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Attractiveness is in the eye of the beholder



Giovanni Russo* , Marco Serafini and Antonio Ranieri

*Correspondence:
Giovanni.russo@cedefop.
europa.eu
Cedefop, Europa 123, Pyleas,
57001 Thessaloniki, Greece

Abstract

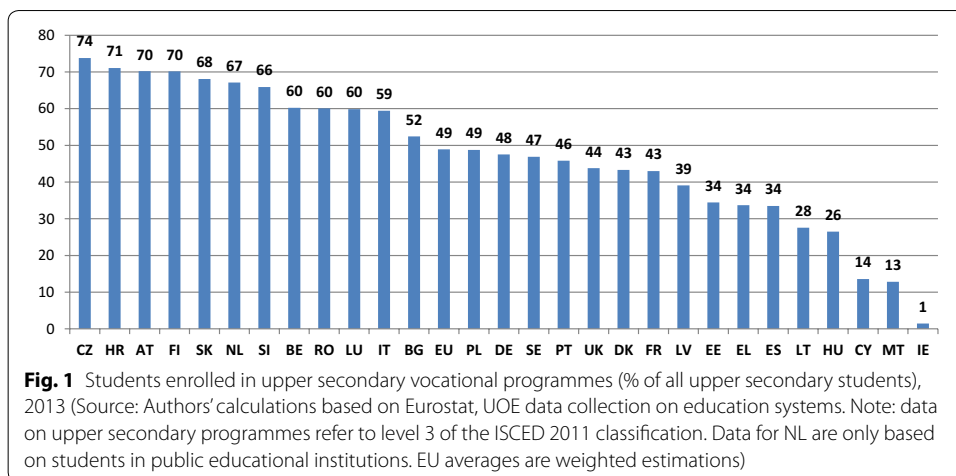
This paper investigates attitudes towards vocational education and training (VET) using Eurobarometer data supplemented by OECD TALIS data. Attitudes are measured in two different ways. First, by a general measure reflecting attitudes towards VET in the country and second by a self-reported measure of personal attitudes towards VET based on the likelihood of recommending it to young men and women. The paper finds that the general attitude towards VET is influenced by the quality of the learning environment and the ability of VET to connect to the world of work. However, only the latter factor is associated with a person's inclination to recommend VET to young men and women. The positive attitude towards VET is found to be at risk of erosion because interviewees associate a VET background with worse labour market outcomes compared to general education. Vocational programmes provided by schools are also associated with a less desirable learning environment.

Keywords: Vocational education and training, Attitudes, Labour market outcomes, Quality of education, School quality, Learning environments

Introduction: what is attractiveness?

Strong policy interest in the 'attractiveness' of vocational education and training (VET) as a learning option is fuelled by concerns about the status of VET in the education system compared to general education, particularly secondary level general education. The concept of 'attractiveness' has never been clearly defined; it is not the same as VET's 'standing', which is more concerned with educational levels, value of qualifications and VET's position in the educational system (Lasonen and Manning 2001). The attractiveness of VET as a learning option depends on who is considering this question. Attractiveness may depend on how VET is perceived by individuals (subjective attractiveness) or factual indicators of cost-effectiveness and/or opportunity cost (objective attractiveness). Consequently, what may make VET attractive to individuals may be different from what makes it attractive to employers. This paper focuses on subjective attractiveness for individuals.

To clarify the concept of attractiveness and provide a viable analytical framework, we start with a definition that VET is attractive if individuals associate it with positive evaluations. This notion is at the core of defining attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (Eagly and Chaiken 1993). The study of attractiveness is similar in nature to the study of a positive attitude towards



VET.¹ Attitudes are evaluative tendencies that can have cognitive, affective and behavioural antecedents and consequences (Eagly and Chaiken 2007). Attitudes can be regarded as associations between an object and a summary evaluation of that object, in this case VET. Associations can vary in strength and, hence, their accessibility from memory (Fazio 2007).

The education system creates knowledge (competence and skills, human capital), but its logics and the trade-offs involved at every stage of the educational path, mean different things to different sections of society. Attitudes towards VET are influenced by an individual's social environment including their family, peers and school. Attitudes are important because they influence behaviour, albeit not deterministically. The stronger someone's positive attitude is towards behaving in a certain way (or towards an object) the more likely they are to behave that way (or acquire the object). The link between attitudes and behaviour is weaker when the attitude is ambivalent; i.e., comprising both positive and negative attitudes (Conner and Armitage 2008).² People typically find themselves attracted to several activities at the same time. When it comes to spending resources (money, time, and effort) on these activities, these are ordered according to certain criteria³ and the highest-ranking activities within the affordable set are chosen (Bandura 2001; Ajzen 2005).

Against this background, the attractiveness of VET can be seen as one factor influencing the decision to enrol in VET. Pupils will be more inclined to enrol in VET if, among other factors, they or those around them have a positive attitude towards it. Attitudes towards education have real consequences as they have been shown to influence the likelihood to support spending on education (Busemeyer 2017).

If we take enrolment in VET as a measure of its attractiveness, Fig. 1 suggests that major concerns are not fully justified. Despite considerable variation across countries in levels, about half of upper secondary students are enrolled in VET programmes in the EU; no less than 40% are enrolled in VET in the large majority of Member States, only in a few are enrolments in VET are below 30%.

¹ An attitude represents an evaluative integration of cognitions and affects experienced in relation to an object (the attitude object). Attitudes are the evaluative judgments that integrate and summarize these cognitive/affective reactions (Crano and Prislin 2006). Attitudes vary in strength, which in turn has implications for persistence, resistance, and attitude-behaviour consistency (Holland et al. 2002). Attitudes also have a well-defined neural base (Falk and Lieberman 2013).

² Attitudes can be seen having two dimensions; first, positive or negative and second intensity. 'Attractiveness' explicitly assumes a positive attitude toward VET.

³ For example, the importance of the goal in the hierarchy of needs (Philippaers et al. 2016).

Depending on what factors pull or push pupils to the VET system, enrolment rate may be compatible with very different attitudes towards VET.

This paper uses data from 2010 Eurobarometer on VET attractiveness and complements it with an analysis of the small subsample containing information on schools at upper secondary level in the 2013 OECD TALIS schools data set. Although attractiveness was not explicitly modelled as an attitude in the Eurobarometer survey questionnaire, the paper shows how attitude can be usefully used to analyse attractiveness of VET. Our results confirm that the attitude towards VET is influenced by perceptions of the quality of the education and of the possible labour market outcomes after VET. In addition, previous experience with VET is positively associated with a positive attitude towards it. However, the positive attitude towards VET is susceptible to erosion due to individuals with VET backgrounds experiencing worse economic outcomes compared to those who went into general education and because VET schools are more likely to be challenging learning environments than general education schools.

The paper is structured as follows. “[Theoretical framework for attitudes towards vocational education and training](#)” section briefly describes attitude formation. “[Data, measures and methods](#)” section describes the data sets and “[Method](#)” section the methods. “[Result and discussion of the analysis of attitudes towards VET](#)” section investigates determinants of attitudes towards VET focusing on the quality of expected outcomes (labour market outcomes and the quality of the learning environment). “[Conclusions](#)” section outlines some conclusions.

Theoretical framework for attitudes towards vocational education and training

Evaluations leading to a positive or negative attitude towards VET arise firstly from experiences of interactions with the VET system (Conner and Armitage 2008). These evaluations reflect how VET has contributed to fulfilment of life goals or satisfaction of needs. They emphasise the importance of self-interest as a determinant of the attitudes towards VET (Busemeyer 2017).⁴ These aspirations are at the basis of the social reproduction of inequality (van de Werfhorst 2011).

We argue that attitudes towards VET are shaped by its effectiveness in delivering desirable outcomes such as good labour market outcomes, namely good jobs, pay and standard of living and good educational outcomes, namely quality education, access to higher education or both. Factors enhancing VET’s effectiveness also improve attitudes towards it.

Regarding labour market outcomes the frequent observation that vocational education provides a smooth transition into jobs early in the career contributes to a positive evaluation of the VET system (Di Stasio 2017). However, a negative attitude may emerge due to a lack of career progression that VET students may experience in life (Hanushek et al.

⁴ Other determinants of attitudes, such as norms, values and institutions are not investigated due to lack of suitable information (Busemeyer 2017).

2011).⁵ Depending on whether VET does or does not contribute to the desired career path, or wage level, or hoped for standard of living, people will over time form either positive or negative attitudes towards VET (Protsch and Solga 2016).

The role of VET in the education system also influences attitudes towards it. VET may be seen as an easy option, implying that VET schools provide low quality education. Attitudes of VET students towards VET are also influenced by VET's reputation in society (Jambo and Pilz 2018) and by the guidance and advice that they receive. For example, if the school system provides advice based on a formative assessment of a pupils' strengths and interests, advice by a teacher or guidance counsellor to enrol in VET may help form a positive attitude towards it. In contrast, if advice to enrol in VET is based on a summative evaluation of the pupil's ability, given that the best students are assumed to enter general education and go on to higher education, routing students into VET by either formal or informal tracking through teachers' advice or other forms of social pressure, will tend to hinder formation of positive attitudes towards VET (Brunello and Checchi 2007; van de Werfhorst and Luijckx 2010). For pupils wanting to continue in education rather than enter the labour market, the ease of access to higher education through VET will encourage positive attitudes towards it. However, negative attitudes towards VET may emerge if students perceive that it diverts them from going to higher education (Di Stasio 2017).

Consequently, the extent to which labour market and educational outcomes contribute to positive or negative attitudes towards VET is an empirical question. Therefore, this paper investigates the following research questions:

1. What is the influence of quality of education and labour market outcomes on individuals' attitudes towards VET?
2. What type of labour market and educational outcomes do individuals associate with VET?

Data, measures and methods

The analysis comprises two parts. The first investigates determinants of attitudes towards VET focusing on the role of high quality education and good labour market outcomes. The second focuses on VET outcomes in terms of labour market success. The analysis uses Eurobarometer data, complemented by OECD TALIS data, which are used to analyse the education quality of VET. Both data sets are described below.

Eurobarometer on the attractiveness of VET

To study attitudes towards VET, we used the special Eurobarometer survey of June 2011 (European Commission 2011) on perceptions of European citizens of the quality and impact of VET in society and the labour market. Data collection involved 26,840

⁵ Lack of career progression may be due to obstacles that prevent moving to certain positions or to reductions in job security brought due to skill polarization, which is affecting jobs for which vocational qualifications have been traditionally important.

European citizens aged 15 and over in 26 countries. The aim was to give a ‘snapshot’ of VET’s image in Member States.⁶

The Eurobarometer survey questions on VET does not differentiate between initial VET (IVET), which takes place within the educational system, and continuing VET (CVET), which takes place in the labour market. However, the questionnaire’s context makes it clear that the questions concerned evaluations of IVET. Further, the questionnaire does not differentiate among different types of IVET and different types of VET are lumped together, such as apprenticeship programmes and school based work-based learning (Raffe et al. 2007). The questionnaire does not even define VET, leaving its interpretation to the respondent. Consequently, in this paper ‘VET’ means ‘IVET’.

Personal attitudes towards VET derive from the following survey question:

Nowadays, which of the following would you recommend to a young person who is finishing his compulsory education? (1) General Secondary or Higher education; (2) VET; (3) it depends on the person.

The question juxtaposes two modes of education: general and vocational. The personal measure of the attitude towards VET is derived from those recommending young people to enrol in VET. On this definition only 32% of the sample had a positive attitude towards VET.

The general measure of the attitude towards VET in the country derives from the following survey question:

Do you think that vocational and educational training has a very positive, fairly positive, fairly negative or very negative image in (YOUR COUNTRY)?

Answers were coded on a 4-point Likert scale ranging from 1 (very negative image) to 4 (very positive image). Since less than 3% of respondents chose the first category (1 very negative image), the variable was recoded into a dichotomous variable with 1 denoting a positive or very positive image and 0 denoting a negative or very negative one.⁷ This self-reported measure quantifies a very general, broadly defined, attitude towards VET. However, answers may be biased towards the positive because VET is a type of education. In modern society all types of education are, generally, valued positively. In fact, about 76% of the sample had a positive attitude towards VET.

The question does not assess respondents’ attitudes towards VET but captures general attitudes towards it in the country as perceived by the respondent. The advantage of the question lies in the fact that VET is not juxtaposed with general education. Consequently, the analysis points to all variables contributing to a positive or negative attitude towards VET. On the contrary, when the question juxtaposes VET and general education, the analysis points to determinants that have differential impact on the attitudes towards VET and general education.

Table 1 shows that the two measures of attitudes towards VET—the personal and the general—differ. Many, while believing that there is a generally positive attitude towards

⁶ The dataset’s questionnaire and descriptive statistics are not described here as they are readily available elsewhere (European Commission 2011).

⁷ The frequency distribution of the answering category was: very positive (16.2%), fairly positive (54.6%), fairly negative (26.5%), very negative (2.7%).

Table 1 General attitude towards VET in the country compared to the personal attitude towards VET (absolute numbers)

General attitude towards VET in the country	Personal attitude towards VET		Total
	Positive	Negative and ambivalent	
Positive	6422	12,606	19,028
Negative	1750	4592	6342
Total	8172	17,198	25,370

Authors' calculations (Eurobarometer 369)

VET in their country, do not have a positive or negative attitude towards VET personally in that they would or would not recommend VET to young men and women.

OECD TALIS

To assess the quality of education provided by the general education and VET tracks, we use the 2013 OECD TALIS data and select schools offering vocational education programmes at upper secondary level (ISCED 3). Data are available for five European countries (Denmark, Italy Finland, Norway, and Poland). In some countries VET extends beyond upper secondary level, however most VET takes place at this level.

Information about the school is collected from the principal. If the principal indicated that there is a vocational or technical education programme taught at the school, the school is considered a VET school. The data consist of 614 schools, across the five countries, of which 350 are VET schools.

The survey gathers information on school resources (budget, equipment) and student behaviour. These features influence attitudes towards VET as they affect the perceived quality of the education delivered by the VET system.

The survey records if schools had more than 10 percent of students with a different first language; more than 10 percent of students with special needs⁸; more than 10 percent of students from socioeconomically disadvantaged homes. The low threshold of 10% is due to the high incidence of Nordic countries in the estimation sample: the relatively low income inequality characterising these countries is reflected in an extremely low percentage of schools with more than 30% of pupils from disadvantaged families.⁹

The small sample size is a limitation of the study. To reduce the number of regressors we collapse elected questions into latent constructs. An exploratory factor analysis, using maximum likelihood and orthogonal rotation, was used to develop the latent constructs.

Items assessing the schools 'ability to deliver quality education' are collapsed into two constructs. The first comprises items assessing the shortage of good, or well performing teachers and shortages of teachers with special competences (quality teachers); the

⁸ Students with a formally identified special learning need due to mental, physical, or emotional disadvantage. Often their education is supported by additional public or private resources (personnel, material or financial) (TALIS questionnaire, question 15).

⁹ Socioeconomically disadvantaged homes are homes lacking basic necessities or advantages of life, such as adequate housing, nutrition or medical care (TALIS questionnaire, question 15).

second captures the lack of resources (comprising items assessing lack of library services, instructional materials and support staff).

From the items measuring student tardiness and absenteeism¹⁰ we derive a construct called 'student readiness'. From the items on the frequency of students' delinquent behaviour we derive the item 'delinquency'.¹¹

Method

The analysis uses different models at different stages. Consequently, the models are presented contextually with the discussion of their results. Analyses are carried out on weighted data as the survey weights adjust the inclusion probability induced by the study design. Eurobarometer data contains a high incidence of 'do not know' answers. To limit the loss of data resulting from deleting these observations an indicator variable for each answer category was introduced for as many independent variables as possible. This includes an indicator variable for the 'do not know' category. This enables us to retain an estimations sample of about 20.000 observations (Di Stasio 2017). The analysis pulls data for all countries and we have added countries fixed effects. To account for the nested nature of observations (respondents nested within countries) standard errors are clustered by country. The analyses is based on the pooled data set since, although educational systems in the EU are highly heterogeneous, they tend to be functionally equivalent in the sense that the degree of segmentation of skills, for example, literacy, produced by different systems tends to be similar (Borgna 2017).

Eurobarometer data were collected during the economic crisis and the recession may have affected attitudes towards VET. However, previous analyses on the same data set using the country unemployment rate to control for the severity of the recession found that the coefficient on the unemployment rate was not significant (Di Stasio 2017).

The Eurobarometer also collects information on interviewees' agreement or disagreement with a set of statements (items) about the quality of VET and its ability to lead to labour market success.¹² Items are collapsed into two latent variables: expected labour market success¹³ and quality of education.¹⁴ The three items concerning a) the possibility to continue to higher education, b) that VET does not provide students with soft skills (i.e., communication and teamwork) and c) that VET leads to jobs well regarded in society, do not appear to load on any of the factors and are used as separate regressors.

¹⁰ How often students arrive late or are absent, equal weights are used to construct the scale. Cronbach alpha 0.82.

¹¹ The items measured the frequency of vandalism and theft, intimidation and verbal abuse among students, physical injuries caused by violence among students and of intimidation and verbal abuse of teachers and staff. Equal weights are used to build the scale. Cronbach alpha = 0.79. This construct has a correlation coefficient of 0.93 with the delinquency scale developed by the OECD.

¹² The battery of questions included the following items: VET furnishes high quality learning; VET gives access to modern equipment; teachers in VET are competent; VET enables people to continue university studies; people in VET learn skills needed by employers; people in VET learn communication and teamwork; VET leads to well paid jobs; VET leads to jobs well regarded in society; VET leads to professions which are highly demanded on the labour market; and VET offers good career opportunities.

¹³ Labour market success consists of the following four items: people in VET learn skills needed by employers; VET leads to well paid jobs; VET leads to professions in high demand on the labour market; and VET offers good career opportunities. The reliability index (Cronbach alpha) for this four-item construct is 0.75.

¹⁴ The scale relative to the quality of the education contains the following three items: VET offers high quality learning; VET gives access to modern equipment; and teachers in VET are competent. The reliability index (Cronbach alpha) of this three-item construct is 0.72.

Control variables used in the analysis based on the OECD TALIS data are introduced contextually in the discussion of the empirical results. The following additional control variables are used in all empirical models based on the Eurobarometer:

1. Individual characteristics: gender, age (coded in 6 categories), number of persons in the family, highest educational attainment (6 ISCED levels plus an additional “no completed education” level), and whether VET education had been attended), income (represented by the difficulties in the household’s ability to pay bills), current labour market position (Di Stasio 2017);
2. Familial background: father’s highest level of education (3 levels);
3. Various indicators of expected outcomes:
 - a. Education: quality of education, opportunities to proceed to tertiary education, and relative ease of being accepted in VET or general education courses.
 - b. Labour market: expected labour market outcomes, whether VET (i) leads to jobs well-regarded in society, (ii) provides soft skills and (iii) VET graduates are more or less likely to find a job compared to general education graduates.

VET outcomes are assessed using one item on personal success in the form of a self-reported position on the social ladder (1, being the lowest rung and 10 the highest). This measure of success has the obvious drawback that the underlying construct is hard to define. However, it has the advantage of being a broad measure of success that goes beyond just wages and gives a life-time perspective on personal success.

Results and discussion of the analysis of attitudes towards VET

Determinants of attitudes towards VET

To assess personal attitudes towards VET we used the respondent’s replies to the question on what they would recommend to a young person who is finishing his compulsory education. The question admits three answers: 1, general education; 2, it depends on the person; and 3, vocational education. The three answers can be considered to mirror a negative, ambivalent, or positive attitude towards VET, respectively. Since the spacing between the three categories is not known, ordered choice models can be used to model the effect of explanatory variables on attitudes towards VET. However, ordered choice models impose that the impact of variables on the outcome is the same across cut points (moving from category 1 to 2 and from 2 to 3). This ‘parallel line assumption,’ or ‘proportional odds assumption’ is violated in our case.¹⁵

To accommodate the different nature of the answer categories and to relax the parallel lines assumption we have analysed the data with the flexible generalised ordered logit model.

The generalised ordered logit model with M choices consists of $M - 1$ equations. It first estimates a model in which the first choice ($j = 1$) is contrasted with all the remaining choices ($j = 2$ to M); it then estimates a second model whereby the first two choices

¹⁵ Using an ordered logit model to model the three choices (recommend “general education”, “it depends on the person”, “VET”), the parallel line assumption is rejected (Brant 1990) with a $\chi^2(82) = 1390.740$, significant at 5%.

($j = 1$ and $j = 2$) are contrasted with all the remaining choices ($j = 3$ to M) and so on until the last ($M - 1$) model contrasts the first $M - 1$ choices ($j = 1$ to $m - 1$) with the last choice ($j = M$). The model can be written as follows:

$$P(Y_i > j) = \frac{\exp(\alpha_j + \beta_j X_i)}{1 + \exp(\alpha_j + \beta_j X_i)} \quad \text{for } j = 1 \dots M - 1 \quad (1)$$

where the subscript i denotes the individual, j denotes the choices (from a set of M possible choices), α and β are coefficients to be estimated and X is a matrix of control variables (Williams 2006). The ordered logit model is a special case of the model in Eq. (1) in which the coefficients β do not vary across the choice sets (the subscript j is dropped). In our empirical model the dependent variable admits three answer categories. Consequently, the analysis is based on two equations. By relaxing the parallel line assumption, a more nuanced picture of the attitudes towards VET can be obtained (Fullerton and Dixon 2010).

The coefficient estimates are shown in Table 2. Distinctions can be made between:

1. A negative attitude towards VET (column 1 in Table 2). Recommend [3] 'VET' or choose [2]; 'it depends on the person' vs. recommending [1] 'general education'; a negative sign on a coefficient in this equation suggests that the corresponding variable is associated with a negative attitude towards VET; a positive coefficient on a variable would suggest that the variable is associated with a lack of a negative attitude towards VET);
2. A positive attitude towards VET (column 2 in Table 2). Recommending [3] 'VET' rather than choosing [2] 'it depends on the person' or recommending [1] 'general education'; a positive sign on a coefficient in this equation suggests that the corresponding variable is associated with a positive attitude towards VET whereas a negative coefficient on a variable suggests that the variable is associated with a lack of a positive attitude towards VET);

Negative signs in the 'negative' column increase the likelihood of a negative attitude; positive signs in the 'positive' column increase the likelihood of a positive attitude.

Respondents believing VET produces good labour market outcomes are more likely to have a positive attitude towards VET and less likely to have a negative one. Further, disagreeing with the statement that VET graduates are more likely to find jobs than general education graduates increases the likelihood of having a negative attitude towards VET and decreases the likelihood of having a positive attitude towards VET compared to those agreeing with the statement. However, respondents answering that VET graduates and general education graduates were equally likely to find jobs were less likely to have a positive attitude towards VET but not more likely to have a negative attitude towards it.¹⁶

¹⁶ Other results can be found in Table 6 in the Appendix. Respondents with secondary education and above are more likely to hold a negative attitude towards VET and less likely to hold a positive attitude towards it. Father's education is found to have a differential impact on the likelihood of having a positive and negative attitude towards VET. Individuals whose father was in VET are less likely to have a negative attitude towards it, but not more likely to have a positive attitude towards it. Individuals whose father was in higher education are less likely to have a positive attitude towards VET but not more likely to have a negative attitude towards it.

Table 2 Positive and negative attitudes towards VET

	Attitudes towards VET	
	Negative sign → negative attitude	Positive sign → positive attitude
(Perceived) quality of education (latent)	−0.072 [0.063]	0.003 [0.055]
(Perceived) labour market outcomes (latent)	0.271 [0.072] ^a	0.306 [0.082] ^a
VET enables people to continue to higher education	Yes	Yes
VET does not provide soft skills	Yes	Yes
VET does not lead to well-regarded jobs	Yes	Yes
Likelihood of finding a job (relative to people with general education)		
Equally likely	−0.161 [0.100]	−0.798 [0.082] ^a
Less likely	−0.634 [0.108] ^a	−0.507 [0.118] ^a
Don't know	−0.300 [0.055] ^a	−0.806 [0.203] ^a
Being accepted in VET (relative to general education)		
Slightly easier	0.231 [0.060] ^a	0.129 [0.085]
No difference	0.618 [0.043] ^a	0.189 [0.090] ^a
Slightly more difficult	0.401 [0.101] ^a	0.350 [0.130] ^a
Much more difficult	0.355 [0.114] ^a	0.318 [0.125] ^a
Don't know	0.647 [0.107] ^a	0.252 [0.169]
Education	Yes	Yes
Attended VET (recently or in the past)	0.252[0.054] ^a	0.307 [0.050] ^a
Father's education	Yes	Yes
Difficulties in making ends meet	Yes	Yes
Gender	Yes	Yes
Age class	Yes	Yes
Number of persons in the household	Yes	Yes
Current labour market position	Yes	Yes
Area	Yes	Yes
Country dummies	Yes	Yes
Constant	−0.544 [0.287]	−2.040 [0.362] ^a
Number of observations	20,086	
Log likelihood restricted model	−21,177.898	
Log likelihood full model	−20,109.872	
Chi squared test	2,136.052 ^a	

Weighted data (clustered standard error in brackets)

^a Significant at 5%. The reference group of the variable is in parentheses: VET does not lead to well-regarded jobs (totally agree), Education (no education), VET enables people to go on to university (totally agree), VET does not provide students with soft skills (totally agree), likelihood that VET graduates find a job compared to GE graduates (more likely), ease of being accepted on a VET course (much easier), age group (15 to 24), current occupation (self-employed), Father's Education (no education), Difficulties in making ends meet (most of the time), Area (rural area), and number of people in the household (1 person)

Individuals who are or were in VET are more likely to have a positive attitude towards it. Further, the perceived selectivity of the VET system plays a role in shaping attitudes towards VET. Those believing that acceptance into VET schools is much easier than acceptance into general education schools have the highest likelihood of having a negative attitude towards VET. However, a belief that being accepted in a VET school is equally or more difficult than being accepted in general education is associated with a decrease in the likelihood of having a negative attitude towards VET.

The quality of education does not seem to influence the likelihood of having a positive or negative attitude towards VET. The missing association between the quality of

education and the attitude towards VET can be ascribed to how the question is formulated in that it juxtaposes attitudes towards VET against those towards general education. If the quality of education is equally important to forming both types of attitudes then the coefficient on this variable is not significant. Teasing out this aspect requires analysing attitudes towards VET generally and not in relation to general education.

For this reason we turn to a second measure of attitudes towards VET.

To assess general attitudes towards VET we used the respondent's replies to the question on how VET is perceived in their country. The answers to the question are recoded into two classes: positive (denoted by 1) and negative (denoted by 0). A binary logit model is used to investigate the relationship between this general measure of attitude towards VET (the latent construct underlying the image of VET). The results of the analysis are shown in Table 3.

In general, the image of VET is more positive for those who think that VET is of good quality and leads to good labour market outcomes, in terms of career and pay. In addition, the likelihood of having a positive attitude towards VET in general is linked to the level of disagreement with the idea that VET leads to jobs not well regarded in society.¹⁷

Outcomes of VET

Previous analyses have shown that VET's ability to deliver good labour market outcomes is an important correlate of the attitude towards VET. Consequently, we now turn to the analysis of the returns (broadly defined) to the choice of VET or general education. We rely on a broad catch-all measure of personal success, namely social positioning, defined as a self-reported measure of one's position in the social ladder (1 lowest rung, 10 highest). The analysis is based on the following regression model:

$$\text{SocialPositioning}_i = \pi_0 + \pi X_i + \varepsilon_i \quad (2)$$

The subscript i denotes individuals and the matrix X includes the control variables, the π s are parameters to be estimated, and ε is a random error term.

Estimation results are set out in Table 4. Individuals with a VET background position themselves lower in the social ladder than those who followed general education.¹⁸ It thus appears that VET is associated with lower returns than general education using this measure of personal success (Brunello and Rocco 2017, Golsteyn and Stenberg 2017, Hanushek et al. 2017). The coefficient on VET background is negative and significant among young workers (below 45 years) and old workers (45 years and above).¹⁹ Finally, when restricting the sample to individuals with post-secondary education (ISCED levels 4, 5, and 6), the coefficient on having attended VET is -0.148 (with a standard error of 0.052, coefficient significant at 5%). In other words, individuals with a university degree

¹⁷ Additional results can be found in Table 7 in the Appendix. Respondents with tertiary education are less likely to have a positive attitude towards VET compared to respondents with primary or no education. Predictably, people with a VET background have a more positive image of VET than those who followed general education. Managers are less likely to have a positive attitude towards VET than self-employed people. Further, people aged over 45 are less likely to have a positive attitude towards VET in general. Note that the coefficient for the age group (65+) is not significant. However, retired people, most of whom are 65+ are also less likely to have a positive attitude towards VET.

¹⁸ The model was estimated by OLS. All predicted values fell in the admissible range [1, 10]. Small country sample size, ranging from 940 to 356 observations, limits the possibility to provide estimates by country. However, the results show that the coefficient on the enrolment in VET is negative in most countries (where it is not, it is positive but close to zero). In the countries in which the coefficient on VET experience is significant it also has a negative sign.

¹⁹ The coefficient on having attended VET is -0.252 (with a standard error of 0.057) among the old workers and -0.150 (with a standard error of 0.075) among the young workers. Both coefficients are significant at 5%.

Table 3 Attitudes towards VET, weighted data (clustered standard error in brackets)

	Attitude towards VET
(Perceived) quality of education (latent)	1.313 [0.151] ^a
(Perceived) labour market outcomes (latent)	0.464 [0.054] ^a
VET enables people to continue to higher education	Yes
VET does not provide soft skills	Yes
VET does not lead to well-regarded jobs	
Tend to agree	0.337 [0.110] ^a
Tend to disagree	0.719 [0.117] ^a
Totally disagree	0.938 [0.112] ^a
Don't know	0.694 [0.163] ^a
Likelihood of finding a job (relative to people with general education)	Yes
Being accepted in VET (relative to General Education)	Yes
Education	
Attended VET (recently or in the past)	Yes
Father's education	
Difficulties in making ends meet	
Gender	Yes
Age class	
Number of persons in the household	
Current labour market position	
Area	
Country dummies	Yes
Constant	− 4.616 [0.914] ^a
Number of observations	20,029
Log likelihood restricted model	− 10,322.546
Log likelihood full model	− 8,279.251
Chi squared test	4,086.590 ^a

^a Significant at 5%. The reference group of the variable is in parentheses: VET does not lead to well-regarded jobs (totally agree), Education (no education), VET enables people to go on to university (totally agree), VET does not provide students with soft skills (totally agree), likelihood that VET graduates find a job compared to GE graduates (more likely), ease of being accepted on a VET course (much easier), age group (15 to 24), current occupation (self-employed), Father's Education (no education), Difficulties in making ends meet (most of the time), Area (rural area), and number of people in the household (1 person)

but a VET background will also position themselves on a lower rung compared with individuals with the same ISCED level with a general education background.²⁰

Quality of education: the trouble with VET schools

We now turn to the analysis of the differential incidence of selected school-related characteristics in VET and general education schools at upper secondary level (ISCED level 3) in five European countries (Denmark, Finland, Italy, Norway and Poland) using the 2013 OECD TALIS data set.

To determine the association between the incidence of the measured school's characteristics and VET status we used a linear probability model. This choice was driven by the small sample size available. The following empirical model was used for the analysis:

$$SS = \beta_0 + \beta Q_i + \varepsilon_{SS} \quad (3)$$

²⁰ Consistently with studies on the returns to education, this measure of personal success is increasing with the respondent's education and decreasing with the frequency of having trouble in paying bills (i.e., making ends meet). See Table 8 in the Appendix.

Table 4 Effect of VET on social positioning on the whole sample and by broad age group. Weighted data, OLS (clustered standard error in brackets)

	Whole sample
(Perceived) quality of education (latent)	0.018 [0.032]
(Perceived) labour market outcomes (latent)	0.071 [0.030] ^a
VET enables people to continue to higher education	Yes
VET does not provide soft skills	Yes
VET does not lead to well-regarded jobs	Yes
Likelihood of finding a job (relative to people with general education)	Yes
Being accepted in VET (relative to general education)	Yes
Education	Yes
Attended VET (recently or in the past)	− 0.066 [0.027] ^a
Father's education	Yes
Difficulties in making ends meet	
From time to time	0.670 [0.132] ^a
Almost never/never	1.319 [0.150] ^a
Refusal	0.835 [0.142] ^a
Gender	Yes
Age class	Yes
Number of persons in the household	Yes
Current labour market position	Yes
Area	Yes
Country dummies	Yes
Constant	4.419 [0.334] ^a
Number of observations	20,055
R squared	0.279

^a Significant at 5%. The reference group of the variable is in parentheses: VET does not lead to well-regarded jobs (totally agree), Education (no education), VET enables people to go on to university (totally agree), VET does not provide students with soft skills (totally agree), likelihood of VET graduates finding a job compared to general education graduates (more likely), ease of being accepted on a VET course (much easier), age group (15 to 24), current occupation (self-employed), Father's Education (no education), Difficulties in making ends meet (most of the time), Area (rural area), and number of people in the household (1 person)

SS denotes school's status (1 if VET, 0 otherwise), the subscript i denotes a school, the matrix Q includes the control variables, β s are coefficients to be estimated, and ε is an error term (satisfying the OLS assumptions).

Results are presented in Table 5. Schools with a high incidence of students with special needs and students from poor social backgrounds are more likely to offer VET programmes. They are also more likely to report delinquency. Association between a school offering VET programmes and student background and frequency of delinquency may have a negative impact on VET's general image at the upper secondary level. The incidence of foreign students and a perceived lack of resources or teacher quality affect both general and vocational schools equally.

To assess the robustness and stability of the results, we estimated the regression for each country separately. Given the limited sample size, the exercise should be treated with caution and can be considered only in the framework of model specification checks. All the relevant coefficients maintain their sign in the country sub-samples. The association between delinquency and the delivery of VET programmes is significant in all sub-samples except Denmark. The association between VET programme provision and having more than 10% of students from disadvantaged families remains significant

Table 5 Regressions results, weighted data, OLS (clustered standard errors in brackets)

	School type: VET programmes
More than 10% students speaking a foreign language	0.076 [0.063]
More than 10% students with special needs	0.112 [0.044] ^a
More than 10% students from poor social backgrounds	0.196 [0.047] ^a
Student readiness	0.044 [0.042]
Frequency of cheating	−0.039 [0.084]
Frequency of delinquency	0.196 [0.055] ^a
Lacking teacher quality	0.031 [0.033]
Lacking resources	0.012 [0.041]
Country dummies (4)	Yes
Constant	0.142 [0.156]
Number of observations	614
R ²	0.233

^a Significant at 5%

in Poland and Italy, while it is positive but non-significant in the Nordic countries. The association between VET provision (and attractiveness) and poor social background may be particularly strong in countries with high income inequality where the school system may play an important role in the process of social stratification.

Conclusions

This paper has provided a first assessment on attitudes towards VET using data from a Eurobarometer survey devoted to the issue and data on VET schools at upper secondary level available in the OECD TALIS survey.

Attitudes can be interpreted as stable, trait-like, constructs that influence behaviour, which makes interest in public policies about attitudes towards VET understandable.

Eurobarometer data offer some scope for an initial analysis of attitudes towards VET. However, the ability of the data to produce scientifically valid results would be improved by a refinement of the survey to include a clear definition of VET. The survey could then distinguish between the various types of VET within any given educational system. Admittedly, this is a tall order as VET components of EU education systems are extremely heterogeneous. The survey could also be improved by taking a broad approach to attitudes. Individuals may, simultaneously, hold two different attitudes (dual attitudes) toward a given object in the same context: one attitude implicit or habitual, the other explicit. Motivation and capacity are required to retrieve the explicit attitude in place of the implicit evaluative response (Ajzen 2001). Further, individuals may have both a positive and a negative attitude towards VET, resulting in an ambivalent attitude. Finally, given that the link between attitudes and behaviours is very close when attitudes are strong, it would be useful to refine the survey to assess the strength of the attitude towards VET.

Against this background, the empirical analysis provides the following insights:

1. Good quality education and good labour market outcomes increase the likelihood that people will report a positive attitude towards VET. This applies to both personal

and general attitudes. VET is strongly associated with transition into the world of work. Those who believe that VET leads to jobs well regarded in society are more likely to report a positive general attitude towards it.

2. Believing that VET graduates are more likely to find work than their general education counterparts increases the likelihood of a positive personal attitude towards VET.
3. Previous experience with VET increases the likelihood of having a positive attitude towards it.

However, our empirical results suggest that the positive impact of VET on the attitudes towards it may be at risk of erosion. People with a VET background tend to report that they occupy a lower position in the social ladder than people with general education backgrounds. This finding questions VET's ability of VET to deliver desirable labour market outcomes, at least in the long run. Further, preliminary evidence from the analysis of the admittedly small data set on VET schools within TALIS, suggests that VET schools may be more likely to enrol students that suffer from delinquency and have a high incidence of students from disadvantaged backgrounds. Consequently, VET schools may have more challenging learning environments than general education schools.

Our study contributes to the growing literature on attitudes towards the education system (Busemeyer 2017; Di Stasio 2017). Attitudes towards VET are influenced by its effectiveness in providing good quality education and good quality labour market outcomes. To sustain positive attitudes over time the quality of education will need to remain high and VET labour market outcomes need to remain good. This paper stresses that when these two conditions are not met the positive attitude toward VET may be eroded.

Our analysis has interesting policy implications.

Policies stressing the importance of VET for integration and social cohesion may generate the opposite effect on the attitudes towards VET if they lead to more challenging school environments, if they are perceived to convey the message that education in VET is of low quality, or that VET is not selective (implying that it is easier for students to be accepted on VET courses compared to general education courses).

Hence a policy narrative stressing the virtues of VET in terms of labour market outcomes and the importance of VET for social inclusion may generate in people both positive and negative attitudes at the same time, resulting in ambivalent attitudes towards the VET system.

Abbreviations

VET: vocational education and training; VE: vocational education; GE: general education.

Authors' contributions

All authors contributed equally to the various parts of the papers. Stefania Sechi and Zoi Diamantakou provided excellent research assistance. All authors read and approved the final manuscript.

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Competing interests

The authors declare that they have no competing interests.

Availability of data and materials

The Eurobarometer data analysed during the current study are available from the GESIS archive upon request, the 2013 OECD TALIS data set can be obtained following the procedure found at the following link https://stats.oecd.org/Index.aspx?datasetcode=talis_2013%20.

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Appendix

See Tables 6, 7, 8.

Table 6 Positive and negative attitudes towards VET. Negative signs in the column “Negative” increase the likelihood of a negative attitude; positive signs in the column “Positive” increase the likelihood of a positive attitude. Weighted data (clustered standard error in brackets)

	Attitudes towards VET	
	Negative sign → negative attitude	Positive sign → positive attitude
(Perceived) quality of education (latent)	−0.072 [0.063]	0.003 [0.055]
(Perceived) labour market outcomes (latent)	0.271 [0.072] ^a	0.306 [0.082] ^a
VET enables people to continue to higher education		
Tend to agree	0.139 [0.071] ^a	0.089 [0.082]
Tend to disagree	0.103 [0.145]	0.085 [0.134]
Totally disagree	0.006 [0.163]	−0.007 [0.138]
Don't know	0.269 [0.149]	−0.005 [0.166]
VET does not provide soft skills		
Tend to agree	0.065 [0.062]	0.019 [0.087]
Tend to disagree	0.137 [0.071]	0.017 [0.112]
Totally disagree	0.244 [0.053] ^a	0.081 [0.070]
Don't know	0.106 [0.129]	−0.236 [0.144]
VET does not lead to well-regarded jobs		
Tend to agree	0.006 [0.090]	0.090 [0.053]
Tend to disagree	0.009 [0.092]	0.079 [0.077]
Totally disagree	−0.087 [0.104]	0.009 [0.101]
Don't know	0.044 [0.174]	0.078 [0.150]
Likelihood of finding a job (relative to people with general education)		
Equally likely	−0.161 [0.100]	−0.798 [0.082] ^a
Less likely	−0.634 [0.108] ^a	−0.507 [0.118] ^a
Don't know	−0.300 [0.055] ^a	−0.806 [0.203] ^a
Being accepted in VET (relative to general education)		
Slightly easier	0.231 [0.060] ^a	0.129 [0.085] ^a
No difference	0.618 [0.043] ^a	0.189 [0.090] ^a
Slightly more difficult	0.401 [0.101] ^a	0.350 [0.130] ^a
Much more difficult	0.355 [0.114] ^a	0.318 [0.125] ^a
Don't know	0.647 [0.107] ^a	0.252 [0.169]
Education		
ISCED level 1	−0.191 [0.175]	−0.139 [0.175]
ISCED level 2	−0.244 [0.189]	−0.232 [0.165]
ISCED level 3	−0.374 [0.130] ^a	−0.484 [0.168] ^a
ISCED level 4	−0.357 [0.146] ^a	−0.521 [0.182] ^a
ISCED level 5	−0.533 [0.157] ^a	−0.849 [0.175] ^a
ISCED level 6	−0.742 [0.230] ^a	−1.525 [0.264] ^a
Don't know	−0.891 [0.229] ^a	−0.582 [0.409]

Table 6 (continued)

	Attitudes towards VET	
	Negative sign → negative attitude	Positive sign → positive attitude
Attended VET (recently or in the past)	0.252 [0.054] ^a	0.307 [0.050] ^a
Father's education		
General secondary education	0.003 [0.077]	0.008 [0.053]
Vocational education and training	0.149 [0.055] ^a	0.048 [0.057]
Higher education	−0.186 [0.128]	−0.421 [0.092] ^a
Refusal	0.118 [0.180]	−0.586 [0.370]
Don't know	0.008 [0.090]	−0.065 [0.113]
Difficulties in making ends meet		
From time to time	0.075 [0.106]	0.047 [0.047]
Almost never/never	−0.054 [0.094]	−0.091 [0.071]
Refusal	0.006 [0.181]	−0.049 [0.141]
Woman	0.021 [0.062]	−0.126 [0.068]
Age class		
25–34	−0.028 [0.077]	0.109 [0.087]
35–44	−0.045 [0.076]	−0.035 [0.073]
45–54	−0.057 [0.079]	−0.057 [0.075]
55–64	0.048 [0.139]	0.024 [0.072]
65+	0.045 [0.117]	−0.065 [0.121]
Number of persons in the household		
2	−0.027 [0.049]	0.020 [0.034]
3	−0.013 [0.064]	0.047 [0.085]
4	−0.071 [0.060]	−0.044 [0.040]
Current labour market position		
Manager	−0.160 [0.082]	−0.317 [0.187]
Other white collar	−0.146 [0.061] ^a	−0.213 [0.113]
Manual worker	−0.030 [0.087]	0.012 [0.088]
House person	−0.044 [0.090]	0.044 [0.138]
Unemployed	0.041 [0.087]	0.110 [0.080]
Retired	0.027 [0.051]	−0.048 [0.088]
Student	−0.598 [0.113] ^a	−0.609 [0.152] ^a
Area		
Small or middle size town	−0.028 [0.064]	0.051 [0.057]
Large town	−0.224 [0.076] ^a	−0.182 [0.094]
Don't know	4.112 [1.189] ^a	1.655 [1.035]
Country dummies	Yes	Yes
Constant	−0.544 [0.287]	−2.040 [0.362] ^a
Number of observations	20,086	
Log likelihood restricted model	−21,177.898	
Log likelihood full model	−20,109.872	
Chi squared test	2,136.052 ^a	

^a Significant at 5%. The reference group of the variable is in parentheses: VET does not lead to well-regarded jobs (totally agree), Education (no education), VET enables people to go on to university (totally agree), VET does not provide students with soft skills (totally agree), likelihood that VET graduates find a job compared to GE graduates (more likely), ease of being accepted on a VET course (much easier), age group (15 to 24), current occupation (self-employed), Father's Education (no education), Difficulties in making ends meet (most of the time), Area (rural area), and number of people in the household (1 person)

Table 7 Attitudes towards VET, weighted data (clustered standard error in brackets)

	Image VET
(Perceived) quality of education (latent)	1.313 [0.151] ^a
(Perceived) labour market outcomes (latent)	0.464 [0.054] ^a
VET enables people to continue to HE	
Tend to agree	0.193 [0.086] ^a
Tend to disagree	− 0.247 [0.128]
Totally disagree	− 0.243 [0.224]
Don't know	0.060 [0.173]
VET does not provide soft skills	
Tend to agree	0.088 [0.119]
Tend to disagree	− 0.092 [0.058]
Totally disagree	− 0.251 [0.111] ^a
Don't know	− 0.166 [0.132]
VET does not lead to well-regarded jobs	
Tend to agree	0.337 [0.110] ^a
Tend to disagree	0.719 [0.117] ^a
Totally disagree	0.938 [0.112] ^a
Don't know	0.694 [0.163] ^a
Likelihood of finding a job (relative to people with general education)	
Equally likely	0.041 [0.090]
Less likely	− 0.194 [0.104]
Don't know	0.226 [0.147]
Being accepted in VET (relative to general education)	
Slightly easier	0.241 [0.072] ^a
No difference	0.003 [0.123]
Slightly more difficult	0.149 [0.121]
Much more difficult	− 0.110 [0.209]
Don't know	0.306 [0.165]
Education	
ISCED level 1	0.138 [0.288]
ISCED level 2	− 0.278 [0.249]
ISCED level 3	− 0.331 [0.231]
ISCED level 4	− 0.422 [0.278]
ISCED level 5	− 0.607 [0.263] ^a
ISCED level 6	− 0.726 [0.342] ^a
Don't know	0.407 [0.552]
Attended VET (recently or in the past)	0.095 [0.061]
Father's education	
General secondary education	0.069 [0.062]
Vocational education and training	− 0.015 [0.100]
Higher education	− 0.246 [0.123]
Refusal	0.274 [0.131]
Don't know	− 0.114 [0.317]
Difficulties in making ends meet	[0.193]
From time to time	− 0.117 [0.126]
Almost never/never	− 0.062 [0.108]
Refusal	0.187 [0.214]
Woman	0.009 [0.037]
Age class	
25–34	− 0.003 [0.125]

Table 7 (continued)

	Image VET
35–44	– 0.173 [0.103]
45–54	– 0.341 [0.103] ^a
55–64	– 0.444 [0.116] ^a
65+	– 0.126 [0.140]
Number of persons in the household	
2	– 0.084 [0.094]
3	– 0.183 [0.148]
4	– 0.164 [0.114]
Current labour market position	
Manager	– 0.329 [0.155] ^a
Other white collar	– 0.093 [0.077]
Manual worker	– 0.035 [0.122]
House person	– 0.025 [0.122]
Unemployed	– 0.058 [0.151]
Retired	– 0.270 [0.134] ^a
Student	– 0.280 [0.189]
Area	
Small or middle size town	0.153 [0.062] ^a
Large town	– 0.115 [0.080]
Don't know	0.926 [1.188]
Country dummies	Yes
Constant	– 4.616 [0.914] ^a
Number of observations	20,029
Log likelihood restricted model	– 10,322.546
Log likelihood full model	– 8,279.251
Chi squared test	4,086.590 ^a

^a Significant at 5%. The reference group of the variable is in parentheses: VET does not lead to well-regarded jobs (totally agree), Education (no education), VET enables people to go on to university (totally agree), VET does not provide students with soft skills (totally agree), likelihood that VET graduates find a job compared to GE graduates (more likely), ease of being accepted on a VET course (much easier), age group (15 to 24), current occupation (self-employed), Father's Education (no education), Difficulties in making ends meet (most of the time), Area (rural area), and number of people in the household (1 person)

Table 8 The effect of VET on social positioning on the whole sample and by broad age group. Weighted data, OLS (clustered standard error in brackets)

	Whole sample
(Perceived) quality of education (latent)	0.018 [0.032]
(Perceived) labour market outcomes (latent)	0.071 [0.030] ^a
VET enables people to continue to higher education	
Tend to agree	−0.023 [0.036]
Tend to disagree	−0.011 [0.045]
Totally disagree	−0.073 [0.110]
Don't know	−0.266 [0.082] ^a
VET does not provide soft skills	
Tend to agree	−0.016 [0.039]
Tend to disagree	−0.086 [0.069]
Totally disagree	−0.060 [0.066]
Don't know	−0.167 [0.102]
VET does not lead to well-regarded jobs	
Tend to agree	0.063 [0.056]
Tend to disagree	0.104 [0.046] ^a
Totally disagree	0.131 [0.072]
Don't know	0.112 [0.079]
Likelihood of finding a job (relative to people with general education)	
Equally likely	0.075 [0.034] ^a
Less likely	0.072 [0.049]
Don't know	−0.146 [0.114]
Being accepted in VET (relative to general education)	
Slightly easier	0.029 [0.043]
No difference	−0.096 [0.066]
Slightly more difficult	0.000 [0.046]
Much more difficult	−0.141 [0.112]
Don't know	−0.123 [0.097]
Education	
ISCED level 1	0.025 [0.114]
ISCED level 2	0.140 [0.109]
ISCED level 3	0.350 [0.134] ^a
ISCED level 4	0.470 [0.143] ^a
ISCED level 5	0.628 [0.158] ^a
ISCED level 6	1.192 [0.116] ^a
Don't know	0.441 [0.113] ^a
Attended VET (recently or in the past)	−0.066 [0.027] ^a
Father's education	
General secondary education	0.194 [0.031] ^a
Vocational education and training	0.178 [0.044] ^a
Higher education	0.248 [0.063] ^a
Refusal	0.018 [0.309]
Don't know	0.081 [0.063]
Difficulties in making ends meet	
From time to time	0.670 [0.132] ^a
Almost never/never	1.319 [0.150] ^a
Refusal	0.835 [0.142] ^a
Woman	0.018 [0.027]
Age class	
25–34	−0.166 [0.078] ^a

Table 8 (continued)

	Whole sample
35–44	–0.186 [0.075] ^a
45–54	–0.127 [0.058] ^a
55–64	–0.037 [0.104]
65+	–0.014 [0.083]
Number of persons in the household	
2	0.097 [0.055]
3	0.219 [0.061] ^a
4	0.234 [0.054] ^a
Current labour market position	
Manager	0.039 [0.059]
Other white collar	–0.176 [0.077] ^a
Manual worker	–0.316 [0.071] ^a
House person	–0.439 [0.083] ^a
Unemployed	–0.681 [0.092] ^a
Retired	–0.465 [0.111] ^a
Student	–0.199 [0.137]
Area	
Small or middle size town	0.002 [0.045]
Large town	0.165 [0.079] ^a
Don't know	–0.351 [0.134] ^a
Country dummies	Yes
Constant	4.419 [0.334] ^a
Number of observations	20,055
R squared	0.279

^a Significant at 5%. The reference group of the variable is in parentheses: Vet does not lead to well-regarded jobs (totally agree), Education (no education), VET enables people to go on to university (totally agree), VET does not provide students with soft skills (totally agree), likelihood of VET graduates finding a job compared to GE graduates (more likely), ease of being accepted on a VET course (much easier), age group (15 to 24), current occupation (self-employed), Father's Education (no education), Difficulties in making ends meet (most of the time), Area (rural area), and number of people in the household (1 person)

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