complete family; for buying books, books are not bought by the household; for size of the place of residence, towns and suburbs.

Source: own calculations.



lower probability of not attending any language classes than boys. We also ran several additional regression models with interaction between a child's gender and variables related to family SES. In these analyses (results not presented here), none of these interactions were statistically significant. It seems that the relationship between gender and participation in additional activities in a foreign language does not change with the family SES.

For participation in paid classes, the following control variables are significant: the child's age, the child in the last grade, and the number of children in the family. The child's age was also statistically significant in the specification for free language additional activities.

## 5. Summary and Conclusions

Our study showed that student and family characteristics play a role in the participation in additional activities in a foreign language. Family SES, operationalised by parental education, ability to make ends meet, and purchasing books by the family are associated with a higher probability of child's participation in paid language activities. Children from rural areas less often participate in paid foreign language activities. Family SES is not important for participation in free foreign language additional activities, whereas living in a rural area is associated with a higher probability of participation in free foreign language activities. For both kinds of activities, girls are more likely to participate than boys.

Additional activities in foreign languages are, apart from sports activities, one of the most popular forms of additional activities in Poland. They are also an important investment by parents in their children's human capital. Our results cast a new light on the issues of children's participation in these additional activities. It turns out that paid and free additional foreign language activities can be of a different nature. The determinants of their participation are different; therefore, if they are analysed together without distinguishing between paid and free activities, incorrect conclusions can be drawn.

Our analysis suggests that free language activities in Poland are organised mainly in schools, after school hours, and they are characterised by equal access. They are used by children from families with different SESs, which is a good sign and may contribute to

equalising educational opportunities for children from disadvantaged backgrounds. However, access to free additional activities depends on the wealth of the school authority. In the report on the BECKER study (Kopańska & Sztanderska, 2015), the authors point out that wealthy local governments are able to finance a greater number of additional activities of various types. Unfortunately, despite their equalising character, free additional activities may still not be available to children from disadvantaged backgrounds living in poorer locations. What is worthy of note is the 2022 study from Heath et al., which showed that students from disadvantaged backgrounds are less likely to participate in additional activities, but if they do, they achieve a relatively higher benefit compared to their advantaged peers. It may be important to encourage students to participate and give them that opportunity by adjusting school hours and school bus timetables. There is also a task for the educational policy at the central level to support poorer local governments in organising additional free educational activities. As a result of the actions of school authorities related to the COVID-19 pandemic, the popularity and accessibility of remote learning has increased. Remote learning tools could help some students who, until now, have been excluded from taking part in additional activities (organised by school after lessons) due to the long-distance travel to school. However, they also need a computer, a good Internet connection, and quiet place to study. Educational policy should support schools and students in implementing such solutions.

Participation in paid additional foreign language activities continues to exacerbate educational inequalities. Our analysis indicates that children from families with a higher SES and living in urban areas are more likely to participate in them, which is consistent with what has been found in previous studies (Dang and Rogers, 2016; Hawrot, 2018). Moreover, paid additional foreign language activities may be of higher quality than free ones organised at schools after lessons. Usually, such paid classes are conducted in small groups or individually, quite often with a native speaker. However, our data do not include such detailed information on additional activities. Greater popularity of distance learning may result in greater availability of paid additional language activities. So, students from rural areas have a better chance of participating in them. Further research will show whether this will actually translate into increased participation of students from the countryside.



The present study confirmed the findings about gender differences in additional activities participation. According to previous studies (Šťastný, 2016), there is a significant advantage for girls in academically oriented additional activities. We showed that girls are more likely to participate in both paid and free additional language activities. Research shows that girls' and boys' attitudes to learning differ. Of course, it is difficult to say to what extent the differences result from biology and to what extent they were created in the process of socialisation. Girls more often demonstrate eagerness to learn, persistence in completing tasks, attentiveness, and organisational skills (Buchmann, DiPrete, & McDaniel, 2008) which give them an advantage. At the same time, they internalise their educational failures more often than boys. Boys in general are less hardworking and interested in learning (Buchmann et al., 2008; Gromkowska-Melosik, 2011); as a result, they often limit their own educational opportunities. However, changing an education system to be more inclusive for boys and empowering girls at the same time is a real challenge. But an important role that schools face is to encourage (or not discourage) boys to participate in additional activities that are already offered by schools.

There are some limitations to the data we used in this work. The UDE questionnaire, although very detailed, did not take into account the situation when the student participated in various foreign language classes. It is possible for a student to learn several languages and in various forms (both paid and free). If the student had participated in paid and free classes, we do not know which answer would be more likely to be given by the respondent.

Another limitation of this study is the lack of more detailed information about characteristics of additional foreign language activities. We can only assume that paid activities are of a higher quality. There is also uncertainty about the function of free additional foreign language classes organised at school. If they are primarily remedial classes, they are aimed more at students from families with a lower SES. In such cases, it might be the reason why we did not find significant impact of family SES on probability of participation in free foreign language classes. This would also mean that paid and free foreign language classes are not substitutes (even imperfect ones), but rather completely separate categories of activities. Future studies could fruitfully explore this issue further by using more specific questions related to additional activities.

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