

## RESEARCH ARTICLE

# Students' mastery goal orientation, academic achievement and education-to-employment transition attitudes. Evidence from 30 countries

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### ABSTRACT

The study aims to seek an answer to the question of whether it is justified to introduce the construct of mastery goal orientation into the discussion of soft skills standards in education in terms of its relevance to students' success in school and to youths' education-to-work transitions, thereby becoming a prerequisite for social inequalities mitigation. **Methods:** The analysis is done in two stages. In the first stage multilevel binary regressions with PISA 2018 microdata in 30 countries are applied to model the relationship between the predictors (mastery goal orientation, social status, academic achievement, self-efficacy and attitudes towards school and learning) and the outcome variables education-to-employment transition attitudes. In the second stage, descriptive comparative analysis for 19 countries is done to explore the relation between academic achievement, mastery goal and actual education-to-employment transition regimes. **Results:** Modelling confirms that, at the individual level, lower social background predicts shorter school-to-work transition attitudes, as well as transition avoidance attitudes, while higher social status is associated with attitudes towards longer career transition. Mastery goal orientation as a disposition contributes to attitudes toward extended education-to-employment transitions that go through obtaining a higher degree, thus moderating the impact of social status on attitudes toward transition. Furthermore, mastery goal orientation is found to inhibit the emergence of attitudes toward short transition and transition avoidance. Mastery goal orientation has the strongest associations compared to the other predictors in the models with the transition attitudes. The observations provide reasons at least to introduce the mastery goal orientation into the discussion about standards in education. Further research is needed to validate how attitudes toward transitions translate into actual transition regimes and what is the role of mastery goal orientation along with social status and educational attainment in this process.

**Keywords:** mastery goal orientation; education-to-employment transitions attitudes; academic achievement; transition regimes; soft skills

## 1. Introduction

Numerous studies and reviews have shown that diverse soft skills are predictors of educational achievement across different levels of education, knowledge areas and national and territorial contexts<sup>[1-7]</sup>. Academic achievements measure the so-called hard skills that result from studying particular subjects at school and are still considered to be the main criteria for job recruitment and university admissions<sup>[8]</sup>.

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However, research shows that an increasing number of employers, while relying on the diploma as a competence criterion for youth employment entry consider it insufficient and combine it with soft skills criteria, including motivation or elements thereof<sup>[9–12]</sup>. The push to study and incorporate soft skills into education is driven also by observations that educational attainment and technical-rational knowledge and skills fail to adequately predict occupational success at the individual level<sup>[13]</sup>. All this requires studies aimed at selecting and validating soft skills that should be promoted in schools. In this situation of increasing demand for soft skills, it cannot be expected that the transition of young people from education to employment will become smoother.

Globally, these transitions remain a difficult process for youth<sup>[14]</sup>, while being important periods in life that often determine life and career paths, future earnings and quality of life<sup>[15]</sup>. There is a rich body of research showing that parental social and occupational status determines the socio-economic and occupational status of their children, and education is seen as a mediator variable, but also as a moderator for higher social mobility<sup>[16]</sup>.

Accordingly, the attitudes that young people have towards their future career paths (including how they envision their transitions from education to employment) will depend in part on their interaction with the environment, the opportunities they see within it and the resources available to them<sup>[17]</sup>. The attitudes of youth towards their future are related to their aspirations and would partly predetermine their choices. In turn, the choices made would translate into real education-to-employment transition regimes. The extent to which the choices will translate into implemented pathways will also depend on the environmental conversion factors and personal resources<sup>[18]</sup>, soft skills including. Thus, the attitudes of youth toward transition paths, their choices and their actual transition regimes are components of the chain of social origin—education-(finding and starting) employment and social status.

The individual skills and knowledge that are formed in education can be interpreted in at least two ways within transitions: 1) in terms of their role in shaping youths' attitudes, aspirations and choices about their transitions to employment, i.e., as part of the interaction with the environment in making choices or 2) as elements of the employability of labour market entrants<sup>[19,20]</sup>. Hence, school performance and availability of certain (motivation-related) soft skills can moderate the social background effects on education-to-work transition attitudes and choices, as well as on actual regimes in a positive manner. Investigating a soft skill within these logic chains can indicate whether it has the potential to mitigate the difficulties associated with the education-to-employment transition experienced by some youth as a result of social inequalities. It could thus provide part of the criteria for appropriate soft skill selection to be purposefully developed in education.

This article explores the construct of mastery goal orientation, which could be recognised as a soft skill. A study of its relationship to the high school students' education-to-work transition attitudes in the light of their social status and educational attainment is made. A supplementary short analysis of youths' actual transition regimes is done. Thus, the present study attempts to overcome some challenges in the way of validating different kinds of soft skills as part of educational goals.

### **1.1. The mastery goal orientation construct**

This paper focuses on the mastery goal orientation construct by applying to it the soft skills issues mentioned above. The construct has been widely discussed in research focused on educational achievement. It was developed within the framework of achievement goal theory and has been reported as the most optimal and beneficial type of achievement goals for academic and life outcomes in a number of studies<sup>[21–24]</sup>. According to the theory, achievement goals orient students toward success<sup>[22]</sup>. The theory distinguishes two types of goal orientations according to the motives behind them: mastery and performance. The first is oriented towards developing competence, understanding the learning material and building on one's knowledge and

skills. It is accordingly dependent on one's effort and is therefore associated with positive connotations<sup>[21]</sup>. The second is defined as demonstrating competence and superiority compared to others, concern about how one is perceived by others without striving for more effort, and consequently having undesirable associations and linkage to normatively high performance<sup>[21]</sup>. Subsequently, these two constructs are complemented by mastery (skill decline) avoidance and performance (low relative to others) avoidance<sup>[25]</sup>. There is empirical evidence that students perceive their personal achievement goals in line with the structure of the environment, e.g., if teachers set expectations for mastery goal structure, students perceive it in their personal achievement goals and meet teachers' expectations<sup>[25]</sup>. There is also a variety of evidence that mastery goal orientation is a predictor of a range of positive school outcomes: academic achievement<sup>[24,26]</sup>, use of cognitive, metacognitive, or self-regulatory strategies among students<sup>[27]</sup>, motivational effects (such as relative autonomy, intrinsic motivation, positive affect, physical activity intent)<sup>[28]</sup>, well-being outcomes<sup>[24]</sup>. It follows that mastery goal orientation meets the definitions of a soft skill because it leads to different formulations of positive outcomes (i.e., of success). Also because it is cultivatable. And finally, because unlike hard skills, it is transversal in nature. Besides, mastery goal orientation is correlated to openness to experience and conscientiousness, general self-efficacy, and self-esteem which are conceptualized as success predictors<sup>[29]</sup> but the causality direction is not quite obvious<sup>[30]</sup>. It could be summarized that mastery goal orientation is related to the development and enhancement of many other skills, respectively psychological attributes. The effects of mastery goal orientation have mainly been studied in educational contexts. Less, but also relatively extensively, the construct has been investigated in the area of employment and performance in work settings. Research shows that mastery goal orientation is positively associated with a variety of job performance variables and can predict higher self-regulation and achievement<sup>[31]</sup>, higher quality of employee-employer relationships, innovation and job satisfaction and therefore better job performance<sup>[32]</sup>, with greater sales and work effort and intrinsic motivation<sup>[30]</sup>.

The role of mastery goal orientation (also referred to as learning goal orientation) in different types of transitions to employment and in different contexts has been studied relatively little. Van Hooft and Noordzij examined transitions from unemployment to employment and found that the situational mastery goal orientation positively predicted the intentions of the unemployed to engage in job seeking, the time and effort spent on job search behaviour and the higher reemployment probabilities in The Netherlands<sup>[33]</sup>. Similarly, Creed, King, Hood, and McKenzie, in Australia found that learning goal orientation of the unemployed predicted job-seeking intensity, mediated by self-regulation, but the job-seeking intensity did not mediate the relationship between goal orientation and reemployment outcomes<sup>[34]</sup>. Affum-Osei and Chan showed that in Ghana learning goal-oriented job seekers were inclined to use more focused and exploratory job search strategies which were found to be more beneficial in "difficult" labour markets<sup>[35]</sup>. Wang and Yan studied graduates' transitions to employment in China and found that mastery and achievement goals positively predicted job search behaviour mediated by cognitive reappraisal strategy and job search self-efficacy<sup>[36]</sup>. The review shows that the effects of mastery goal orientation are typically mediated by variables such as transition-related effort intensity and self-efficacy.

One of the criticisms of research on this construct and its effects is the tendency to generalize conclusions about it based on outcomes observed mainly in the US and Australia, rarely in Russia and Africa, and that meta-analyses encompass studies that use different instruments (questionnaires) in their research, making comparisons between them difficult<sup>[37]</sup>. This has largely been overcome by the research of Guo et al., 2022, which validated the positive relationship between mastery goal orientation and academic achievement in PISA in most of the 77 countries and regions, all of which participated in the 2018 PISA study<sup>[24]</sup>. In the same study, a positive relationship was observed between the construct and the education and career aspirations, which is

close to the education-to-employment transition theme considered in this article. However, we did not find in the studies a cross-national validation of the existence of a relationship between mastery goal orientation and education-to-employment transitions attitudes, nor did the studies seek to explore the relationship between attitudes, the dispositional mastery goal orientation, and the actual regimes of education-to-employment transitions.

## **1.2. Aim and research questions**

The study aims to seek an answer to the question of whether it is justified to introduce the construct of mastery goal orientation into the discussion of soft skills standards in education in terms of its relevance to students' success in school and to youths' education-to-work transitions, thereby becoming a prerequisite for social inequalities mitigation.

The following hypotheses were investigated and research questions were sought to be answered:

### **1.2.1. Hypothesis 1**

Research seeking educational solutions to address inequalities has periodically shown that students from low-status families consistently have lower educational achievement than high-status students<sup>[38-44]</sup>. This is further theorized as one of the elements that limit social mobility<sup>[16]</sup>. Although education-to-employment transitions are increasingly diversifying and often not unidirectional<sup>[45]</sup>, yet there is an elongation as more young people enrol in higher education and this is observed in different parts of the world<sup>[46]</sup>. It can be assumed that young people who have higher aspirations in terms of their career development will envision and prefer longer or postponed transitions to employment that involve higher educational degrees. Thus, it can be assumed that students with lower socioeconomic status (and the lower it is) will have diminished aspirations for extended transitions from education to employment due to socially constructed lower expectations (environmental and/or internalized), poorer school performance, and a need to quickly engage in income generating activities. The first hypothesis of the study is formulated as follows:

**H1.** The family's social status influences the student's attitude about what the transition is supposed to be, with a lower social background predisposing an attitude towards shorter transitions and straight passage from school to work, while higher social status is associated with an attitude towards postponed or longer career transitions.

Subject to confirmation of the hypothesis, an additional research question is tested:

**RQ1.** Is the social status influence on education-to-employment transition attitudes mediated by students' educational attainment or not?

### **1.2.2. Hypothesis 2**

As seen in the review so far mastery goal orientation has a positive effect on academic achievement, work transition intentions of the unemployed, and students' career and educational aspirations. Also is seen that the moderator between mastery goal orientation and educational attainments is Bandura's self-efficacy in a number of the studies cited. This is explained by the higher adaptability of confident individuals, which is maintained among those who have a disposition toward mastery goals<sup>[30]</sup>.

**H2.** Mastery goal orientation as a disposition fosters attitudes toward extended or postponed education-to-employment transitions that proceed through obtaining a higher degree, thereby moderating the impact of social status on attitudes toward transition.

This hypothesis also raises two additional research questions if confirmed:

**RQ2.** Does mastery goal orientation influence education-to-employment transition attitudes directly and

thus moderate the impact of socioeconomic status, or does it achieve this through the mediating effects of educational attainment and self-efficacy?

**RQ3.** Is there a correspondence between students' attitudes towards the education-to-employment transition and their attitudes towards learning in terms of the importance they attach to learning for the success of the transition?

### 1.2.3. Hypothesis 3

A third hypothesis is posed in relation to the exposition so far. It relates attitudes towards transitions in countries to the actual regimes that take place in them.

**H3.** Variation in academic achievement and mastery goal orientation by country is associated with actual education-to-employment transition regimes and is mediated by the attitudes that students have about their transition path.

## 2. Data, methods and variables

Data from two sources is used and the analysis is done in two stages. The first stage of the study tests hypotheses 1 and 2 and answers the additional research questions attached to them. The second stage of the study tests hypothesis 3.

### 2.1. First stage of the study

The first stage uses openly published microdata from the PISA survey among 15-year-old adolescents conducted in 2018 in 80 countries and regions around the world<sup>[47]</sup>. PISA assesses the three core subjects of reading, mathematics and science. The survey also collects information on students' family backgrounds, their approaches to learning, their learning environment and well-being, their educational path and their aspirations for future careers<sup>[48]</sup>.

The analysis covers 30 countries and regions where data have been collected (i.e. are available) on both student attitudes about their transitions from education to employment and mastery goal orientation, as well as microdata on academic achievement in reading, mathematics and science have been published—Albania, Australia, Austria, Belgium, Brazil, Brunei Darussalam, Bulgaria, Chinese Taipei, Costa Rica, Croatia, Denmark, Greece, Hong Kong, Hungary, Iceland, Ireland, Italy, Kazakhstan, Korea, Lithuania, Malta, Morocco, New Zealand, Panama, Poland, Serbia, Slovakia, Slovenia, Thailand, United Kingdom ( $N_{30\text{countries}} = 222876$  students). The survey design is based on at least 5250 students and 150 schools sampled in each country<sup>[49]</sup>. An important methodological clarification is that they fall into different levels of education (between 8th and 10th grade) depending on the education system in different countries<sup>[49]</sup>.

Weights that reflect the inverse of the school's and student's probability of selection are used. Thus, all sampled students have the same final weight, minimizing sampling variability<sup>[50]</sup>. Mathematical calculation of sample variances is not always possible for some multivariate indices. For these reasons, the estimation of sample variances in PISA relies on replication methodologies, specifically Bootstrap replication with Fay modification, where 80 replicated samples are calculated, and for all of them, a set of weights is also derived<sup>[51]</sup>. The total weight used in the present analysis is the squared mean of these weights. SPSS 24 is used for data processing and modelling. Detailed information on the sample distribution by country before and after weighting can be found in **Appendix, Table A1**. Multilevel binary regressions are applied to model the relationship between the predictor variables (social, economic and cultural status, general academic achievement, mastery goal orientation, attitude towards school-learning activities, and self-efficacy) and three outcome variables measuring the student's attitudes towards their education-to-employment transition path. A

separate series of models are developed for each outcome variable (namely, transition postponement attitude; short transition attitude; and transition avoidance attitude which are presented in detail in the next section). The models have two levels. The first level includes individual-level variables. The second level includes country-level variables. In the text, level 1 denotes the individual respondent and level 2 denotes the survey country.

The models are selected because of the nature of the data. Presumably, there are common variances between respondents from the same country, because the students from one country shared cultural contexts, educational system and country levels of socio-economic development. Besides, there are statistically significant variances of the outcome variables between the countries, respectively for transition postponement attitude ( $F_{emp} = 1590.4 > F_{0.001}, p < 0.001$ ), for short transition attitude ( $F_{emp} = 1685.8 > F_{0.001}, p < 0.001$ ), and for transition avoidance attitude ( $F_{emp} = 2123.0 > F_{0.001}, p < 0.001$ ). Working only with student-level outcomes and not accounting for between-group variation increases the risk of type-first error<sup>[52]</sup>.

Additional sequential mediation and moderated mediation analyses are conducted to address RQ1, to test H2 for each level—student and country. Andrew Hayes Process SPSS macro (version 4.2) is used<sup>[53]</sup>.

### 2.1.1. Outcome variables

Students' attitudes towards education-to-employment transitions are coded into three binary outcome variables. They are generated based on one of the questions in the Educational Career Questionnaire for PISA 2018. Students are asked, "What do you think you will be doing 5 years from now?" Possible answers are:

- a) I will be working because the occupation I want does not require a study degree (e.g., diploma or university degree). (01)
- b) I will be working because I need to be financially independent. (02)
- c) I will be studying because I do not know what I would like to do yet. (03)
- d) I will be studying because the occupation I want requires a study degree (e.g., a diploma or university degree). (04)
- e) I will be studying or working for other reasons. (05)
- f) I will be doing something else. (06).

Theoretically, these responses can be decomposed into: 1) attitudes towards postponing the education-to-employment transition (or prolonged/postponed transition), which involves continuing education at a higher level (items 1 and 2 in the responses) but does not necessarily preclude combining study and work; 2) attitudes towards a short education-to-employment transition, which involves starting work rather recently (items 3 and 4); and 3) attitudes towards avoiding the transition, which involves completing education without the intention of starting work (item 6).

Three dichotomous outcome variables are created respectively:

- a) Students with attitudes of postponing transition form the group of potential enrollees in higher education within the next 5 years (the dichotomous variable is "**transition postponement attitudes**" = 1 and "other" = 0).
- b) Students with a short transition attitude form the group of potential employed within the next 5 years ("**short transition attitudes**" = 1 and "other" = 0).
- c) Students who avoid transition form the group of potential NEETs - young people who are neither working nor studying ("**transition avoidance attitudes**" = 1 and 'other' = 0). Thus, paradoxically, the transition avoidance attitude places the young person in the potential group of young people stuck in transition.

For each outcome variable, several regressions are developed to model the relationship between it and each of the predictor variables presented.

### 2.1.2. Predictor variables

Ready-made constructs developed in PISA are used in modelling as predictors. These indices summarise responses from students through the scaling of multiple items and are cross-countries validated by Item response theory (IRT) modelling. Based on Warm likelihood estimates and standardization the indices indicate the distance of the respective generic variable from the weighted mean for all countries ( $\mu = 0$ ). The indices range is  $[-1; 1]$ <sup>[48,51]</sup>.

The following continuous variables are used as predictors:

**The index of economic social and cultural status (ESCS)** is a complex variable that reflects multiple dimensions of social and family background. It covers several sub-indices from PISA—Parents’ highest level of education, Parents’ highest occupational status (for each of them the higher status among the parents is taken into account) and Household possessions<sup>[54]</sup>—included here are not only basic material environments such as the availability of computers, tablets and other material possessions but also the availability of space (a quiet corner for learning), of opportunities to receive a diverse flow of (selected) information to develop a sense of different areas of knowledge and art through books, musical instruments and works of art. ESCS thus represents the environment in which the student carries out their individual efforts. This includes the impact of the social structure, parents’ opportunities to assist in the learning process because of their education and profession, the personal example they set for the student with their achievements and expectations, the presence of an environment (including material) at home that is favourable to learning or not, etc. For brevity, the index of economic, social and cultural status will be referred to as social status in this paper.

**General academic achievement** is calculated as the arithmetic mean of each student’s score on the PISA reading, mathematics and science tests. This procedure is done separately for each of the so-called plausible values. In PISA, 10 plausible values are calculated based on the actual scores that the student received for each outcome, which are obtained by generating random numbers with IRT scaling for each of the three testing domains<sup>[51]</sup>. This way an interval is generated in which these 10 plausible values vary with high probability, where the true value is located, which in reality is not known. Here for study purposes, an individual-level average is calculated from plausible value 1 in math, plausible value 1 in reading, and plausible value 1 in science. Thus, plausible value 1 for general academic achievement is obtained. A similar is done for plausible value 2, plausible value 3 etc. Then test models have been developed that include plausible value 1 in general academic achievement (as recommended in the PISA<sup>[51]</sup>). After selecting the final models, for each model containing a general academic achievement variable, 9 more analogous models containing the other plausible values in general academic achievement are created. The coefficients, odds ratios, probabilities and p-values presented in the model tables are averages of the corresponding values for each of the 10 analogous models.

The construction of the rest of the predictor variables is shown in **Table 1**. The descriptive characteristics here differ from those of the full sample (where they have a mean of 0 and standard deviation of 1) as only 30 countries are included.

**Table 1.** Construction and descriptives of the predictive constructs “Mastery goal orientation”, “Attitude towards school-learning activities” and “Self-efficacy”, PISA 2018.

Variable	Descriptives*	Composing Items		
		Question	Items	Likert item scales
Mastery goal orientation	Min = -2.5; Max = 1.9; Mean = 0.2; Std. Dev = 1.0	Think about your goals in school: how true are the following statements for you?	My goal is to learn as much as possible.	Not at all true of me (1)
			My goal is to completely master the material presented in my classes.	Slightly true of me (2)
			My goal is to understand the content of my	Moderately true of me (3)
				Very true of me (4)
				Extremely true of me (5)

			classes as thoroughly as possible.	
Attitude towards school-learning activities	Min = -2.5; Max = 1.1; Mean = 0.1; Std. Dev = 1.0	Thinking about your school: to what extent do you agree with the following statements?	Trying hard at school will help me get a good job. Trying hard at school will help me get into a good “college”/university. Trying hard at school is important.	Strongly agree (1); Agree (2) Disagree (3) Strongly disagree (4)
Self-efficacy (Original name in PISA: Resilience)	Min = -3.2; Max = 2.8; Mean = -0.1; Std. Dev = 1.0	How much do you agree with the following statements	I usually manage one way or another. I feel proud that I have accomplished things. I feel that I can handle many things at a time. My belief in myself gets me through hard times. When I’m in a difficult situation, I can usually find my way out of it.	Strongly disagree (1) Disagree (2) Agree (3) Strongly agree (4)

All predictor variables are with strait sequence scaling. Positive values of mastery goal orientation and self-efficacy scales (and as high as they are) mean that the student has a higher mastery orientation towards learning and higher self-efficacy than the average student across OECD countries.

The construct Attitude towards school-learning activities in practice indicates students’ attitudes towards the value of school and learning, not only in principle but about their realisations in later life related specifically to transitions from education to employment. Although the composing items are reversely coded, the PISA documents ultimately state that positive values on its scale should be interpreted as a sign that the student values schooling more than the average OECD countries student<sup>[54]</sup>.

## 2.2. Second stage of the research

The analysis in the second stage of the study is carried out only at the country level (level 2) and only in 19 countries (Albania, Austria, Belgium, Bulgaria, Costa Rica, Denmark, United Kingdom, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Korea, Malta, Poland, Serbia, Slovakia, Slovenia) out of the original 30. This is due to lack of data for all of them. Descriptive comparative analysis is done and correlation analysis at the country level is included where possible. Data from the PISA 2018 survey used in the previous stage of the study are included in the analysis. Also data from the ILO Youth Labour Market Statistics<sup>[55]</sup>, which provide information on actual education-to-employment transition regimes are used.

The predictor variables from the PISA are presented with their country means derived from the survey microdata (**Appendix, Table A2**). The averaged official-published data in the OECD reports on reading, mathematics, and science<sup>[49]</sup> averaged across countries are used for the general academic achievements variable.

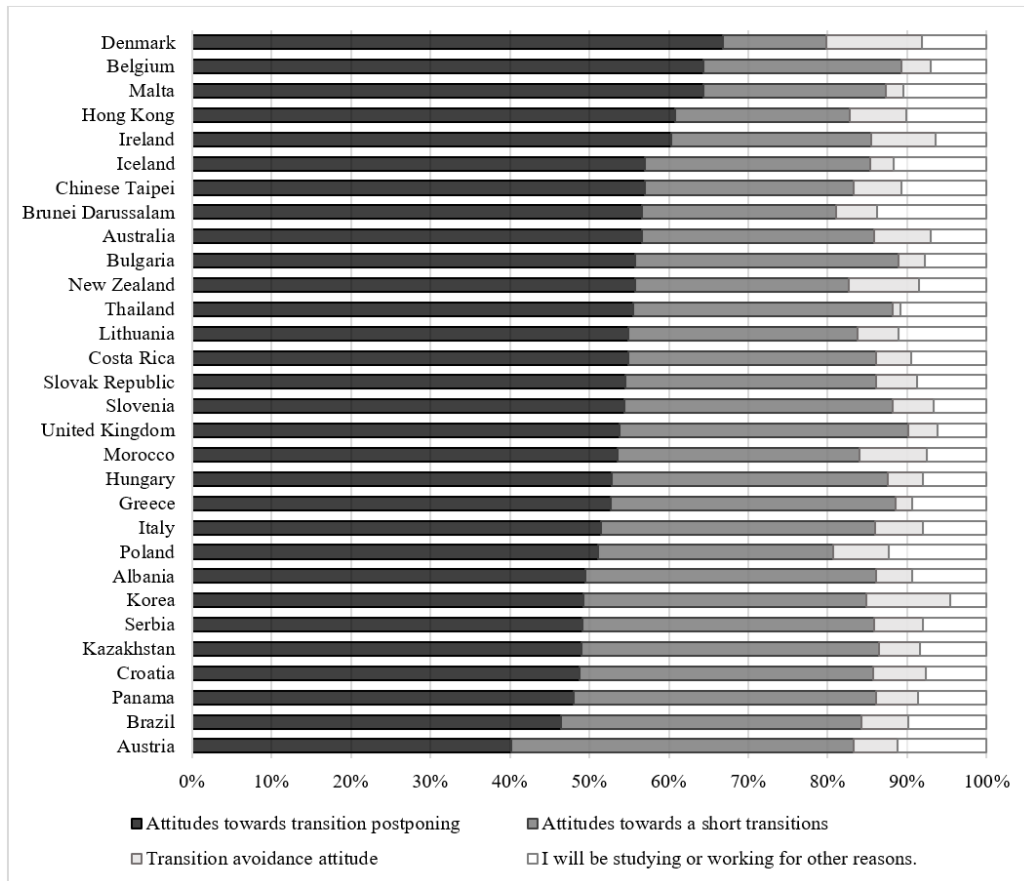
Outcome variables from the previous analysis of the PISA microdata are represented by the proportion of respondents indicating the corresponding response for the respective country. They are visualized in **Figure 1**.

ILO data show the distributions of young people aged 15–19 according to 7 forms of transition as follows: 1—School leavers in stable employment; 2—School leavers in satisfactory temporary or self-employment, not wanting to change job; 3—Students in the labour force; 4—Unemployed school leavers; 5—School leavers in non-stable or non-satisfactory employment, wanting to change job; 6—Outside the labour force school leavers in potential labour force or aiming to look for work later; 7—Outside the labour force students; 8—Outside the labour force school leavers with no intention of looking for work<sup>[14]</sup>. In line with the classifications that were made for the first stage of the study for the attitude towards transition phenomenon, data on forms of



transition are aggregated as follows:

- a) Transited—youth who have left school and have satisfactory employment (items 1 and 2).
- b) Youth in transition and insecurity—school leavers who do not have a job but have intentions to work or do not have satisfactory employment (items 4, 5 and 6).
- c) Youth in transition and high pressure (item 3).
- d) Youth with postponed transition (item 7—full learners).
- e) NEETs (8—school leavers outside the labour force).



**Figure 1.** Education-to-employment transition attitudes among 15-year-olds in 30 countries, PISA, 2018.

Data for 2019 are used (distribution within each country is shown in the **Appendix, Table A3**). The year was chosen with the following considerations in mind: 1. The year should be after the year of the PISA survey because it is conceptually more logical to interpret this as an effect of education-to-employment attitudes, although there may be other interpretations and it is not entirely certain; 2. There should be as much as possible data available for the countries analysed in the first stage of the study; 3. There should be no specific contingent events such as the Covid-19 pandemic which may distort the picture as there is a sharp change in educational and employment opportunities and this is the subject of another analysis. 4. There should be a distance from the year of comparison (2018) of possibly 5 years, because that is how the question on education-to-employment attitudes is framed and because the narrowest age groups from the ILO statistics cover 5-year age intervals (15-year-olds in 2018 are about 19-year-olds in 2022).

Data closest to the requirements are relevant for 2019 (meet conditions 1-3) and this year is chosen with a compromise. Insufficient data has been collected for 2021 and 2022. This analysis is pilot in nature. It can only be relied upon to outline a general initial picture, given the limitations of the available data.

### 3. Results

The most frequently chosen attitude towards transition is to postpone it (at least 40% of students in each country indicate this attitude). There is one exception (Austria), where the attitude towards short transitions is more prevalent (**Figure 1**). This picture is in line with observed trends in actual transitions and the aspiration of more and more young people in different parts of the world to pursue higher study degrees. However, clear differences between countries can be observed in attitudes towards transition postponement as well as in the ratio between this attitude and the second most frequently reported short school-to-work transition attitude (**Figure 1**).

Partly, similarities can be found between attitudes towards transitions on territorial grounds or in terms of countries' economic or human development. Attitudes towards transition can be interpreted in the context of what is desirable within the environment—the microenvironment of significant others and the macroenvironment of society. Attitudes will not only reflect this but also individuals' expectations of opportunities. In some countries, the economic structure will imply a need for highly specialised workers and this will be demanded in the labour market, while in other countries high specialisation or education will not be necessary. Attitudes towards the education-to-employment transition will likely be closer to what is perceived as desirable than actual transition regimes, which will more closely reflect what is possible and what is actually achievable. Thus, it can be expected that attitudes towards postponing transition will be more common in more developed countries, where the structure of the economy will predict higher value added, higher incomes and higher education and specialisation. It can also be expected that actual transition regimes will be more often postponed and years in education will be longer.

It is relevant to profile countries into three main types in terms of the ratio between those preferring postponement to those preferring rapid education-to-work transition (short transition). We will call this indicator the degree of prevalence of transition postponement attitudes.

The first group are countries with a high prevalence of postponement attitudes compared to attitudes towards quick completion of the transition ending with employment. In this group (Australia, New Zealand, Brunei Darussalam, Hong Kong, Chinese Taipei, Iceland, Malta, Ireland, Belgium, and Denmark), students' school-to-work postponement attitudes (approximately between 56% and 67% of respondents) are between 2 and 5 times more abundant than those with short transition attitudes. All countries belong to the very high human development group for 2021 according to the Human Development Index (Brunei Darussalam is in the same group, but slightly behind).

In the second country group, the transition postponement attitude (between 51% and 55% of respondents) is between 1.5 and 1.9 times more common than the short transition attitude (United Kingdom, Morocco, Italy, Greece, Hungary, Bulgaria, Slovenia, Poland, Slovak Republic, Lithuania, Costa Rica, Thailand). Most of these countries (not all) fall in the middle and low part of the very high development group or the upper positions of the high human development group.

Within the last group of countries (Brazil, Panama, Kazakhstan, Croatia, Serbia, Albania, Korea), the share of students who declared an attitude towards postponing transition is up to 50%. These attitudes are between 1.2 and 1.4 times more frequent than short transition attitudes in these countries. The countries are in the lower part of the very highly developed countries or the higher part of the developed countries (Korea-exception). The association between the degree of prevalence of transition postponement attitudes in a country and the Human Development Index 2021 could be referred to as moderate ( $r = 0.41, p \leq 0.05$ ). It is worth noting that the HDI partially incorporates the realisation of these attitudes (three years after the PISA survey), as its construction includes indicators for years of schooling. The HDI does not vary markedly between

successive periods. Similar findings are reported for the association between the 2018 HDI and the degree of prevalence of transition postponement attitudes ( $r = 0.39, p \leq 0.05$ ). Theoretically, this relationship could be interpreted bidirectionally.

### 3.1. Results of modelling in the first stage of the study

Because of the foregoing, it is important to account for variation in the outcome variable by country in the first stage of model analysis. Preliminary analysis of the null multilevel models showed little variation at the country level—between 2% and 7 % and respectively  $ICC_{transition\ postponement\ attitude} = 0.02$ ;  $ICC_{short\ transition\ attitude} = 0.03$ ;  $ICC_{avoidance\ transition\ attitude} = 0.07$ . Nevertheless, these types of models are selected because, unlike older studies where the ICC is recommended to be above a threshold of 0.05, in more recent ones it is considered that even minimal departures from zero can result in increased Type I errors<sup>[56]</sup>. Also, the minimal sample size requirements of a minimum of 30 groups with 30 individuals per group for  $ICC < 0.25$ <sup>[56]</sup> are met.

This section presents multilevel binary logistic regressions organized in separate tables for each outcome variable.

#### 3.1.1. Transition postponement attitude

Table 2 presents some of the modelling results with an outcome variable “Transition postponement attitude”.

**Table 2.** Multilevel binary models explaining variations in “Transition postponement attitude”, PISA, 2018.

Variable		Model 0	Model 1	Model 2	Model 3	Model 4
intercept $\gamma_{00}$	$\gamma$	0.171**	0.207**	0.083	-0.683	-0.735
	<i>Sig</i>	(0.000)	(0.000)	(0.863)	(0.157)	(0.147)
	<i>OR</i>	1.186**	1.23**	1.086	0.505	0.479
	<i>prob</i>	0.543**	0.551**	0.521	0.336	0.324
Level 2 (Country)						
ESCS	$\gamma$	-	-0.166*	-	-	-
	<i>Sig</i>	-	(0.030)	-	-	-
	<i>OR</i>	-	0.847**	-	-	-
	<i>prob</i>	-	0.459**	-	-	-
General academic achievement	$\gamma$	-	-	-0.006**	-0.005**	-0.004**
	<i>Sig</i>	-	-	(0.000)	(0.000)	(0.000)
	<i>OR</i>	-	-	0.994**	0.995**	0.996**
	<i>prob</i>	-	-	0.498**	0.499**	0.499**
Level 1 (Individual)						
ESCS	$\gamma$	-	0.305**	0.167**	0.165**	0.172**
	<i>Sig</i>	-	(0.000)	(0.000)	(0.000)	(0.000)
	<i>OR</i>	-	1.357**	1.181**	1.179**	1.187**
	<i>prob</i>	-	0.576**	0.542**	0.541**	0.543**
General academic achievement	$\gamma$	-	-	0.006**	0.006**	0.006**
	<i>Sig</i>	-	-	(0.000)	(0.000)	(0.000)
	<i>OR</i>	-	-	1.006**	1.006**	1.006**
	<i>prob</i>	-	-	0.502**	0.502**	0.502**

Mastery goal orientation	$\gamma$	-	-	-	0.259**	0.241**
	<i>Sig</i>	-	-	-	(0.000)	(0.000)
	<i>OR</i>	-	-	-	1.296**	1.272**
	<i>prob</i>	-	-	-	0.564**	0.56**
ESCS*Mastery goal orientation	$\gamma$	-	-	-	0.014**	0.008°
	<i>Sig</i>	-	-	-	(0.002)	(0.094)
	<i>OR</i>	-	-	-	1.015**	1.008°
	<i>prob</i>	-	-	-	0.504**	0.502°
Self-efficacy (Original name in PISA: Resilience)	$\gamma$	-	-	-	-	-0.07**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	0.932**
	<i>prob</i>	-	-	-	-	0.482**
Attitude towards school-learning activities	$\gamma$	-	-	-	-	0.159**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	1.173**
	<i>prob</i>	-	-	-	-	0.54**
Mastery goal orientation *Attitude towards school-learning activities	$\gamma$	-	-	-	-	-0.047**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	0.954**
	<i>prob</i>	-	-	-	-	0.488**
Residual variation						
Between-country variation - fixed effect		0.06**	0.07**	0.22**	0.07**	0.07**
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Explained variation in “Transition postponement” compared to the null model (in %)						
Overall Percent Correct		53.9%	57.7%	63.2%	64.2%	64.6%
Compared to the null model			3.8%	9.3%	10.3%	10.7%
Goodness of fit						
AIC corrected		22906185.8	22894580.1	817445.0	769726.1	770456.5
-2 Log Likelihood		22906185.8	22894578.1	7651009.2	769706.8	747493.3
Number of parameters		3	5	6	8	9
Degrees of freedom (df)			2	1	2	1
$\chi^2_{(EM)}$			11605.8	22077127.1	21307420.4	22213.5
$\chi^2_{(T)}, p < 0.001$			13.816	10.83	13.816	16.27
The goodness of fit is tested relative to:			Model 0	Model 1	Model 2	Model 3

$N_{clusters} = 30$ ;  $\gamma$ —gamma coefficient in multilevel analysis; *OR*—Odd Ratio; *Prob*—Probability; *Sig*: \*\*:  $p < 0.01$ , \*:  $p < 0.05$ , and °:  $p < 0.1$

According to the null model (Model 0), a student is 1.2 times as likely to indicate an attitude towards postponing transition than to give any other answer (the probability is 54%). When the influence of socioeconomic status at the individual level is taken into account, the intercept coefficient becomes negative, i.e., the probability of students having such an attitude decreases to 42% (model not presented). The higher socioeconomic and cultural status of the family at the individual level contributes to an increase in the odds of a student having an education-to-employment transition postponement attitude, thus proving the first hypothesis of the study (Model 1). This observation can be explained in many ways. These include family

support, the presence of a material environment at home that is conducive to the learning process and access to information, the example of parents who have higher educational attainment, the student's expectation of the chances of performing better in school and having greater social capital, greater chances in the environment such as the absence of discrimination and institutionally induced reproduction of inequalities in origin. But these are probably not the only possible explanations. An interesting finding is that when testing the socioeconomic and cultural status variable at level 2 (country), the variable is not statistically significant. However, this changes when adding socioeconomic status at the individual level. Socioeconomic status at the country level is negatively associated with the attitude of delaying the transition from education to employment (Model 1). That is when within-country structural inequalities among students are controlled for, it is evident that at the cross-country level, in countries where family conditions are better on average, students have weaker attitudes towards postponing the transition. For, after controlling for within-country inequalities the degree of socioeconomic country development would be expected to remain. This is an interesting question worth exploring given the positive relationship between the human development index and the degree of prevalence of transition postponement attitudes that was observed at the beginning of Section 3.

The assumptions that can explain this observation may vary. They may be related to the prevalence of postmodern values in the most developed countries, for which development and progress come second to self-expression through entertainment and hedonism. There may be rationalistic explanations, such as that there is not such a significant income gap between the low-educated and the highly educated in developed countries, and young people do not find a reason in putting effort and resources into higher education. It can be explained by the saturation of developed labour markets with a certain type of labour supply and expectations that higher educated people will not be in demand. Or it may be a compensatory behaviour of young people in less developed countries, where getting an education is expected to overcome possible poverty, which is more widespread and therefore inequalities stand out less. Thus, when the impact of inequalities is controlled for, the aspirations of young people to prolong transitions are seen to be greater in less developed countries. At this stage, the reasoning would be speculative.

Random effects are tested in addition to socioeconomic status fixed effects. The model is statistically significant but explains an extremely small proportion of the variance and does not increase the goodness of fit. Moreover, the remaining coefficients do not change. The model will not be presented.

Model 2 shows a positive significant association between students' aggregate PISA scores and education-to-employment postponement attitudes at the individual level and a negative one at the cluster level (Model 2). When included in the model, the association of socioeconomic status with education-to-employment transition postponement attitudes decreases at the individual level and becomes significant at the country level. This points to the mediating role of educational achievement, but the associations are weak and the probabilities hardly change. In the multilevel models, the interaction between socioeconomic status and overall student performance in PISA is insignificant at the country level and positive and very weak at the student level (OR = 1.01<sup>\*\*</sup>). In practice, it can be concluded that there is almost no moderating effect. An additional mediation analysis using Andrew Hayes Process SPSS macro (version 4.2)<sup>[53]</sup> of the chain socioeconomic status—educational achievement—postponement attitudes is conducted, which confirms the conclusions drawn so far. We find a slightly stronger (but nearly equivalent) positive indirect (OR = 1.23<sup>\*\*</sup>) compared to the direct (OR = 1.1<sup>\*\*</sup>) effect of socioeconomic status at the individual level. Overall, the effects are weak.

Conversely, at the country level, the direct effect is positive and higher (OR = 1.62<sup>\*\*</sup>) and the indirect effect is weaker and opposite (OR = 0.91<sup>\*\*</sup>). The answer to the first research question is positive, but the associations are opposite at the two levels similar to what is observed about social status effects. Here, however, the influence of individual variation is not controlled for.

The observed effects with opposite signs at the two levels may have an explanation, but it remains only a hypothesis. The assumption is that in countries with more widespread higher education and higher socioeconomic status, the lack of better career development will not translate into a decline in the satisfaction of basic needs to the same extent as in other countries. For this reason, all other things being equal, attitudes will not be as strongly oriented towards continuing education and postponing transition. But it should also be recognized that the sample here includes mostly very high-income and highly developed countries according to the HDI.

Mastery goal orientation (Model 3) is independently and positively associated with education-to-employment transition postponement attitudes at the individual level ( $OR = 1.3^{**}$ ). There is a 56% probability that students with higher mastery goal orientation will indicate an attitude of postponing transitions if the influence of students' socioeconomic status and educational achievement is controlled for. That is, mastery goal orientation very slightly raises the probability above the unconditional probability observed for the intercept in the null model but is noticeably higher than the probability in the intercept from Model 3. Model 3 intercept baseline indicates the situation of a student with low social status, and low educational achievement, in a country where students underperform and with no or weak mastery orientation. The probability that a student has a transition postponement attitude if they have a mastery goal orientation is 20 percentage points higher compared to the intercept baseline. Mastery goal orientation has the strongest association with the outcome variable of all variables included in the model. Overall, all antecedents are associated with a higher probability of the event occurring, but the probabilities observed are approximately the same for an average student in the sample (intercept in Model 0).

There is almost no change in the associations of Model 2 variables after controlling for mastery goal orientation, indicating a weak moderating role. This is confirmed by the inclusion of moderating variables that show a positive interaction of mastery goal orientation and socioeconomic status at the individual level, with a minimal association with postponement attitudes ( $OR = 1.02^{**}$ ). The two variables individually also have a positive influence that does not diminish with the inclusion of their interaction, i.e., in the presence of both variables, the odds increase but only slightly. Larger is the influence of each variable separately.

When an additional interaction between mastery goal orientation and student performance in PISA is included, the association between mastery goal orientation and the postponement transition attitude becomes negative ( $\gamma = -0.28^{**}$ ;  $OR = 0.76^{**}$ ;  $prob = 0.43^{**}$ ), while the individual-level achievement variable remains unchanged. This provides a grounded hypothesis that achievement mediates the impact of mastery goal orientation on transition postponement attitudes and extended years in education, rather than the opposite. Even if one has mastery goal orientation if one does not perform well through one's achievements in school it is less likely to intend to continue further education. The model is not presented in **Table 2** as it does not increase the goodness of fit relative to model 3.

The second hypothesis (the part concerning attitudes towards postponing the education-to-employment transition) is proved and the second question is partially answered.

Testing a model with mastery goal orientation predictor at the country level in the different stages of modelling shows that the variable has no statistical significance, which is why it is not shown in **Table 2** with the final models. This could be due to no or weak relationship as well as other effects, but also to the sample and the type of outcome variable (the variances are smaller for dichotomous variables). Similar patterns are found for self-efficacy and attitude towards school and learning activities

Students are less likely ( $OR = 0.9^{**}$ ) to have an attitude of prolonging their transitions if they feel confident about coping in difficult situations, about completing their assignments, and about being able to do

many things at once. Perhaps this confidence allows them to choose to get into life more quickly. Self-efficacy at the individual level has a negative association with education-to-employment transition postponement attitudes (Model 4) contrary to the expectation that there would be an unidirectional association similar to mastery goal orientation. The observation from other studies that the effect of mastery goal orientation on various outcome variables related to success is mediated by self-efficacy cannot be confirmed when it comes to attitudes toward continuing education. The interaction between the two variables is insignificant and therefore not included in the models presented.

There is a positive statistically significant association ( $OR = 1.2^{**}$ ) between a student believing that effort in school is important in helping them get a good job or a good college and the attitudes toward extending transitions and years spent in education. This observation provides a positive answer to the third research question. There is a correspondence between postponement attitudes and attitudes toward school and learning, with the notion of success (career or university) implicit in both constructs. It is not very certain what the relationship direction is—whether one variable influences the other, whether it is the other way around, or whether both are influenced by another antecedent.

When attitude towards school and learning activities interacts with mastery goal orientation the association with transition postponement attitude becomes negative. This observation has common with the efforts that an individual is ready to make for a concrete purpose—be it success in career or success in university application. Mastery goal orientation (in the way it is constructed in the present study) contains to a large extent an element of general motivational disposition. In the construct attitude towards school and learning activities, two of the items relate to specific motivation. And the third is directed at the value of learning in general. A skill including general motivation or self-control, even if present, may not manifest if the individual is not motivated to perform a specific task<sup>[7,13]</sup>. The shared variance between attitude towards learning activities and mastery goal orientation refers to that shared motivational disposition towards learning and mastery of knowledge, which differs from the external manifestations of the notion of success (in career, in university), i.e., as others perceive one’s success.

### 3.1.2. Short transition attitude

The models presented for the “Transition postponement attitude” were repeated for the “Short transition attitude” to examine the extent to which the same combinations of variables that were used to test Hypotheses 1 and 2 and to answer Research Questions 1 through 3 are applicable to another outcome. The statistically insignificant predictor variables or interactions - social, economic and cultural status at the country level in Model 1 and the interaction of social, economic and cultural status with mastery goal orientation in Model 4—were then removed. Whether self-efficacy mediates the impact of mastery goal orientation is further tested to once again seek an answer to research question 2. Again, no statistical significance is observed and therefore not included in the models. The results are presented in **Table 3**.

**Table 3.** Multilevel binary models explaining variations in “Short transition attitude”, PISA, 2018.

Variable		Model 0	Model 1	Model 2	Model 3	Model 4
intercept $\gamma_{00}$	$\gamma$	-0.909**	0.207**	-0.30	0.31	0.35
	<i>Sig</i>	(0.000)	(0.000)	(0.623)	(0.621)	(0.581)
	<i>OR</i>	0.403**	1.23**	0.74	1.36	1.41
	<i>prob</i>	0.287**	0.551**	0.43	0.58	0.59
Level 2 (Country)						

General academic achievement	$\gamma$	-	-	0.005**	0.004**	0.004**
	<i>Sig</i>	-	-	(0.000)	(0.004)	(0.006)
	<i>OR</i>	-	-	1.005**	1.004**	1.004**
	<i>prob</i>	-	-	0.501**	0.501**	0.501**
Level 1 (Individual)						
ESCS	$\gamma$	-	-0.336**	-0.162**	-0.166**	-0.173**
	<i>Sig</i>	-	(0.000)	(0.000)	(0.000)	(0.000)
	<i>OR</i>	-	0.714**	0.85**	0.847**	0.841**
	<i>prob</i>	-	0.417**	0.46**	0.459**	0.457**
General academic achievement	$\gamma$	-	-	-0.006**	-0.006**	-0.006**
	<i>Sig</i>	-	-	(0.000)	(0.000)	(0.000)
	<i>OR</i>	-	-	0.994**	0.994**	0.994**
	<i>prob</i>	-	-	0.498**	0.498**	0.498**
Mastery goal orientation	$\gamma$	-	-	-	-0.165**	-0.163**
	<i>Sig</i>	-	-	-	(0.000)	(0.000)
	<i>OR</i>	-	-	-	0.848**	0.849**
	<i>prob</i>	-	-	-	0.459**	0.459**
ESCS*Mastery goal orientation	$\gamma$	-	-	-	-0.008°	-
	<i>Sig</i>	-	-	-	(0.086)	-
	<i>OR</i>	-	-	-	0.992	-
	<i>prob</i>	-	-	-	0.498°	-
Self-efficacy (Original name in PISA: Resilience)	$\gamma$	-	-	-	-	0.07**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	1.072**
	<i>prob</i>	-	-	-	-	0.517**
Attitude towards school-learning activities	$\gamma$	-	-	-	-	-0.095**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	0.91**
	<i>prob</i>	-	-	-	-	0.476**
Mastery goal orientation *Attitude towards school-learning activities	$\gamma$	-	-	-	-	0.021**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	1.022**
	<i>prob</i>	-	-	-	-	0.505**
Residual variation						
Between-country variation - fixed effect		0.1**	0.11**	0.12**	0.11**	0.11**
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Explained variation in "Transition postponement" compared to the null model (in %)						
Overall Percent Correct		68.5%	68.5%	68.9%	69.2%	69.3%
Compared to the null model			0.0%	0.4%	0.7%	0.8%
Goodness of fit						
AIC corrected		832369.6	833794.2	845381.6	794211.0	770719.4
-2 Log Likelihood		832367.6	833792.2	845379.6	794209.0	770717.4



The goodness of fit is tested relative to:	Model 0	Model 1	Model 2	Model 3
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$N_{clusters} = 30$ ;  $\gamma$ —gamma coefficient in multilevel analysis; *OR*—Odd Ratio; *Prob*—Probability; Sig: \*\*:  $p < 0.01$ , \*:  $p < 0.05$ , and °:  $p < 0.1$ .

Models 1 and 2 do not show an increase in goodness of fit. In general, Model 0 would be preferred because there is less information lost. However, the predictability of Models 1 and 2 is still maintained or slightly increased. Also, there are very large changes in the intercept and the social status variances between Models 1 and 2. This should not be ignored in the analysis. Therefore, results from all models will be analysed.

The probability of a student in the sample having a short transition attitude, other things being equal, is 29% (**Table 3**, Model 0) and is much lower than the probability of having a transition postponement attitude (54%—**Table 2**, Model 0). If all students had the same low income, this probability would rise to 55% (**Table 3**, Model 1). The association between social status and attitudes towards short transitions is negative. The higher the social status of students, the less likely they are to have a short transition to employment attitude. Theoretically, i.e., hypothetically, students have options to choose between a variety of transitions and, hence have an attitude towards a variety of transitions. The options in the environment vary and therefore the set of transitions that students can actually choose between will be smaller than theoretically possible and will depend on various constraints in the environment. Depending on the theoretical construct, the actual choice between the available environmental options may be conceptualized differently. For example, in the spirit of the economic rationalist interpretation, students of lower social status will have an attitude towards short transitions because they have a material need to do so. But the sociological interpretation will pay attention, for example, to the expectations of the environment that construct choices and attitudes. It is theoretically possible that the environment has expectations of longer transitions toward higher social status students, while the environment may have no such expectations or no high expectations at all toward lower status students. Moreover, depending on the rigidity of the social structure, lower social status students may have expectations of short transitions. Similarly, hypothetically, students who perform well in school may have higher expectations of prolonging transitions and continuing their education compared to the expectations toward others. And the lowest performing students may even have expectations of delaying work without education continuation or not entering transition at all. The evidence from Model 2 suggests that a student is less likely than average to have a short transition-to-work attitude after graduation if they exhibit higher academic achievement and even less likely if they have low social status. The association between social status and short transition attitude is weaker when controlling for educational achievement. The associations between academic achievement and attitudes toward short transitions from education to employment persist in the remaining models, no matter controlling for other variables.

The analysis confirms the first hypothesis about the effect of social status on attitudes towards short transitions and provides arguments for a positive answer to the first research question about the mediating role of educational achievement.

In continuation of the theoretical considerations above, the student may or may not internalize and may interpret the possibilities and expectations of the environment differently. An important research question here was whether mastery goal orientation as an internal disposition has the potential to counteract social inequalities from which unequal expectations of the future may arise and this may predetermine students' attitudes towards transitions. Model 3 of **Table 3** shows that mastery goal orientation has an almost identical magnitude and direction of association with attitudes toward short transitions as social status. The more students aim to master the educational material, to learn and understand the content of the material, i.e., the more they see meaning in their efforts to learn, the less likely they are to prefer a quick transition to work after graduation. According to the data from Model 3, in the sample frame of the 30 countries studied, this means

that if a student has a low social status but a high goal mastery orientation, these effects offset each other and the probability that the student has a short transition attitude, i.e., a direct transition to work after school, equals the average. Another issue is that socioeconomic status may have a positive, albeit weak, association with mastery goal orientation, as observed within most countries (except for 4 countries), and this may preclude its moderating role on the effect of social status on education-to-employment transition attitudes. Model 4 shows the moderating effect of mastery goal orientation on the effect of socioeconomic status on short-transition attitudes. The association (between social status and outcome variable) is still negative, but it is softened and weaker than that observed for social status alone at the individual level.

It is important to explicitly stress that attitudes towards short transitions should not necessarily be seen as an unfavourable outcome, among all possible attitudes towards transitions. These attitudes may be linked to socially legitimised expectations towards young people for more autonomy at a younger age. Or be associated with young people’s greater confidence to cope. For example, self-efficacy is positively associated with attitudes towards short transitions (Model 4), which can be interpreted as more confidence that facilitates bolder dispositions and courage. Furthermore, it is not unconditional that success in a culture, for example, be associated with better career development, staying in education longer, etc. Nor is it necessarily true that getting a higher education will be a prerequisite for a better career or for a higher social status anywhere on the planet. But to the extent that choices of transitions may be part of a path to reproducing inequalities, to that extent they can also be interpreted in that light.

Attitude toward school-learning activities has a negative association with attitudes toward a short transition from school to work. This can be explained by students who believe that putting effort into studying because it will help them in their career or to get into college or university implicitly places a value on careers and higher degrees of education. That is, going to work immediately after finishing school is treated as less valuable.

Model 4 shows that mastery goal orientation impacts attitudes regarding the transition from education to employment both directly and by moderating the effect of social status, but we found no evidence of this occurring with the mediating effect of educational attainment and self-efficacy.

### 3.1.3. Transition avoidance attitude

The modelling of the variations of the transition avoidance attitude proceeds in the same way as the analysis of the short transition attitude. The same models are applied and the insignificant variables (socio-economic and cultural status at the country level in Model 1) are removed. The results are presented in **Table 4**.

**Table 4.** Multilevel binary models explaining variations in “Transition avoidance attitude”, PISA, 2018.

Variable		Model 0	Model 1	Model 2	Model 3	Model 4
intercept $\gamma_{00}$	$\gamma$	-2.926**	-2.941**	-4.336**	-3.858**	-3.711**
	<i>Sig</i>	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
	<i>OR</i>	0.054**	0.053**	0.013**	0.021**	0.024**
	<i>prob</i>	0.051**	0.05**	0.013**	0.021**	0.024**
Level 2 (Country)						
General academic achievement	$\gamma$	-	-	0.006**	0.005*	0.004°
	<i>Sig</i>	-	-	(0.000)	(0.029)	(0.070)
	<i>OR</i>	-	-	1.006**	1.005*	1.004°
	<i>prob</i>	-	-	0.502**	0.501*	0.501°

Level 1 (Individual)						
ESCS	$\gamma$	-	-0.057**	0.039**	0.041**	0.043**
	<i>Sig</i>	-	(0.000)	(0.000)	(0.001)	(0.000)
	<i>OR</i>	-	0.945**	1.04**	1.042**	1.044**
	<i>prob</i>	-	0.486**	0.51**	0.51**	0.511**
General academic achievement	$\gamma$	-	-	-0.003**	-0.003**	-0.003**
	<i>Sig</i>	-	-	(0.003)	(0.000)	(0.000)
	<i>OR</i>	-	-	0.997**	0.997**	0.997**
	<i>prob</i>	-	-	0.499**	0.499**	0.499**
Mastery goal orientation	$\gamma$	-	-	-	-0.292**	-0.259**
	<i>Sig</i>	-	-	-	(0.000)	(0.000)
	<i>OR</i>	-	-	-	0.746**	0.772**
	<i>prob</i>	-	-	-	0.427**	0.436**
ESCS*Mastery goal orientation	$\gamma$	-	-	-	-0.027**	-0.024**
	<i>Sig</i>	-	-	-	(0.004)	(0.009)
	<i>OR</i>	-	-	-	0.974**	0.974**
	<i>prob</i>	-	-	-	0.493**	0.493**
Self-efficacy (Original name in PISA: Resilience)	$\gamma$	-	-	-	-	0.057**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	1.059**
	<i>prob</i>	-	-	-	-	0.514**
Attitude towards school-learning activities	$\gamma$	-	-	-	-	-0.165**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	0.848**
	<i>prob</i>	-	-	-	-	0.459**
Mastery goal orientation *Attitude towards school-learning activities	$\gamma$	-	-	-	-	0.035**
	<i>Sig</i>	-	-	-	-	(0.000)
	<i>OR</i>	-	-	-	-	1.035**
	<i>prob</i>	-	-	-	-	0.509**
Residual variation						
Between-country variation - fixed effect		0.29**	0.29**	0.27**	0.3**	0.34**
		(0.08)	(0.08)	(0.07)	(0.08)	(0.09)
Explained variation in “Transition postponement” compared to the null model (in %)						
Overall Percent Correct		94.3%	94.3%	94.3%	94.3%	94.4%
Goodness of fit						
AIC corrected		1107628.0	1102047.4	1105889.8	1043880.5	1015144.0
-2 Log Likelihood		1107626.0	1102045.4	1105887.8	1043878.5	1015142.0
The goodness of fit is tested relative to:			Model 0	Model 1	Model 2	Model 3

$N_{clusters} = 30$ ;  $\gamma$ —gamma coefficient in multilevel analysis; *OR*—Odd Ratio; *Prob*—Probability; *Sig*: \*\*:  $p < 0.01$ , \*:  $p < 0.05$ , and °:  $p < 0.1$ .

There is a 5% probability that, other things being equal, one student in the sample would indicate an attitude toward avoiding transition (Model 0). Social status has a negative association with transition avoidance attitudes (Model 1), i.e., low social status is associated with a higher likelihood of a student falling into the

group of potential NEETs. This complements research Hypothesis 1. Educational attainment at the individual level is also negatively associated with attitudes towards avoiding the transition from education to employment (Model 2). By controlling for this variable, the association between social status and transition avoidance attitude becomes positive. It follows that social status is negatively associated with transition avoidance attitudes through the mediation of educational achievement. Social status and educational achievement in the PISA are positively associated at the individual level overall for the sample and within each country. The association can be classified as weak to moderate. The weakest correlation is in Kazakhstan ( $r = 0.19^{**}, p \leq 0.001$ ), and the strongest is in Hungary ( $r = 0.48^{**}, p \leq 0.001$ ). When a student has a low social status, if they have poor educational achievements, this will increase the likelihood that they will fall into the group of young people who potentially do not want to work or study. The associations between educational attainment and attitudes towards transitions remain unchanged in models 2, 3 and 4 for all outcome variables. The effects are robust no matter what additional variables are controlled for. Consequently, if educational attainment is influenced to increase, this will translate to an increase in the proportion of students with education-to-employment transitions postponement attitudes and extended years of schooling at the expense of the proportions of: 1) students who have attitudes towards short transitions with fewer years of schooling or 2) transition avoidance and potentially falling into the group of NEETs. Mastery goal orientation and attitude towards school-learning activities are negatively associated with the transition avoidance attitude. The students with a higher orientation towards learning, mastering and understanding knowledge, and acquiring new skills in school (because of the value of the learning itself and the value of the learning for future careers or higher educational grade admission) are more likely not to fall in the potential NEETs group. Mastery goal orientation when interacting with social status has a negative association with transition avoidance attitude. This observation raises more questions than it answers, and further research is needed to provide an adequate interpretation.

Self-efficacy has a positive association with transition avoidance attitude. The interaction between mastery goal orientation and attitude toward school-learning activities has also a positive association with it. Similar observations exist in terms of a short transition attitude, and they have already been interpreted accordingly.

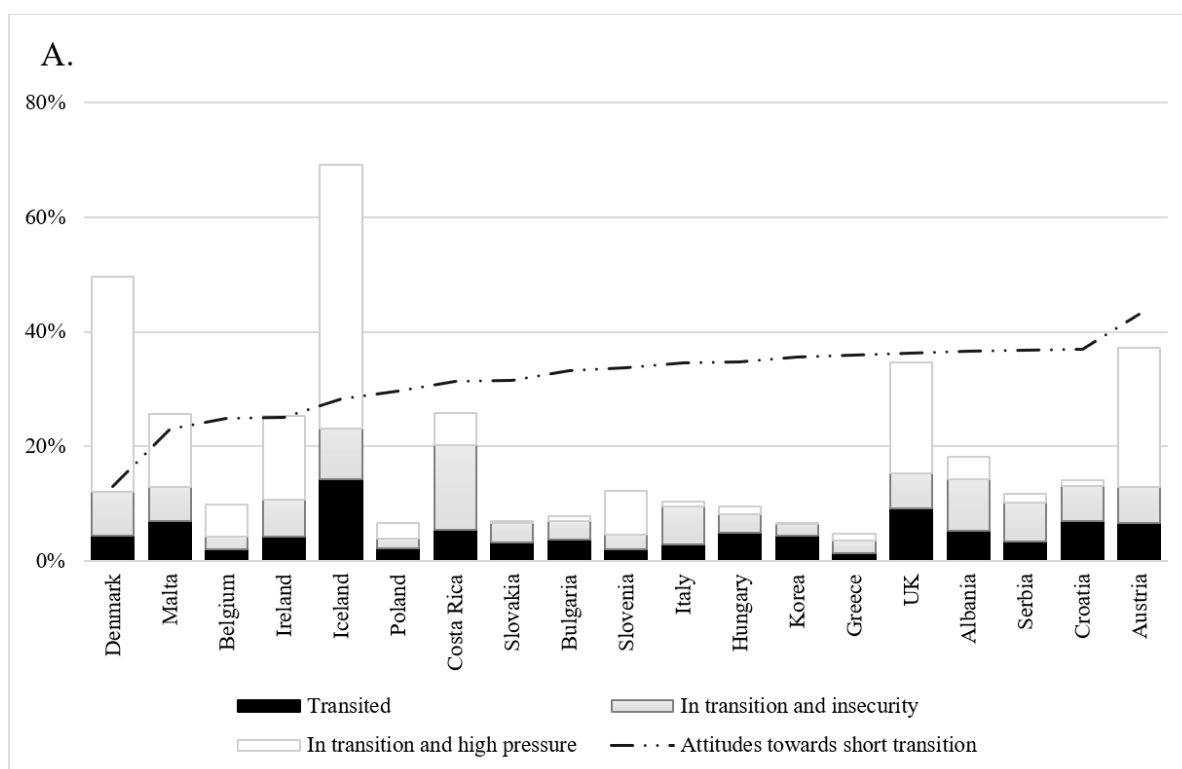
### **3.2. Results of the analysis in the second stage of the research**

The first stage of the study confirmed that, at the individual level, academic achievement and mastery goal orientation are positively associated with attitudes toward extended transitions from education to employment and negatively associated with attitudes toward short transitions and avoiding transitions. Mastery goal orientation was found to influence attitudes toward education-to-employment transitions with the mediating role of educational achievement. On the other hand, academic achievement was found to be negatively associated with transition postponement attitude and positively associated with short transition and avoidance transition attitudes at the country level. In countries where students perform better on the PISA tests, students are less likely to have an attitude of postponing transitions than in countries with lower achievement on the PISA tests. No statistically significant association was found between mastery goal orientation and education-to-employment transition attitudes at the country level. Given that at the individual level, the association between mastery goal orientation is mediated by students' educational attainment, we can assume that this also occurs at the country level. But due to weaker associations at the country level, it cannot be registered. The number of clusters is significantly smaller than the number of cases. So, the probability of a type I error (not detecting an effect when it exists) increases at the country level. But it is possible that the association is very weak or non-existent.

Here, we test whether a correspondence can be found between the average values of these two indicators

and the variation in actual transitions across countries. To avoid type II error—finding an association where there is none in the small number of cases examined, power analysis at sig. level  $p < 0.05$  is made. We found a negative association between educational attainment in PISA and the proportion of young people aged 15–19 who neither want to study nor work. The association can be referred to as strong ( $r = -0.77, p < 0.01$ ;  $power_{\text{Fisher's Z-test}} = 0.988, p < 0.05$ ). In countries where students show higher educational attainment in mathematics, reading and science, young people are less likely to be in a situation of neither wanting to study nor work. This observation contrasts with the observation in the first part of the analysis that academic achievement is negatively associated with transition avoidance attitudes and will be addressed in the discussion. We also find no associations between variation in attitudes toward transitions by country and variation in actual transitions.

**Figure 2** shows some correspondence between the magnitude of education-to-employment transition attitudes across countries and the magnitude of actual realized transitions. For example, the smaller proportions of students with a transition-avoidance attitude in the total number of students correspond to the smaller stocks of youth who are neither working nor studying among all young people (**Figure 2**, Section B). Similarly, the majority of those willing to postpone the transition to employment corresponds to a larger proportion of those postponing the transition because they are studying. There is no correspondence, however, between variations in attitudes and variations in the respective regimes by country. This may be an indication that variation in biographical transitions by country depends on a range of other factors that obscure the association between attitudes and actual transition regimes. It can be seen that in some countries a large proportion of attitudes towards short transitions are not realised, while in other countries they are realised in uncertain transition regimes—with insecure and unsatisfactory work, or as high workload transitions, i.e. combining learning and work (**Figure 2**, Section A).



**Figure 2.** Attitudes towards transition versus actual realized transition regimes in 19 countries.

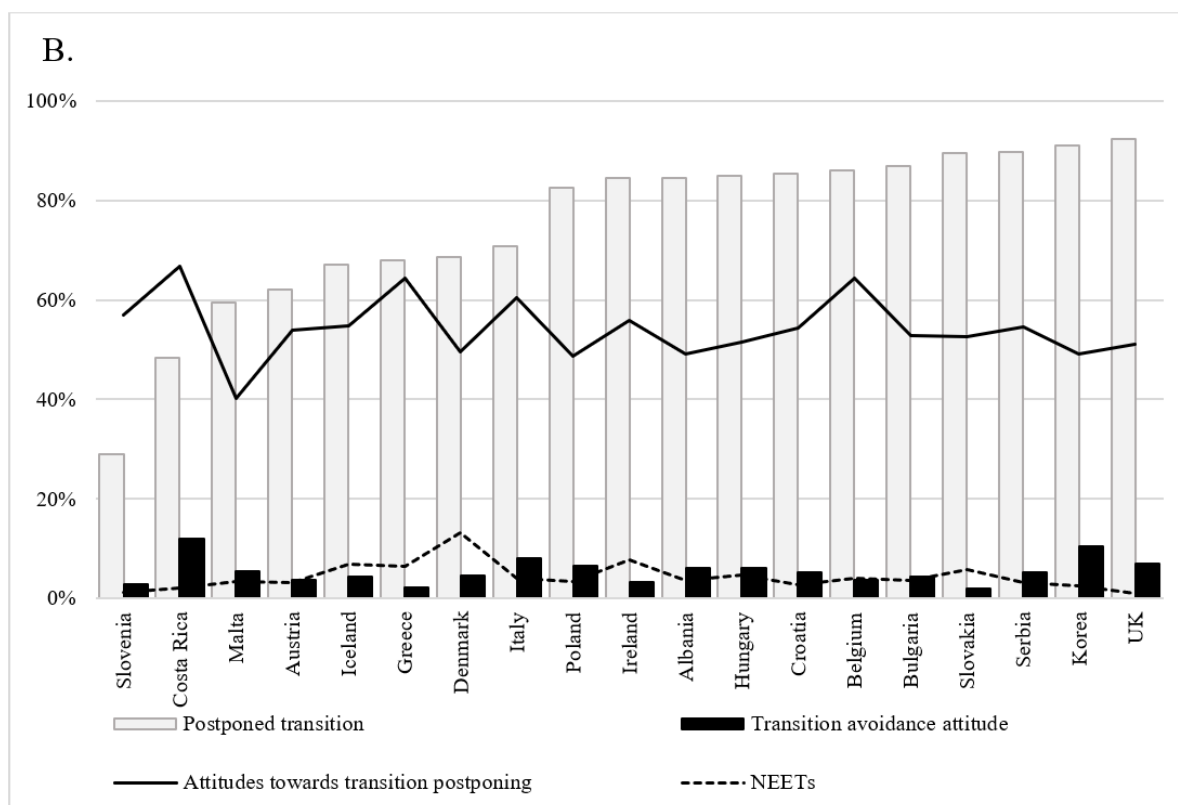


Figure 2. (Continued).

Similar reasoning can be done for the mastery goal orientation construct. We found a positive association between the proportion of young people in a country who are in transition mode combined with insecurity and mastery goal orientation country means from PISA ( $r = -0.66, p < 0.01; power_{\text{Fisher's } Z\text{-test}} = 0.904, p < 0.05$ ). That is, in countries where students have a higher mastery goal orientation, they also have high proportions of uncertain transitions. We consider that the two variables have no direct relationship with each other but are influenced by the general characteristics of the environment. We found a somewhat weaker, association between educational achievement and uncertain transitions but with the same direction ( $r = -0.56, p < 0.05; power_{\text{Fisher's } Z\text{-test}} = 0.63, p < 0.05$ ). Given that at the individual level educational achievement mediates mastery goal orientation, the situation is probably the same here.

Indeed, we found some evidence for Hypothesis 3 that variation in academic achievement and mastery goal orientation across countries are associated with actual transition regimes, but we found no evidence that they are mediated by the attitudes students have about their transition path.

### 3.3. Limitations to the study

There are several limitations to the study. Although the first stage of the study draws on strong empirical evidence, more representation of countries from different territorial, developmental and cultural contexts is still needed. There are indeed countries represented from different parts of the world, but countries from Europe still predominate.

Most countries are among the very highly and highly developed in terms of human development achieved. Future analyses need to include more data on developing countries.

Furthermore, it is necessary to take into account that a large number of countries in the first stage of the analysis are culturally individualistic according to various studies<sup>[60,61]</sup>. However, because some Eastern European countries are more likely to be classified as collectivist cultures<sup>[60]</sup>, the distribution of individualist-

collectivist societies is more even compared to the territorial and developmental distribution.

The main limitations concern the second stage of the study. These are:

- scarce data with few cases and inability to work with individual-level data;
- use of data from different sources;
- over-representation of European countries;
- cross-section of only one year;
- inability to analyse more periods, with a pandemic in 2020–2021, which may obscure the possibilities for an analysis cleansed of exceptional events.

The analysis in the second stage of the study should be seen only as an initial, pilot attempt to get a general idea. Ideally, longitudinal data at the individual level and across multiple countries in different parts of the world are needed to enable robust analysis in the search for validation of mastery goal orientation. Similar should be the direction of the research that tests the validity of different soft skills in the process of selecting them for the needs of the education systems and for the benefit of individuals and businesses.

#### **4. Discussion**

The study provides rich material for interpretation. In summary, the modelling results confirm and complement the first hypothesis. At the individual level, lower social background predisposes to shorter school-to-work transition attitudes, as well as transition avoidance attitudes, while higher social status is associated with attitudes towards longer career transitions. There are a number of reasons to consider that the effect of social status on attitudes toward education-to-employment transitions is mediated by students' educational attainment. It is confirmed that mastery goal orientation in its role as a disposition contributes to attitudes toward extended education-to-employment transitions that go through obtaining a higher degree. Thus, the mastery goal orientation moderates the impact of social status on attitudes toward transition. Furthermore, mastery goal orientation is found to inhibit the emergence of an attitude toward short transitions and transition avoidance. There is a need to further investigate how it moderates the effect of social status. Self-efficacy is not confirmed to have a mediating effect, as observed in other studies. However, there is a reason to consider that educational attainment mediates the effect of mastery goal orientation on transition postponement attitudes.

Mastery goal orientation has the strongest associations compared to the other predictors in the models upon the three types of transition attitudes. This provides further justification for at least introducing it into the discussion of standards in education. Mastery goal orientation can be cultivated and in practice represents a skill that can be instrumental to students' success in school and in forming young people's education-to-work transitions attitudes. Given the modelling results, it might be expected that cultivating mastery goal orientation appropriately would successfully moderate the impact of social status in the direction of equalizing the chances that students of lower social status will have similar attitudes toward transitions from education to employment as students of higher status. Transitions from education to employment are part of the chain of social origin—education-(finding and starting) employment and social status. Thus, cultivating a skill such as mastery goal orientation may be part of the solution to overcoming social inequalities, given that transitions from education to employment play a key role in life and career trajectories. But some uncertainties have also arisen.

In the first stage of the study, socioeconomic status and educational attainment are found to have inverse associations with attitudes towards transition across levels of analysis. If a negative association is observed at the individual level, a positive association is observed at the country level and vice versa. Thus, for example, countries with lower average socioeconomic status are more likely to observe attitudes towards postponing the

transition to employment, while at the individual level, they appear to be less likely. This may seem illogical at first glance, but there are different possible explanations.

One explanation is related to the countries reaching a development threshold, which in research is associated with the emergence of certain values in societies. These changes in values are observed in the change of generations, i.e. in the new generations, and it is precisely young people who are the carriers of the value transformations.

Attitudes reflect values ranked differently for each person, generation, and culture<sup>[57]</sup>. In a broader and abstract sense, for example, such ranking could include values like self-direction, benevolence, achievement, power, tradition, hedonism, freedom etc.<sup>[58,59]</sup>. In a narrower sense, for example, such ranking could include the value of work, the value of learning, the value of fun, the value of money etc. These values are formulated and ranked differently depending on cultures' understanding of success<sup>[58]</sup> and autonomy<sup>[59]</sup>. The notion of success could depend on what is leading—personal individual growth or the collective group's welfare<sup>[62]</sup>. The notion of autonomy could differentiate depending on one's sense of existential security although everyone seeks autonomy<sup>[59]</sup>. At the individual level material security could be important in less developed countries. This may provoke a drive towards strategies that can bring more income in the future, such as investment in further education, i.e., postponing the education-to-employment transition (that is, materialist or modern values). In more developed countries, the quest may not be for material security, but for other forms of freedom and self-expression (i.e. postmodern and postmaterialist values). When studying values, Inglehart concluded that the shift from materialist to post-materialist values occurs when a certain threshold of living standards is reached<sup>[59]</sup>. Thus, variations in observed attitudes towards transitions from education to employment as a reflection of values may vary depending on whether or not a country has crossed a developmental threshold.

Research records a positive relationship between post-material or post-modern values (measured via hedonism orientation) as well as modern values (measured via achievement value orientation) and the human development index, respectively<sup>[60,63]</sup>. The hedonism is conceptualized as the unfolding of personal uniqueness through consumption, fun, adventure, and openness to new things. The achievement value orientation is connected to personal progress pursuit, self-enhancement and emphasising on self-interest, recognition and admiration seeking from others. In countries with higher economic development otherwise adjacent values such as hedonism and achievement values correlate to each other less than in other countries<sup>[63]</sup>. Thus, post-material values such as hedonism suggest that in developed countries where educational attainment and socio-economic development are higher, there is expected to be a greater likelihood of transition avoidance attitudes. If a particular cultural context ranks achievement value higher, then it might be expected that there would be attitudes towards postponement of transition or towards short transitions, depending on the understanding of what success is in that society.

Furthermore, it can be assumed that in countries with more widespread higher education and socioeconomic status, the lack of more prestigious and lucrative career development will not translate to the same extent towards a decline in the satisfaction of basic needs as in other countries. For this reason, other things being equal, attitudes would not be as strongly oriented towards continuing education and postponing transition.

However, the negative association between socioeconomic status and education-to-employment transition postponement at the country level can also reflect the state of the education system and the expectations of individuals about the quality of education they can receive. It can be indicative of how accessible higher education is for different social classes and how inaccessible it is, as well as of predominant expectations about the return on investment in education by young people, etc. This may also depend on the saturation of the



labour markets with certain types of professionals with higher education, young people's awareness of this saturation, or their expectations for realisation. That is, their rational choice as to whether further education is profitable or not. In developed countries where there are larger proportions of educated people there may probably not be as much need for graduates as in developing economies where there may be more growth and/or restructuring, weaving in more professionals. The explanations may be many and require further research.

The results of the present study point to the fact that it makes sense to select mastery goal orientation among the skills to be developed in school, and this has been validated for 30 countries in terms of attitudes towards students' transitions from education to employment, but several other outstanding issues remain.

One important issue remains the economic and cultural context. Dekker and Fischer, 2008 in a meta-analysis of studies registered a positive relationship between the level of development in 13 countries as measured by the Human Development Index and the propensity to adopt mastery goal orientation. They explain it by the fact that in developed countries basic survival needs are met and students' failure has a less negative impact on their social status, therefore they are freer to choose challenging tasks and form mastery goal orientation<sup>[64]</sup>. This observation, however, is not confirmed by the research of 77 countries<sup>[27]</sup>. The cultural and values climate will have a significant impact on the propensity towards mastery orientation in a given context. Therefore, taking account of these variations in climate is one of the future directions in selecting soft skills to produce a tighter fit between the performance of education systems, the business's needs and the individuals' trajectories success. Another important direction is the extension of the research and validation among more countries outside Europe. The current study has the limitation of working with only 30 countries in which European countries are over-represented, although there are countries from all inhabited continents. This may bias the results.

Another important issue relates to the realisation of opportunities. The question is whether investing in a particular skill assists in real-life situations such as that of an actual education-to-employment transition. In this study, we do not get evidence, but this is a pilot test with little data collected on actual transitions that have taken place. There is a need to collect more valid data on transitions.

Among the directions of research development in soft skills selection, another conceptual issue needs to be clarified.

According to the so-called '21st-century skills movement' and in the context of human capital theory, the development of soft skills in education should improve the labour market and life outcomes<sup>[65]</sup>. The debate on the need to develop competences of a diverse and growing kind seems rather monolithically directed in political rhetoric (especially in Europe) towards the creation of such skills<sup>[65]</sup>.

On the one hand, the theory of human capital and skills development has its critics who question the returns to the individual within globalising labour markets without taking into account social inequalities<sup>[66]</sup>. On the other hand, it is often debated what is a soft skill and which (soft) skills from their endlessly growing list should be included in curricula<sup>[67,68]</sup>. It is also important to ask how justified it is to set different skills from these lists as targets in different cultural contexts. Assuming that the notion of success is implicit in the concept of soft skills, as can be seen from a review of multiple studies, although not always explicitly stated<sup>[67-70]</sup>, it follows that success is an important criterion in selecting the soft skills that should enter the curricula. However, the concept of success varies across cultures<sup>[71,72]</sup> and even for different individuals<sup>[69]</sup>. It goes beyond the concept of return on investment in knowledge and skills on which human capital theory relies.

Here, we have tried to validate the success definition issue by using the variable "Attitude towards school-learning activities", which contains the questions of how important are careers, university entry or learning for

students and how much effort they are willing to put in regarding this. That is, implicit in the variable is the question of whether students associate a career or higher education with the notion of success. The associations of Attitudes towards school-learning activities with attitudes towards transition confirmed the need to consider the notion of success. In this sense, such an approach has a future in research focusing on soft skills, their effects on people's lives and their selection for educational purposes.

In conclusion, this study validates the importance of mastery goal orientation in shaping students' attitudes towards transitions from education to employment as part of the chain of social origin—education-(finding and starting) employment and social status. However, further research is needed to validate how attitudes towards transitions translate into actual transition regimes and what is the role of mastery goal orientation along with social status and educational attainment in this process.

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## Conflict of interest

The author declares no conflict of interest.

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## Appendix

**Table A1.** Sample distribution of PISA 2018 microdata for 30 countries.

Country	Number of cases		Distribution	
	Unweighted Count	Weighted Count	Unweighted	Weighted
Albania	6359	27963	0.03	0.00
Australia	14273	257779	0.06	0.04
Austria	6802	75077	0.03	0.01
Belgium	8475	118025	0.04	0.02
Brazil	10691	2036861	0.05	0.31
Brunei Darussalam	6828	6899	0.03	0.00
Bulgaria	5294	47851	0.02	0.01
Chinese Taipei	7243	226698	0.03	0.03
Costa Rica	7221	45475	0.03	0.01
Croatia	6609	35462	0.03	0.01
Denmark	7657	59967	0.03	0.01
Greece	6403	95370	0.03	0.01
Hong Kong	6037	51101	0.03	0.01
Hungary	5132	86754	0.02	0.01
Iceland	3296	3878	0.01	0.00
Ireland	5577	59639	0.03	0.01
Italy	11785	521223	0.05	0.08
Kazakhstan	19507	212229	0.09	0.03
Korea	6650	455544	0.03	0.07
Lithuania	6885	24453	0.03	0.00
Malta	3363	3925	0.02	0.00
Morocco	6814	386408	0.03	0.06
New Zealand	6173	53000	0.03	0.01
Panama	6270	38540	0.03	0.01
Poland	5625	318724	0.03	0.05
Serbia	1090	10409	0.00	0.00
Slovak Republic	5965	44418	0.03	0.01
Slovenia	6401	17138	0.03	0.00
Thailand	8633	575713	0.04	0.09
United Kingdom	13818	597240	0.06	0.09
Total	222876	6493761	1	1

**Table A2.** Descriptive statistics of the main PISA 2018 variables used in the second stage of the study by country.

Country		Economic, social and cultural status	Attitude towards school: learning activities	Self-efficacy (Resilience)	Mastery goal orientation	General Achievement
Albania	Mean	-0.83	0.52	0.59	0.65	419.67
	N	6277	6098	6118	6051	6359

	Std. Deviation	0.96	0.86	1.05	0.96	0.00
Australia	Mean	0.32	0.11	0.01	0.05	499.00
	N	12813	12170	11915	11913	14273
	Std. Deviation	0.91	1.03	0.95	0.96	0.00
Austria	Mean	0.04	-0.03	0.09	0.04	491.00
	N	6674	6475	6303	6337	6802
	Std. Deviation	0.87	0.98	1.04	0.98	0.00
Belgium	Mean	0.10	-0.11	-0.21	0.11	500.00
	N	8312	7733	4477	7596	8475
	Std. Deviation	0.92	0.93	0.82	0.88	0.00
Brazil	Mean	-1.13	0.33	-0.16	0.55	400.33
	N	10453	9065	8468	8521	10691
	Std. Deviation	1.22	0.96	0.97	1.00	0.00
Brunei Darussalam	Mean	-0.26	0.17	-0.18	0.12	423.00
	N	6790	6571	6263	6260	6828
	Std. Deviation	0.97	0.99	0.81	0.96	0.00
Bulgaria	Mean	-0.22	-0.08	0.06	-0.23	426.67
	N	5113	4530	4328	4353	5294
	Std. Deviation	1.01	1.01	1.17	1.14	0.00
Chinese Taipei	Mean	-0.33	-0.20	-0.21	-0.29	516.67
	N	7172	7134	7136	7117	7243
	Std. Deviation	0.92	0.96	0.93	1.02	0.00
Costa Rica	Mean	-0.98	0.40	0.46	0.53	414.67
	N	7182	6475	6454	6405	7221
	Std. Deviation	1.29	1.08	1.06	1.06	0.00
Croatia	Mean	-0.24	-0.07	0.23	-0.10	471.67
	N	6576	6382	6309	6291	6609
	Std. Deviation	0.78	1.00	0.97	1.04	0.00
Denmark	Mean	0.39	-0.03	0.06	0.45	501.00
	N	7431	6704	6428	6494	7657
	Std. Deviation	0.84	1.07	0.94	0.90	0.00
Greece	Mean	-0.09	-0.25	0.05	-0.08	453.33
	N	6372	6118	6054	6019	6403
	Std. Deviation	0.91	0.95	0.95	0.96	0.00
Hong Kong	Mean	-0.52	-0.27	-0.29	-0.05	530.67
	N	5839	5742	5702	5689	6037
	Std. Deviation	1.02	0.91	0.91	0.92	0.00
Hungary	Mean	-0.06	0.10	0.19	-0.22	479.33
	N	5083	4980	4920	4901	5132
	Std. Deviation	0.92	0.91	0.94	0.97	0.00
Iceland	Mean	0.54	0.19	0.10	0.25	481.33
	N	3222	3065	2994	2999	3296

	Std. Deviation	0.82	1.05	1.17	1.03	0.00
Ireland	Mean	0.13	0.11	-0.05	-0.12	504.67
	N	5519	5476	5391	5366	5577
	Std. Deviation	0.86	0.97	0.88	0.96	0.00
Italy	Mean	-0.22	-0.03	-0.03	-0.22	477.00
	N	11475	10990	10612	10629	11785
	Std. Deviation	0.89	0.95	0.96	0.97	0.00
Kazakhstan	Mean	-0.33	-0.21	-0.03	0.47	402.33
	N	19451	18687	18249	18183	19507
	Std. Deviation	0.86	1.10	1.01	1.01	0.00
Korea	Mean	0.09	0.08	-0.04	0.06	519.67
	N	6626	6596	6606	6580	6650
	Std. Deviation	0.77	0.97	1.00	1.08	0.00
Lithuania	Mean	0.03	-0.27	0.19	0.02	479.67
	N	6693	6568	6392	6383	6885
	Std. Deviation	0.86	1.02	1.04	1.01	0.00
Malta	Mean	0.08	0.18	0.10	0.22	459.00
	N	3295	3143	3086	3069	3363
	Std. Deviation	0.95	0.96	1.02	1.05	0.00
Morocco	Mean	-1.91	0.24	0.02	0.30	368.00
	N	6731	5405	4587	4512	6814
	Std. Deviation	1.42	0.89	1.03	1.06	0.00
New Zealand	Mean	0.18	0.11	-0.03	0.07	502.67
	N	6013	5941	5861	5864	6173
	Std. Deviation	0.97	1.00	0.90	0.92	0.00
Panama	Mean	-1.03	0.13	0.43	0.61	365.00
	N	6088	4464	3632	3721	6270
	Std. Deviation	1.33	1.14	1.08	1.12	0.00
Poland	Mean	-0.14	-0.46	-0.05	0.01	513.00
	N	5556	5511	5457	5450	5625
	Std. Deviation	0.85	0.93	0.96	0.91	0.00
Serbia	Mean	-0.30	-0.35	0.36	-0.04	442.33
	N	1081	967	929	915	1090
	Std. Deviation	0.81	1.02	1.13	1.09	0.00
Slovak Republic	Mean	-0.18	-0.35	-0.28	-0.33	469.33
	N	5884	5550	5449	5429	5965
	Std. Deviation	0.92	0.95	0.95	0.99	0.00
Slovenia	Mean	-0.01	-0.12	-0.06	-0.30	503.67
	N	6331	6011	5930	5944	6401
	Std. Deviation	0.79	0.95	0.98	1.00	0.00
Thailand	Mean	-1.05	-0.21	0.06	0.26	412.67
	N	8582	8484	8496	8434	8633



	Std. Deviation	1.25	0.87	0.84	0.90	0.00
United Kingdom	Mean	0.24	0.21	-0.16	-0.11	503.67
	N	12893	13022	12715	12729	13818
	Std. Deviation	0.89	0.97	0.94	1.00	0.00

**Table A3.** Real transition regimes distributions of young people 15–19, 19 countries, ILO.

Country	2019				
	Transited	In transition and insecurity	In transition and high pressure	Postponed transition	NEETs
Albania	5%	9%	4%	69%	13%
Austria	7%	6%	24%	59%	3%
Belgium	2%	2%	6%	86%	4%
Bulgaria	4%	3%	1%	84%	8%
Costa Rica	5%	15%	6%	67%	7%
Croatia	7%	6%	1%	83%	3%
Denmark	4%	8%	38%	48%	2%
Greece	1%	2%	1%	90%	6%
Hungary	5%	3%	1%	87%	4%
Iceland	14%	9%	46%	29%	1%
Ireland	4%	6%	15%	71%	4%
Italy	3%	7%	1%	85%	5%
Korea	4%	2%	0%	91%	3%
Malta	7%	6%	13%	68%	6%
Poland	2%	2%	3%	92%	1%
Serbia	3%	7%	2%	85%	4%
Slovakia	3%	4%	0%	90%	3%
Slovenia	2%	2%	8%	85%	3%
United Kingdom	9%	6%	19%	62%	3%