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Pathways beyond school



**An analysis of structural inequalities in post-VET transitions
within the Catalan education system**

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Executive summary

Vocational Education and Training (VET) attracts the interest of educational authorities worldwide thanks to its unique ability to bridge the gap between education and structural needs (Cedefop, 2023), reduce youth unemployment, and provide a smooth transition into the labour market (Cedefop, 2013; Korber, 2019).

The Catalan VET framework comprises intermediate-level and higher-level VET programmes (IVET and HVET), which are classified into 26 vocational fields. IVET provides access to HVET, which grants entry into university (Departament d'Educació, 2019). Framed within the AIVET project, this study aims to analyse the impact of structural determinants on the transition to further studies or the labour market within one year after completing a VET programme in Catalonia.

VET graduates make educational decisions with a relevant degree of freedom (Gambetta, 1987; Bachmann Hunziker et al., 2021). However, drawing on Bourdieu (1998 [1979]), I argue that numerous structural determinants—social and economic factors—shape individuals' internalised framework of dispositions (*habitus*), as they strongly influence (1) their opportunities and constraints and (2) their aspirations and preferences.

Four structural elements are analysed: socio-demographic characteristics (gender and overage status—being two or more years older than the minimum age), socioeconomic status (SES, using the mean postal code income and type of school ownership as proxies), local availability of educational and job opportunities (using the degree of urbanisation as a proxy) and training background (type of company hosting the internship). I hypothesise that these structural determinants shape both the transition choice (H1) and the characteristics of this transition (H2)—namely, the level of further studies pursued (H2a) and the employment outcomes upon labour market entry (H2b).

I have obtained data on internships from the registry of VET internships (produced by the Barcelona Chamber of Commerce) and data on post-VET transitions and structural determinants from the survey on the labour insertion of VET graduates (designed by the General Council of Chambers of Catalonia, CGCC) for academic

years 2020/2021, 2021/2022, and 2022/2023. I supplemented the data with complementary sources (INE, Idescat, Observatorio de la FP and González-Cervera et al. (2021)) and selected only IVET and HVET graduates aged between 15 and 34 (inclusive) who live in Catalonia.

I built several multilevel logistic models, with the abovementioned indicators of structural determinants as independent variables and the vocational fields as random intercepts (to control for their effect without estimating coefficients). The dependent variables are the current education or employment status for H1, the level of further studies for H2a, and indicators of labour market outcomes (monthly income, type of contract, work schedule, and job-studies relation) for H2b. I also analysed the relationship of random intercepts in H2b with the proportion of female students in the field (linear regression) and the classification of the field as STEM or non-STEM (t-test).

The results support the proposed hypotheses and reveal significant structural inequalities between social groups. Despite the increasing student demand for VET programmes in recent years (Generalitat de Catalunya, 2025), the findings demonstrate that VET ultimately reproduces pre-existing social inequalities.

Regarding gender, female students are more likely to prolong their studies while working. Moreover, evidence points toward the existence of vertical—unequal distribution of women and men between vocational fields (Merino, 2021)—and horizontal segregation—gender-based inequality within fields (González-Cervera et al., 2021)—. Both women and vocational fields with the highest proportion of female students are more likely to face poorer employment conditions, including lower-income and part-time jobs. The divide between STEM (male-dominated) and non-STEM (female-dominated) fields largely explains these patterns.

The effect of other structural factors is also significant. Overage students are more likely to enter the labour market upon programme completion and experience better employment conditions. Students with a higher SES and those having completed an internship in a business setting are more likely to obtain better-quality jobs. Finally, the results indicate more limited job opportunities in urban centres due to higher competition.

Some relevant conclusions on future public policies might be drawn from the findings. With regard to gender, they should aim to improve employment conditions in more feminised fields and encourage women to enter STEM-related vocational tracks. As for the other structural determinants, they should focus on supporting the pursuit of further studies and smoothing labour market entry for less advantaged individuals. Finally, the analysis confirms that many students use VET as a stepping stone to higher education, so I firmly believe that future educational policy should develop more flexible pathways between vocational and academic tracks.

The use of proxies for SES and the lack of data on individual motivations and long-term trajectories limit the explanatory power of this analysis. I firmly encourage CGCC to start collecting these data, as their availability would enable further longitudinal analyses of students' trajectories to ascertain whether the observed short-term effects of structural determinants are truly lasting.

Resum executiu

La Formació Professional (FP) desperta l'interès de les autoritats educatives arreu del món gràcies a la seva capacitat única de connectar l'educació amb les necessitats estructurals (Cedefop, 2023), reduir l'atur juvenil i proporcionar una transició fluida al mercat laboral (Cedefop, 2013; Korber, 2019).

El sistema català d'FP comprèn cicles formatius de grau mitjà i de grau superior (CFGM i CFGS), classificats en 26 famílies professionals. Un CFGM proporciona accés a un CFGS, amb el qual es pot accedir a la universitat (Departament d'Educació, 2019). Emmarcat en el projecte AIVET, l'objectiu d'aquest estudi és analitzar l'impacte dels determinants estructurals sobre la transició a estudis posteriors o al mercat laboral durant el primer any després d'haver finalitzat un cicle formatiu a Catalunya.

Els graduats d'FP prenen decisions educatives amb un cert grau de llibertat (Gambetta, 1987; Bachmann Hunziker et al., 2021). Tanmateix, d'acord amb Bourdieu (1998 [1979]), sostinc que nombrosos determinants estructurals —factors socials i econòmics— configuren el marc de disposicions interioritzades dels individus (*habitus*), ja que influeixen significativament en (1) les seves oportunitats i limitacions i (2) les seves aspiracions i preferències.

Quatre elements estructurals són analitzats: les característiques sociodemogràfiques (gènere i condició d'*overage*—tenir una edat dos o més anys major que la mínima), l'estatus socioeconòmic (SES, utilitzant els ingressos mitjans del codi postal i la titularitat de l'escola com a *proxies*), la disponibilitat local d'oportunitats educatives i laborals (utilitzant el grau d'urbanització com a *proxy*) i l'experiència de pràctiques (tipus d'empresa de les pràctiques). Formulo la hipòtesi que aquests determinants estructurals condicionen tant l'elecció de transició (H1) com les característiques d'aquesta transició (H2) —és a dir, el nivell dels estudis posteriors (H2a) i els resultats ocupacionals en entrar al mercat laboral (H2b).

He obtingut les dades sobre les pràctiques del registre de pràctiques d'FP (produït per la Cambra de Comerç de Barcelona) i les dades sobre les transicions post-FP i els determinants estructurals de l'enquesta d'inserció laboral dels graduats d'FP

(dissenyada pel Consell General de Cambres de Catalunya, CGCC) pels cursos 2020/2021, 2021/2022 i 2022/2023. He complementat les dades amb fonts addicionals (INE, Idescat, Observatorio de la FP i González-Cervera et al. (2021)) i he seleccionat només els graduats de CFGM i CFGS d'entre 15 i 34 anys (inclosos) que viuen a Catalunya.

He construït diversos models logístics multinivell, amb els indicadors mencionats dels determinants estructurals com a variables independents i les famílies professionals com a *intercepts* aleatoris (per controlar el seu efecte sense estimar coeficients). Les variables dependents són la situació educativa o ocupacional actual per H1, el nivell d'estudis posteriors per H2a, i indicadors dels resultats al mercat de treball (ingressos mensuals, tipus de contracte, tipus de jornada i relació entre feina i estudis) per H2b. He analitzat també la relació dels *intercepts* aleatoris de H2b amb la proporció d'estudiants dones a la família professional (regressió lineal) i amb la classificació de la família com a STEM o no-STEM (t-test).

Els resultats donen suport a les hipòtesis proposades i posen de manifest desigualtats estructurals significatives entre grups socials. Tot i la creixent demanda dels cicles formatius els darrers anys (Generalitat de Catalunya, 2025), les troballes demostren que l'FP reproduceix les desigualtats socials preexistents.

Quant al gènere, les dones són més propenses a allargar els estudis mentre treballen. A més, les evidències apunten a l'existència d'una segregació vertical —distribució desigual de dones i homes entre famílies professionals (Merino, 2021)— i horitzontal —desigualtat de gènere dins de les famílies professionals (González-Cervera et al., 2021). Tant les dones com les famílies amb més proporció d'estudiants dones són més propenses a afrontar pitjors condicions laborals, incloent-hi sous més baixos i feines a temps parcial. La divisió entre les famílies STEM (majoritàriament masculines) i no-STEM (majoritàriament femenines) explica en gran part aquests patrons.

L'efecte d'altres factors estructurals també és significatiu. Els estudiants *overage* són més propensos a entrar al mercat de treball en acabar el cicle formatiu i a experimentar millors condicions ocupacionals. Els estudiants amb major SES i els que han fet les pràctiques a una empresa són més propensos a obtenir feines de

millor qualitat. Finalment, els resultats indiquen que les oportunitats laborals als centres urbans són més limitades a causa d'una major competició.

Es poden extreure algunes conclusions rellevants per futures polítiques públiques. Pel que fa al gènere, haurien d'intentar millorar les condicions ocupacionals de les famílies professionals més feminitzades i encoratjar les dones a cursar cicles formatius STEM. Quant als altres determinants estructurals, haurien de centrar-se a incentivar el perllongament dels estudis i garantir una entrada fluida al mercat laboral pels individus menys avantatjats. Finalment, l'anàlisi confirma que molts estudiants utilitzen l'FP com a via per a accedir a l'educació superior, així que crec fermament que les futures polítiques educatives haurien de desenvolupar camins més flexibles entre els itineraris d'FP i d'educació superior.

L'ús de *proxies* pel SES i la falta de dades sobre les motivacions individuals i les trajectòries a llarg termini limiten el poder explicatiu d'aquesta anàlisi. Encoratjo el CGCC a començar a recollir aquestes dades, perquè la seva disponibilitat possibilitaria anàlisis longitudinals de les trajectòries dels estudiants per determinar si els efectes dels determinants estructurals observats a curt termini són realment duradors.

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1. Introduction

Our world is evolving at an unprecedented pace, presenting ever-changing challenges that require us to adapt in order to navigate them. There is a widespread feeling of standing on *slippery slopes*, given that we are compelled to continuously acquire new abilities to face the environmental, technological, and economic challenges in the years to come (Rosa, 2003). In this context, Vocational Education and Training (VET) is bound to play a crucial role thanks to its unique ability to bridge the gap between education and these emerging structural needs (Cedefop, 2023).

Moreover, numerous studies highlight the positive effect of VET in reducing youth unemployment and providing a smooth transition into the labour market because it equips individuals with specific competencies that match the demands of the local and global markets (Cedefop, 2013; Korber, 2019). Inspired by such evidence, governments across Europe and beyond have increasingly paid attention to VET as a strategy to guarantee a better occupational insertion of young people, as well as quickly developing a qualified and adaptable workforce, given that VET students rapidly acquire a profession and can start working immediately upon programme completion (Lamamra et al., 2021).

In countries like Spain, where VET is often perceived as less prestigious than academic tracks, the current challenge lies in making it more attractive. As efforts to promote VET continue to grow, it is essential to acknowledge that its economic function (preparing for specific occupations) is not the students' sole motivation. Considering that VET provides pathways to higher education, its educational function should not be undervalued. VET also serves a crucial social function: combatting unemployment, thereby mitigating social exclusion (Merino, 2021).

The Catalan education system follows the Spanish framework. After completing the last stage of compulsory schooling (*Educació Secundària Obligatòria*, ESO)¹ at the (minimum) age of 16, students can opt for two distinct tracks that lead to

¹ People who do not complete ESO can access an initial-level VET, which grants them access to an intermediate-level VET.

unequal outcomes (Tarabini & Jacovkis, 2019). On the one hand, the vocational track—associated with lower wages and worse job conditions—starts with an intermediate-level VET programme (*Cicle Formatiu de Grau Mitjà*, IVET), which grants access to a higher-level VET programme (*Cicle Formatiu de Grau Superior*, HVET). This path has a higher proportion of male and working-class students (Castejón et al., 2020). On the other hand, the more prestigious academic track (*Batxillerat*) provides a direct entry route to university or a HVET programme. HVET graduates are also admitted into the university, which provides a pathway to transition from the vocational to the academic track.

VET programmes are classified into 26 vocational fields², comprising 140 qualification programmes offered across 443 Vocational Training Centres. All VET qualifications include an in-company internship, which may last between 350 and 410 hours. Globally, state schools have more students than private schools (Departament d'Educació, 2019).

Framed within the AIVET project (*Developing AI tools for sharing intelligence on the local labour markets of VET graduates*), this study examines previously unexplored data on VET students' internships and their transitions within one year after completing the programme. Furthermore, it produces new evidence on educational transitions apropos of VET tracks in Catalonia, an area that has received limited attention in previous research.

Structural determinants such as socioeconomic status, gender and age, which create divides between more and less advantaged groups, significantly shape educational transitions. Aiming to uncover these structural stratification patterns in post-VET transitions, this study addresses the following research question:

What is the impact of structural determinants on the transition to further studies or to the labour market within one year after completing a VET programme in Catalonia?

² 24 VET fields plus *Sports studies* and *Artistic studies* (Generalitat de Catalunya, n.d.-a & n.d.-b). The complete list is provided in Table 6 in the Appendix.

This project is structured as follows. The introduction contextualises the importance of VET in the contemporary world, focusing particularly on the Catalan context, and introduces the research question to be discussed. In the second section, I summarise some relevant sociological concepts and review existing literature on the influence of structural factors on educational transitions. In the third section, I introduce an analytical model comprising the relationships between the key theoretical concepts, some hypotheses to be addressed, and an outline of how the concepts are measured. I describe the methodology used to obtain and analyse the data in the fourth section and present the results of the analysis in the fifth section. Finally, in the sixth section I discuss the formulated hypothesis drawing on the results and conclude with considerations on policy relevance and avenues for future research.

2. Theoretical framework

The progress from the completion of an educational programme into the next stage—further studies or the labour market— is referred to as an *educational transition*. Transitions are moulded by the interaction of individual competences and resources with the social environment and regulations, which favour or constrain the students’ future academic and occupational choices (Ludwig-Mayerhofer et al., 2011).

While acknowledging the centrality of the transition between the completion of ESO and access to VET, the present project focuses on the transition immediately following the completion of a VET programme—both IVET and HVET—to either further studies or to the labour market. On the one hand, progress to further studies (particularly to university) is of special importance, considering that it is a strategy that allows VET graduates to adapt to growing skill requirements, thereby securing long-term participation in the labour market (Grønning & Trede, 2019). On the other hand, previous research has found that job quality indicators of VET graduates are related to various elements such as gender, socioeconomic status, or age (see, for example, Zimmermann & Seiler, 2019; Mustajab & Irawan, 2023). I refer to these factors as ‘structural determinants’ because they shape individuals’ opportunities and preferences, yet they are not a result of personal choices. Instead, they are deeply embedded in the social and economic structures.

Educational choices and how they relate to the reproduction of social inequalities can be explained through two prisms: structuralist and individualist approaches.

Firstly, structuralist approaches focus on the social determinants that constrain individuals’ capacity to choose. From this viewpoint, educational decisions are socially heterogeneous and unequal because the distribution of resources and constraints is socially determined (Denzler, 2011). As Gambetta (1987) pointed out, these theories explore whether (1) people do not genuinely choose because, under particular contingencies, their options are cut down to a preeminent alternative or (2) an individual’s actions are driven by social or psychological forces that escape their consciousness. From this perspective, socioeconomic determinants act upon

opportunities, constraints, preferences, and aspirations through both economic and cultural mechanisms.

Secondly, individualist approaches emphasise individual agency when making educational decisions. These theories suggest that individuals act purposively following their intentions.

These two perspectives need not be contradictory: while empirical evidence on transitions upon VET completion proves that people act somehow intentionally (Bachmann Hunziker et al., 2021), as Gambetta (1987) cautions, it would be naïve to assume that individuals always decide with a relevant degree of freedom and being fully conscious of their motives for action.

Drawing on Bourdieu (1998 [1979]), the *habitus* refers to the internalised framework of dispositions that shape an individual's aspirations and preferences. While the concept allows for individual agency (Reay, 2004), these dispositions are strongly influenced by one's position within the social structure and the forms of capital—economic, cultural, social, and symbolic—that derive from it. Adopting this perspective, I assert that structural factors exert double pressure on individuals: on the one hand, they determine the opportunities and constraints students face when they make educational decisions; on the other hand, they highly influence their inclinations and ambitions, thus shaping their habitus.

This interplay between social structure and individual agency proposed by Bourdieu can be analysed through four elements: socio-demographic characteristics, socioeconomic status, local availability of educational and job offers, and training background.

2.1. Socio-demographic characteristics

Although the causal mechanisms are complex and not the object of this study, it is undisputable that different socio-demographic groups follow distinct logics in choosing educational pathways (Tarabini & Ingram, 2018). Gender emerges as one of the most influential socio-demographic characteristics.

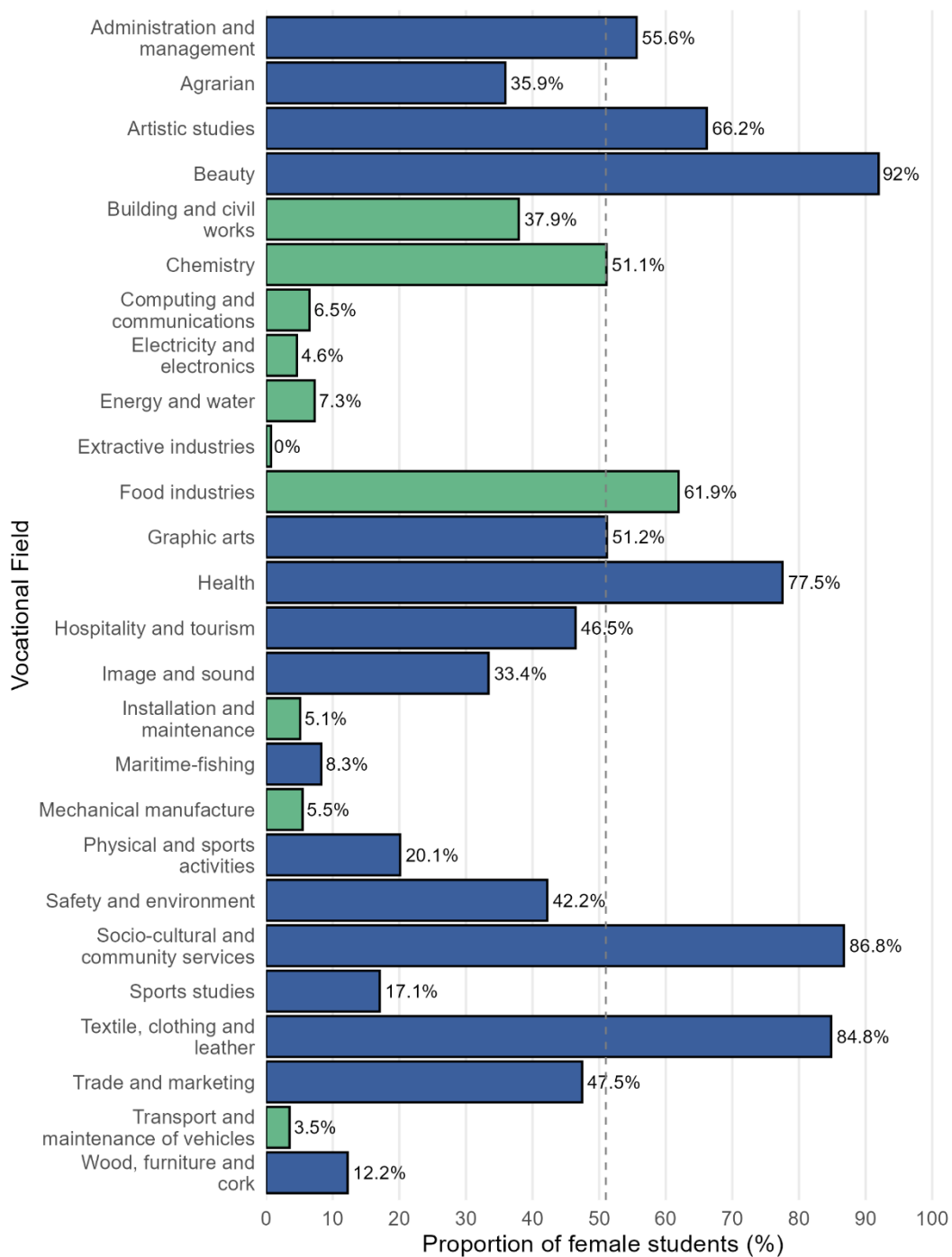
The notable specialisation of the VET offer in Spain—with 26 vocational fields and 164 specialities—reinforces patterns of occupational segregation. Far from being random, the choice of VET programme among this wide array of options is strongly influenced by the notion of *vocation*, which stems directly from the individual habitus. Since habitus is gendered, leading to distinct occupational goals and expectations of success, it comes as no surprise that there is a significant horizontal differentiation—unequal distribution of women and men—between vocational fields (Merino, 2021).

Some fields have extremely low female participation, such as those related to installation, vehicles and electronics (below 5%), whereas others, such as Beauty (89.7% female) and Socio-cultural and community services (84.4% female), are highly feminised (Gamboa Navarro et al., 2023; data for the whole of Spain from the academic year 2021-2022). Moreover, research has consistently shown that horizontal differentiation reproduces itself since boys tend to aspire to male-dominated occupations, whereas girls are more likely to aim for female-dominated sectors (Malin & Jacob, 2018).

A clear proof of horizontal segregation is the particularly low representation of women in vocational fields related to Science, Technology, Engineering and Mathematics (STEM), which tend to offer higher salaries and greater prestige. Only 8.4% of IVET students and 12.9% of HVET students in STEM-related programmes were female in Spain for the academic year 2019-2020 (González-Cervera et al., 2021). The process behind the lack of women in STEM studies has been described as a leaky pipeline, highlighting how girls subsequently leak out at each stage of the process leading to a STEM career (Valdés & Solga, 2024).

By displaying the proportion of female students for each vocational field, Figure 1 illustrates how this phenomenon is also clearly observed in the sample of this study. There is also evidence of vertical segregation—gender-based inequality within fields—as even in STEM fields, women have been found to have lower salaries than their male counterparts (González-Cervera et al., 2021).

Figure 1: Proportion of female students by vocational field, with STEM fields coloured green and non-STEM fields coloured blue. The dashed line indicates the mean overall proportion of female students (51.01%).



Another socio-demographic characteristic that plays a crucial role in educational transitions is age. Overage students, who are two or more years older than the typical age of entry (16 for IVET and 18 for HVET), might harbour a desire to catch up to peers of their cohort who have already entered the labour market and feel

increased pressure to start earning their own income independently of their parents. Therefore, they might be more likely than non-overage students to look for a job immediately after completing a VET programme.

Depending on its causes, being overage might have two distinct implications for labour market outcomes. If it is connected to school dropout or grade repetition, it may signal poor academic performance, which might hinder labour market integration. Conversely, if it results from having gained additional work or educational experience before the VET programme, it may lead to more favourable employment conditions.

2.2. Socioeconomic status

Socioeconomic status (SES) shapes, to a great extent, the context in which individuals make educational choices. As Gambetta (1987) states, different socioeconomic groups have distinct educational aspirations due to the influence of their reference group and the occupational experiences of the parents. Furthermore, the perception of their likelihood of succeeding in particular pathways—highly shaped by their SES—can drive them to adapt their preferences to the most feasible option (Elster, 1983). Furthermore, the relative costs of pursuing further education for students from working-class backgrounds are higher, so they tend to stay shorter in education than their more privileged counterparts (Boudon, 1974).

The availability of educational opportunities also depends on the students' family SES. Students from lower SES backgrounds are more likely to enrol in state schools because of the higher costs of attending a private school (Cordero et al., 2016). Therefore, it is safe to assume that the ownership of the school is an indicator of the student's family SES. This way, inequalities are reproduced, as private institutions offer additional resources and industry partnerships that increase their students' chances of finding a better job upon entering the labour market.

As I mentioned in the introduction, working-class students are over-represented in VET compared to the academic track (Castejón et al., 2020). This fact reveals a mechanism that is pivotal to social reproduction: students from families with lower SES are more likely to study a VET programme, which reduces their chances of

entering university and high-prestige occupations, thus increasing their likelihood of ending up having a working-class job (Shavit & Müller, 2006).

2.3. Local availability

Both occupational and educational opportunities are unequally distributed across the territory, as more densely populated areas tend to concentrate the most significant amount of job offers and school places. Consequently, the local availability of educational programmes—often aligned with local and regional job demand— and the local businesses’ internship and job opportunities impact the decision to enter the labour market or continue studying after a VET programme (Lamamra et al., 2021).

In this regard, the individual agency operates within a narrow margin of manoeuvre since students tend to restrict themselves to the options closest to home because of the remarkably higher costs of pursuing a locally unavailable pathway. These costs are mainly economic—direct (commuting or living away from home) and indirect (opportunity costs)—and emotional, given that relocation leads to the loss of social networks (Denzler, 2011).

2.4. Training background

Although the individual agency plays a role in selecting an internship location, the choice depends on the student’s preferences—shaped by the socio-demographic profile and SES, as discussed above— and the school centre’s internship offerings.

In Bourdieusian terms, internships allow students to gain first-hand insights into the field in which they may work. They acquire a deeper understanding of the opportunities, constraints, and career possibilities they will experience when entering the labour market and can update their career aspirations accordingly. Through this mechanism, internship experiences are incorporated into their habitus.

Internships can influence the choice of transition after finishing the VET programme in two directions. On the one hand, companies provide information, incentives and support, impacting the students’ motivation to pursue further studies (Grønning & Trede, 2019). On the other hand, internships can serve as a direct

pathway into employment, as many companies hire apprentices at the end of their internship to reduce recruitment costs and mitigate the uncertainty associated with hiring new employees whose skill level is unknown (Couppié & Gasquet, 2021). In fact, for the sample of individuals in this study, 27.4% of employed people found their current job through an internship, rendering it the most common route into the labour market.

3. Analytical model

To address the research question, I propose an analytical model containing the four outlined structural determinants that influence educational decisions: socio-demographic profile, SES, local availability and training background. These elements shape the students' access to opportunities and the constraints they experience at two distinct stages.

First, they are central to the decision between following further studies or entering the labour market. As aforementioned, overage students and those with a lower SES have higher incentives to enter the labour market directly. In addition, gendered career aspirations, the local availability of employment opportunities and further education options, and the student's experiences during workplace internships may tip the balance in favour of one option or the other. Accordingly, I formulate the following hypothesis:

H1. Structural determinants shape the decision to either pursue further studies or transition to the labour market after completing the VET programme.

Second, once this decision has been made, the same structural factors wield influence again over the features of the transition itself—the level of further studies pursued or the characteristics of the first job. Job quality is tightly bound to the local availability of suitable positions, and theories of social reproduction suggest that women and people with a lower SES tend to encounter worse occupational conditions. Moreover, given that many students are hired by the same organisation where they completed their internship, the effect of the internship site is also worth examining. These insights lead to the formulation of a second hypothesis:

H2. Structural determinants significantly shape the characteristics of the post-VET transition, influencing both the level of further studies pursued (**H2a**) and the labour market outcomes at entry (**H2b**).

Figure 2 presents an overview of the analysis model, while Table 1 shows how its central concepts translate into measurable indicators.

Figure 2: Analytical Model

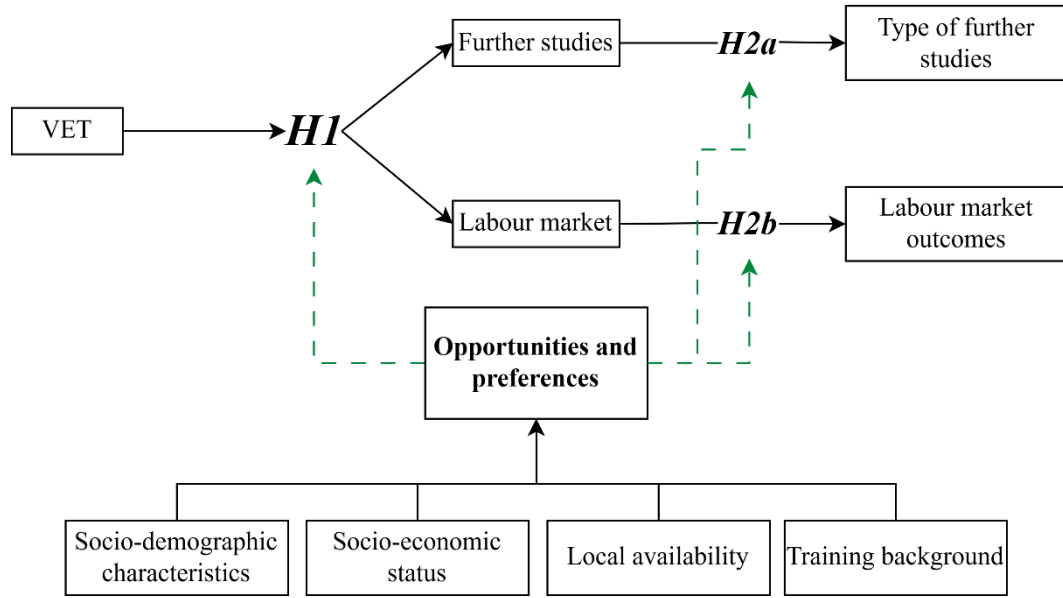


Table 1: Operationalisation of the central concepts

Concept	Indicator
Socio-demographic characteristics	Gender Overage
Socioeconomic status	Mean annual per capita income of student postal code ³ School centre ownership
Local availability	Degree of urbanisation
Training background	Type of company of the internship
Type of further studies	Level of studies
Labour market outcomes	Net monthly income Type of contract Work schedule Relation of the job to the studies

³ Used as a proxy for SES in the absence of family income data.

4. Methodology

4.1. Data collection

4.1.1. Sources

I have obtained the data for this study from two primary sources: the registry of VET internships in Catalonia produced by the Barcelona Chamber of Commerce (Cambra de Comerç de Barcelona) and the survey on the labour insertion of VET graduates designed by the General Council of Chambers of Catalonia (Consell General de Cambres de Catalunya, CGCC).

The registry collects information on all VET internship agreements in Catalonia and individual-level student data. Having removed the internship agreements that were agreed upon but were not carried out, the registry contains 305,636 internship agreements for the academic years 2020/2021, 2021/2022, and 2022/2023.

The survey, which aims to assess transitions after completing a VET programme, collects information about graduates' current studies and job conditions. Most surveys were conducted between six and nine months after finishing the studies (January and April), with a few responses gathered between May and July. A total of 102,162 surveys were answered for the abovementioned academic years.

Additionally, I have extracted some information from complementary sources: (1) the average yearly per capita income for the year 2022 from INE using `ineAtlasR` package in R (García Guzmán, 2024); (2) the degree of urbanisation (Degurba) by municipality for the year 2022 from Idescat (2024); (3) the proportion of female students by vocational field for the academic year 2021-2022 from Observatorio de la FP (Albizu Echevarria et al., 2023); and (4) the classification of vocational fields as STEM or non-STEM from a study on STEM VET (González-Cervera et al., 2021).

4.1.2. Selection of the sample

I combined the registry and survey data, limiting the analysis to students who appeared in the two sources, thus forming an initial sample of 102,855 observations.

I merged entries for extended internships and retained only the longest internship for the 13,663 students who completed more than one in the same academic year⁴. I selected the people who answered the survey within one year after finishing the studies to account for their short-term educational transition, and included only students aged between 15 and 34 (inclusive) who live in Catalonia. Finally, I restricted the sample to students who were studying an intermediate-level (IVET) or higher-level VET (HVET), reducing the dataset to 59,153 observations (57.5% of the initial data), which are used to discuss H1.

To address H2a, I concentrate on individuals who continue studying (whether they work or not) after finishing the VET program (35,239).

To analyse H2b, I am only interested in people working within one year after finishing their studies and who did not have their current job before starting their studies, thus reducing the sample to 22,684. Additionally, since salary information is only available for full-time workers, the income analysis is limited to 12,272 observations.

4.2. Data analysis

I built several multilevel logistic models (MLMs from now on). For all models, the independent variables are the indicators of the structural determinants outlined in Table 1. I added the vocational fields as a random intercept to account for their inherent differences, thus controlling for their effect without estimating a fixed-effects coefficient for each field.

Regarding H1, to understand the determinants of transitioning to further studies or the labour market, I set the person's current situation (within one year after completing the VET programme) as the dependent variable. As VET has traditionally been designed to prepare individuals for direct entry into the labour market, I set *Working* as the reference level and build 3 MLMs to compare the other

⁴ It must be highlighted that some students might appear more than once in the dataset if they completed an internship for different VET programmes in the three studied academic years.

pathways against it. The transition after IVET occurs in an entirely different context from the transition after HVET, so they are analysed separately.

For H2a, I built an MLM for HVET, setting a dummy—where 1 is going to university (bachelor's or master's degree) and 0 corresponds to other study options—as the dependent variable. No model for IVET has been deemed necessary since the majority of graduates who continue studying transition to HVET programmes (86%), with all other pathways being marginal.

For H2b, I built four MLMs for the indicators of the labour market outcomes in Table 1. In addition to the independent variables included in the previous models, I add the VET degree (IVET / HVET) to account for the differing labour market outcomes between the two tracks, as well as the current situation (Working / Studying and working) since the type of work sought by someone still studying is likely to differ significantly from that of someone who has stopped studying.

The MLMs for H2b correspond to (1) net monthly income higher than 1200 € (vs lower than 1200 €); (2) temporal contract (vs indefinite contract); (3) part-time schedule (vs full-time); and (4) job being related to the studies (vs not being related).

The precise effect of each vocational field, which is outside the scope of this project, is not considered. Nonetheless, an interpretation of the random intercepts is given for H2b, focusing on their relationship to the proportion of female students in the fields (linear regression) and whether the field is classified as STEM or not (t-test).

5. Results

The results of the MLMs are summarised by tables 2 to 5, which include the Odds Ratio (OR)—with a 95% confidence interval and its p-value—for every category within each variable. Note that ORs are highlighted if they are significantly different from 1—green if they are above, blue if they are below. For example, in Table 2, the OR for women continuing their studies is 1.17. This should be interpreted as the odds of women being in this situation compared to the reference category (*Working*) multiplying by 1.17 the odds of men—or, equivalently, being 17% higher.

For the MLMs in Table 5 (H2b), figures 14, 16, 18 and 20 show the regression line for the random intercepts explained by the proportion of women, the coefficients, and their p-value. Figures 15, 17, 19 and 21 show boxplots comparing the distribution of random intercept values divided by STEM and non-STEM fields, as well as the p-value corresponding to the comparison of means t-test.

Please refer to the Appendix for (a) a list of independent and dependent variables, including their categories (tables 7 and 8); (b) a brief descriptive analysis of the data (tables 9 to 12); and (c) an overview of the random intercepts of vocational fields for each MLM (figures 3 to 13).

5.1. H1

Table 2: Multilevel logistic models for *Current situation* (vs. reference level *Working*) - IVET
OR (95% CI); p-value

Variable	Continue studying	Studying and working	Looking for a job
(Intercept)	3.73 (2.86 – 4.85) p < 0.001	0.88 (0.71 – 1.10) p = 0.260	0.63 (0.52 – 0.76) p < 0.001
Gender [Women]	1.17 (1.07 – 1.27) p < 0.001	1.37 (1.24 – 1.51) p < 0.001	1.17 (1.05 – 1.31) p = 0.005
Overage [Yes]	0.23 (0.22 – 0.25) p < 0.001	0.41 (0.38 – 0.45) p < 0.001	0.60 (0.55 – 0.66) p < 0.001
Income quintile [Q2]	1.10 (0.99 – 1.22) p = 0.069	1.20 (1.06 – 1.35) p = 0.004	0.96 (0.84 – 1.10) p = 0.551
Income quintile [Q3]	1.05 (0.95 – 1.16) p = 0.357	1.20 (1.06 – 1.35) p = 0.004	0.97 (0.85 – 1.11) p = 0.643
Income quintile [Q4]	1.04 (0.94 – 1.16) p = 0.419	1.33 (1.17 – 1.50) p < 0.001	0.95 (0.83 – 1.09) p = 0.481
Income quintile [Q5]	1.23 (1.11 – 1.38) p < 0.001	1.52 (1.34 – 1.73) p < 0.001	0.92 (0.79 – 1.06) p = 0.243
Centre ownership [Private]	1.80 (1.66 – 1.95) p < 0.001	1.47 (1.34 – 1.62) p < 0.001	1.40 (1.26 – 1.55) p < 0.001
Degurba [2]	1.04 (0.97 – 1.12) p = 0.245	0.97 (0.89 – 1.06) p = 0.471	0.85 (0.77 – 0.94) p = 0.002
Degurba [3]	0.99 (0.88 – 1.11) p = 0.899	0.94 (0.82 – 1.08) p = 0.393	0.62 (0.52 – 0.74) p < 0.001
Company type [Healthcare]	1.25 (1.11 – 1.41) p < 0.001	1.16 (1.01 – 1.33) p = 0.036	1.21 (1.04 – 1.40) p = 0.013
Company type [Education]	1.62 (1.34 – 1.97) p < 0.001	1.32 (1.06 – 1.65) p = 0.013	1.49 (1.16 – 1.91) p = 0.002
Company type [Public body]	1.16 (0.97 – 1.39) p = 0.115	1.11 (0.90 – 1.38) p = 0.337	1.18 (0.92 – 1.51) p = 0.191
Company type [Associations and foundations]	1.27 (1.12 – 1.44) p < 0.001	1.36 (1.19 – 1.57) p < 0.001	1.25 (1.06 – 1.47) p = 0.007
<i>n</i>	22,801	11,371	9,064
Conditional R ²	0.220	0.126	0.063
Marginal R ²	0.130	0.075	0.035
ICC	0.10	0.05	0.03

**Table 3: Multilevel logistic models for *Current situation* (vs. reference level *Working*) - HVET
OR (95% CI); p-value**

Variable	Continue studying	Studying and working	Looking for a job
(Intercept)	0.73 (0.61-0.87) <0.001	0.41 (0.34-0.50) <0.001	0.34 (0.27-0.41) <0.001
Gender [Women]	0.98 (0.91-1.06) 0.699	1.29 (1.19-1.40) <0.001	0.99 (0.91-1.09) 0.894
Overage [Yes]	0.31 (0.29-0.34) <0.001	0.49 (0.46-0.52) <0.001	0.93 (0.87-1.01) 0.081
Income quintile [Q2]	0.94 (0.85-1.04) 0.222	0.93 (0.83-1.03) 0.177	0.90 (0.80-1.02) 0.093
Income quintile [Q3]	0.80 (0.72-0.88) <0.001	1.00 (0.90-1.12) 0.943	0.86 (0.77-0.97) 0.014
Income quintile [Q4]	0.86 (0.78-0.96) 0.006	1.09 (0.98-1.22) 0.101	0.85 (0.76-0.96) 0.010
Income quintile [Q5]	1.14 (1.03-1.26) 0.012	1.18 (1.06-1.31) 0.003	0.89 (0.79-1.00) 0.045
Centre ownership [Private]	1.47 (1.37-1.57) <0.001	1.33 (1.23-1.43) <0.001	1.24 (1.14-1.34) <0.001
Degurba [2]	1.07 (1.00-1.15) 0.064	0.94 (0.87-1.01) 0.105	0.90 (0.82-0.97) 0.011
Degurba [3]	1.01 (0.90-1.14) 0.807	1.00 (0.89-1.13) 0.994	0.75 (0.64-0.87) <0.001
Company type [Healthcare]	0.80 (0.69-0.93) 0.003	0.90 (0.77-1.05) 0.180	1.04 (0.88-1.22) 0.652
Company type [Education]	1.67 (1.45-1.92) <0.001	1.16 (1.01-1.34) 0.039	1.63 (1.36-1.94) <0.001
Company type [Public body]	1.49 (1.27-1.76) <0.001	1.43 (1.20-1.69) <0.001	1.55 (1.29-1.86) <0.001
Company type [Associations and foundations]	1.40 (1.26-1.56) <0.001	1.22 (1.09-1.36) <0.001	1.24 (1.09-1.42) 0.001
<i>n</i>	17892	16835	14793
Conditional R²	0.149	0.099	0.059
Marginal R²	0.119	0.056	0.013
ICC	0.03	0.05	0.05

5.2. H2a

Table 4: MLM for *Going to university* (vs. reference level *Other studies*) - HVET.
OR (95% CI); p-value

Variable	University
(Intercept)	0.92 (0.72-1.17) p=0.505
Gender [Women]	1.15 (1.05-1.26) p=0.003
Overage [Yes]	0.68 (0.63-0.75) p<0.001
Income quintile [Q2]	1.01 (0.89-1.14) p=0.916
Income quintile [Q3]	1.09 (0.97-1.24) p=0.160
Income quintile [Q4]	1.04 (0.92-1.18) p=0.535
Income quintile [Q5]	1.25 (1.11-1.42) p<0.001
Centre ownership [Private]	1.48 (1.36-1.61) p<0.001
Degurba [2]	1.20 (1.10-1.31) p<0.001
Degurba [3]	1.08 (0.94-1.24) p=0.284
Company type [Healthcare]	1.01 (0.84-1.21) p=0.948
Company type [Education]	0.98 (0.83-1.16) p=0.801
Company type [Public body]	0.91 (0.76-1.10) p=0.345
Company type [Associations and foundations]	1.10 (0.97-1.24) p=0.142
<i>n</i>	12935
Conditional R ²	0.096
Marginal R ²	0.026
ICC	0.07

5.3. H2b

Table 5: MLMs for *Net salary >1200€, Temporal contract, Part-time schedule, and Job related to the studies*. OR (95% CI); p-value

Variables	>1200€ (vs. <1200€)	Temporal (vs. Indefinite)	Part-time (vs. Full-time)	Related (vs. Not related)
(Intercept)	0.55 (0.44–0.69) p<0.001	0.77 (0.66–0.89) p<0.001	0.53 (0.41–0.70) p<0.001	2.25 (1.81–2.81) p<0.001
Gender [Women]	0.70 (0.64–0.76) p<0.001	0.90 (0.84–0.96) p=0.002	1.31 (1.22–1.40) p<0.001	0.95 (0.90–1.02) p=0.147
Overage [Yes]	1.27 (1.19–1.36) p<0.001	0.85 (0.81–0.90) p<0.001	0.61 (0.58–0.65) p<0.001	1.02 (0.97–1.08) p=0.373
Income quintile [Q2]	1.05 (0.94–1.17) p=0.380	0.93 (0.86–1.01) p=0.102	1.13 (1.03–1.23) p=0.007	0.98 (0.90–1.06) p=0.629
Income quintile [Q3]	1.22 (1.10–1.36) p<0.001	0.92 (0.84–1.00) p=0.040	1.09 (1.00–1.19) p=0.043	1.05 (0.97–1.14) p=0.251
Income quintile [Q4]	1.31 (1.17–1.46) p<0.001	0.88 (0.81–0.96) p=0.004	1.09 (1.00–1.19) p=0.049	1.07 (0.98–1.16) p=0.118
Income quintile [Q5]	1.28 (1.15–1.43) p<0.001	0.93 (0.85–1.01) p=0.088	1.16 (1.06–1.27) p=0.001	1.03 (0.95–1.12) p=0.483
Centre ownership [Private]	1.02 (0.94–1.11) p=0.597	0.87 (0.81–0.92) p<0.001	1.18 (1.11–1.26) p<0.001	1.00 (0.95–1.06) p=0.889
Degurba [2]	1.03 (0.95–1.11) p=0.483	1.04 (0.98–1.10) p=0.251	0.84 (0.79–0.90) p<0.001	0.95 (0.90–1.00) p=0.070
Degurba [3]	1.03 (0.91–1.16) p=0.646	1.00 (0.91–1.10) p=0.972	0.78 (0.70–0.86) p<0.001	1.02 (0.93–1.11) p=0.735
Company type [Healthcare]	1.16 (1.02–1.31) p=0.027	1.87 (1.69–2.08) p<0.001	1.04 (0.93–1.15) p=0.527	1.23 (1.11–1.37) p<0.001
Company type [Education]	0.98 (0.80–1.19) p=0.820	1.26 (1.11–1.42) p<0.001	1.73 (1.51–1.97) p<0.001	0.54 (0.48–0.61) p<0.001
Company type [Public body]	1.00 (0.83–1.20) p=1.000	1.45 (1.26–1.67) p<0.001	0.95 (0.82–1.10) p=0.473	0.66 (0.58–0.75) p<0.001
Company type [Associations and foundations]	1.05 (0.93–1.20) p=0.433	1.28 (1.17–1.40) p<0.001	1.11 (1.01–1.22) p=0.029	0.83 (0.76–0.91) p<0.001
Current situation [Studying and working]	0.98 (0.90–1.08) p=0.717	1.00 (0.94–1.06) p=0.918	6.53 (6.16–6.92) p<0.001	0.70 (0.66–0.74) p<0.001
Study degree [HVET]	2.09 (1.93–2.26) p<0.001	0.77 (0.73–0.82) p<0.001	0.62 (0.58–0.66) p<0.001	1.21 (1.14–1.28) p<0.001
<i>n</i>	14551	23327	28206	28206
Conditional R ²	0.114	0.044	0.331	0.097
Marginal R ²	0.049	0.021	0.249	0.026
ICC	0.07	0.02	0.11	0.07

6. Discussion and conclusions

6.1. Assessment of the hypotheses

Overall, the results of the models support the proposed hypotheses. Although not all factors are equally significant, the models provide substantial evidence of the association between structural determinants and the choice and characteristics of transitions after finishing a VET programme. This study reveals the existence of significant inequalities between social groups that future educational policy should endeavour to eradicate.

Gender appears as a central stratification axis, as women are more likely to opt for studying and working simultaneously and to have worse job conditions than men when entering the labour market. The gender-based variability in job quality stems from the dual influence of gender unearthed by the models.

On the one hand, within vocational fields, being a woman is associated with having a lower income and a greater likelihood of part-time work. On the other hand, variation between fields is strongly shaped by the feminisation of each field, which is measured by the proportion of female students. More feminised fields are linked to lower income, more part-time schedules, and a higher likelihood that the job is unrelated to the studies. Interestingly, while women individually are less likely to have temporary contracts, more feminised fields are associated with higher rates of temporary contracts.

The divide between STEM and non-STEM fields largely explains these patterns. STEM fields, occupied predominantly by male students (see Figure 1), are consistently associated with a greater likelihood of having a higher income, full-time employment, and an alignment between job and studies (see figures 14 to 21). Future educational policy should make a double effort to improve the quality of job positions in more feminised fields and to implement strategies to encourage women to enter STEM-related vocational tracks.

The effect of age is also remarkable. As discussed, the models predict a higher probability of overage people entering the labour market without pursuing further

studies after completing a VET programme. Moreover, being overage might signal additional work and educational experience, as the models predict better job quality indicators for overage graduates, including higher income, more indefinite contracts and more full-time schedules. Hence, the results suggest that individuals who amass more experience before entering the labour market, far from being hindered by their overage status, might actually be favoured. VET policies should thus help younger students bridge this gap via enhanced career orientation and stronger internship programmes.

The impacts of SES point toward the reproduction of socioeconomic inequalities. On the one hand, students from higher-income areas (Q5) and private schools appear more likely to continue studying, which is essential to attaining better employment opportunities. On the other hand, upon entering the labour market, students from higher-income areas and private schools are more likely to have higher incomes⁵ and indefinite contracts. They are also more likely to work part-time because they have a stronger tendency to prolong their studies while working. Consequently, public policy should focus on (1) supporting individuals from lower SES backgrounds and state schools to continue their studies after VET and (2) smoothing their labour market entry.

The local availability of occupational and educational places—measured by the degree of urbanisation—shows limited effects. While it does not significantly influence the transition choice, among individuals who decide to end their studies and try to enter the labour market, those in less populated areas (degrees 2 and 3) are more likely to have already found a job, which may point towards more limited job opportunities in urban centres. Moreover, students from less dense areas are more likely to hold full-time jobs than their urban counterparts. These findings indicate the need for urban-specific programmes to facilitate entry into the labour market.

⁵ Not significant for private schools.

Finally, the type of internship placement appears highly influential. Completing an internship outside a business setting (except for *Healthcare*⁶) is associated with lower job quality at labour market entry—including more part-time and temporary contracts and weaker job-study alignment—and a higher likelihood of prolonging the studies after completing the VET programme. This observation suggests that internships placed in businesses may provide a more direct pathway toward better job conditions, which may motivate students to end their studies and enter the labour market directly.

Considering the decision to enter university after HVET (compared to other study pathways), the same variables that push individuals toward pursuing further studies drive them toward university studies as well: women, non-overage people, individuals from higher-income areas (Q5) and private schools are more likely to enter university.

Interestingly, internship placement does not significantly affect the decision to enter university after HVET (compared to other study pathways). Therefore, while specific internship settings may influence the decision to pursue further studies, they do not appear to steer students specifically toward the university.

6.2. Concluding remarks

When examining how these findings fit into recent developments, a broader picture emerges. Over the last decade, school dropout has substantially decreased in Catalonia (Curran & Montes, 2022). Moreover, the demand for VET has skyrocketed: a 34% increase in demand in state schools from 2019 to 2025 has prompted the creation of thousands of new places (Generalitat de Catalunya, 2025).

VET provides a faster and more direct route into the labour market than other educational pathways. However, far from indicating universally smooth or high-quality transitions for all VET graduates, the results reveal the reproduction of pre-existing social inequalities. Additionally, the hierarchy among knowledge fields

⁶ Linked to higher income and stronger job relevance, despite a higher likelihood of having a temporary contract

becomes evident, with STEM-related and male-dominated fields—which often coincide—at the top, which translates to better labour market outcomes.

Moreover, as Merino (2021) suggests and the analysis confirms, many students—particularly women and those from higher SES backgrounds—use VET as a stepping stone to higher education. Therefore, I firmly believe that, instead of considering VET and higher education as two fully disconnected spheres, future educational policies should develop more flexible pathways between them.

6.3. Limitations and further research

The unavailability of some key data limits the explanatory power of the findings. This study did not have access to family-level information—only to proxy measures of SES—so it could not fully capture the socioeconomic conditions of students. Moreover, the results offer indirect evidence that educational choices emerge from distinct habitus (moulded by students' positions within various social fields), but data on student preferences or aspirations were unavailable. Consequently, the present analysis cannot fully evaluate to what extent post-VET transitions are shaped by structural factors rather than by the individual agency. I firmly encourage CGCC to begin collecting family-level information on SES, education level and migration background, as well as individual-level data on motivations and goals.

The dataset provides only two key snapshots—the internship completed during VET and the activity within one year after graduation—which allow only a short-term analysis. A longitudinal follow-up would provide the means to track the students' trajectories, assess the evolution of the observed inequalities, and determine whether the effect of the internship placement is truly lasting or merely short-term. This presents a compelling avenue for further research.

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8. Appendix

8.1. Vocational fields

Table 6: Distribution of students in the sample by vocational field. Fields with a relative frequency higher than 5% are shown in bold.

Field	n	IVET	HVET	Proportion (%)
Administration and management	6019	3736	2283	10.18
Agrarian	841	454	387	1.42
Artistic studies	1690	529	1161	2.86
Beauty	2078	1565	513	3.51
Building and civil works	203	77	126	0.34
Chemistry	1362	520	842	2.3
Computing and communications	6871	4240	2631	11.62
Electricity and electronics	1727	912	815	2.92
Energy and water	96	13	83	0.16
Extractive industries	7	7	0	0.01
Food industries	386	354	32	0.65
Graphic arts	432	255	177	0.73
Health	12178	7416	4762	20.59
Hospitality and tourism	1498	864	634	2.53
Image and sound	1860	482	1378	3.14
Installation and maintenance	820	591	229	1.39
Maritime-fishing	181	94	87	0.31
Mechanical manufacture	748	504	244	1.26
Physical and sports activities	3270	1977	1932	5.53
Safety and environment	244	39	205	0.41
Socio-cultural and community services	8790	2750	6040	14.86
Sports studies	639	579	60	1.08
Textile, clothing and leather	402	216	186	0.68
Trade and marketing	4053	1629	2424	6.85
Transport and maintenance of vehicles	2611	2031	580	4.41
Wood, furniture and cork	147	115	32	0.25

8.2. Variables

Table 7: Independent variables of the MLMs. The first category of each variable is the reference level

Variable	Categories	Source
Gender	Men	Survey
	Women	
Overage: Being two or more years older than the minimum age when entering the VET	Overage	Registry ⁷
	Not overage	
Income quintile: Mean per capita income of student postal code. Quintiles obtained from the sample.	Q1	INE ⁸
	Q2	
	Q3	
	Q4	
	Q5	
School centre ownership	State	Survey
	Private	
Degurba: degree of urbanisation of the student's municipality of residence	1: Urban centres or densely populated areas	Idescat
	2: Semidense or intermediate density areas	
	3: Rural or scarcely populated areas	
Company type: where the internship (or longest internship, if more than 1) was completed	Business ⁹	Registry
	Healthcare	
	Education	
	Public body	
	Associations and foundations	
Study degree ¹⁰	IVET	Study degree
	HVET	
Vocational field ¹¹	26 categories	Survey

⁷ The age has been calculated as the age of the cohort: entrance year minus birth year. If age at entry is ≥ 18 for IVET or ≥ 20 for HVET (two or more years than the minimum age), the person is considered overage.

⁸ Weighted average of the mean per capita income of the census tracts within the student's postal code

⁹ Aggregates the following original categories: Individual business owner, Microbusiness, Small business, Medium-sized business, Large business, and Multinational.

¹⁰ Used as an explicative variable only for H2b.

¹¹ Added as a random effect

Table 8: Dependent variables of the MLMs. The first category is the reference level

Variable	Hypothesis	Categories	Source
Current situation ¹²	H1	Working	Survey
		Continue studying	
		Studying and working	
		Looking for a job	
Further studies	H2a	Going to university ¹³	
		Other studies	
Net income	H2b	<1200 €	
		>1200 €	
Contract type ¹⁴	H2b	Indefinite	
		Temporal	
		Self-employed	
		Other	
Work schedule	H2b	Full-time	
		Part-time	
Relationship of the job to the studies	H2b	Related to the studies	
		Not related to the studies	

¹² Also used as an input variable in MLMs for H2b to control for its effect.

¹³ Bachelor's degree, master's degree or other higher education.

¹⁴ Only the MLM for *Temporal contract* (vs. *Indefinite*) is analysed.

8.3. Descriptive analysis

Table 9: Independent variables

Variable	Category	n	Proportion (%)
Gender	Men	28981	48.99
	Women	30172	51.01
Overage	No	39131	66.15
	Yes	20022	33.85
Income quintile	Q1	11849	20.08
	Q2	11880	20.13
	Q3	11819	20.03
	Q4	11663	19.77
	Q5	11792	19.99
Centre ownership	State	39309	66.45
	Private	19844	33.55
Degurba	1	34475	58.28
	2	19220	32.49
	3	5458	9.23
Company type	Business	37381	63.19
	Education	5723	9.68
	Healthcare	5561	9.4
	Public body	2555	4.32
	Associations and foundations	7932	13.41
Study degree	HVET	27783	46.97
	IVET	31370	53.03

Table 10: Current situation (dependent variable for H1)

Study degree	Current situation	n	Proportion (%)
IVET	Working	5997	19.12
	Continue studying	16872	53.78
	Studying and working	5408	17.24
	Looking for a job	3093	9.86
HVET	Working	10916	39.29
	Continue studying	7010	25.23
	Studying and working	5949	21.41
	Looking for a job	3908	14.07

Table 11: Current studies after finishing the VET programme (dependent variable for H2a)

Study degree	Current studies	n	Proportion (%)
IVET	HVET	19088	85.67
	IVET	1656	7.43
	Other studies	1536	6.90
HVET	University	8307	35.90
	Other studies	4652	64.10

Table 12: Job quality indicators (dependent variables for H2b)

Variable	Level	n	Proportion (%)
Net income	<1200 €	5858	47.73
	>1200 €	6414	52.27
Contract type	Indefinite	10795	47.59
	Temporal	8011	35.32
	Self-employed	417	1.84
	Other	3461	15.26
Work schedule	Part-time	10412	45.9
	Full-time	12272	54.1
Job related to the studies	Yes	16296	71.84
	No	6388	28.16

8.4. Random intercept caterpillar plots

8.4.1. Random intercepts for the MLMs in Table 2

Figure 3: Random intercepts for *Continue studying (vs. Working)* - IVET

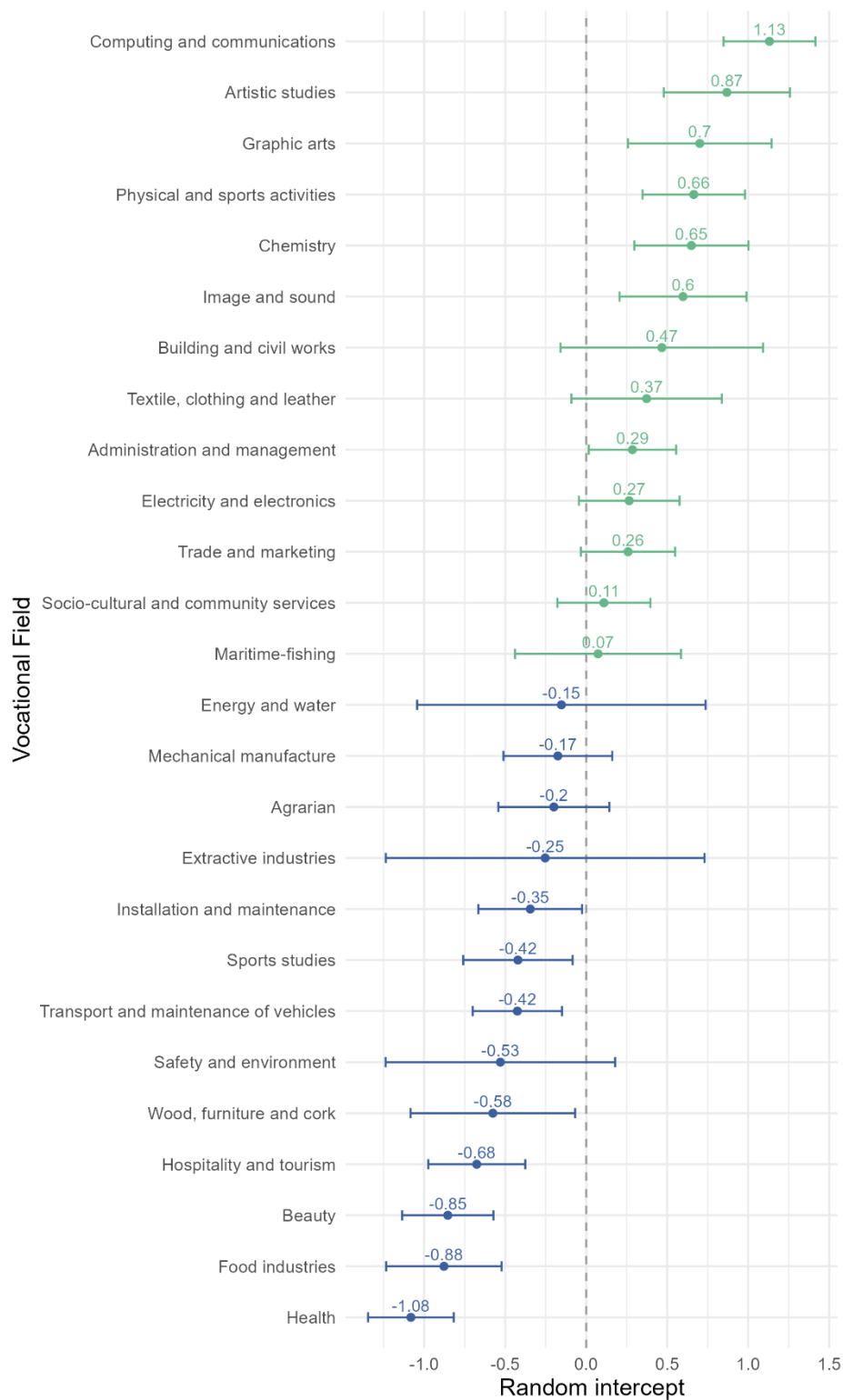


Figure 4: Random intercepts for *Studying and working* (vs. *Working*) - IVET

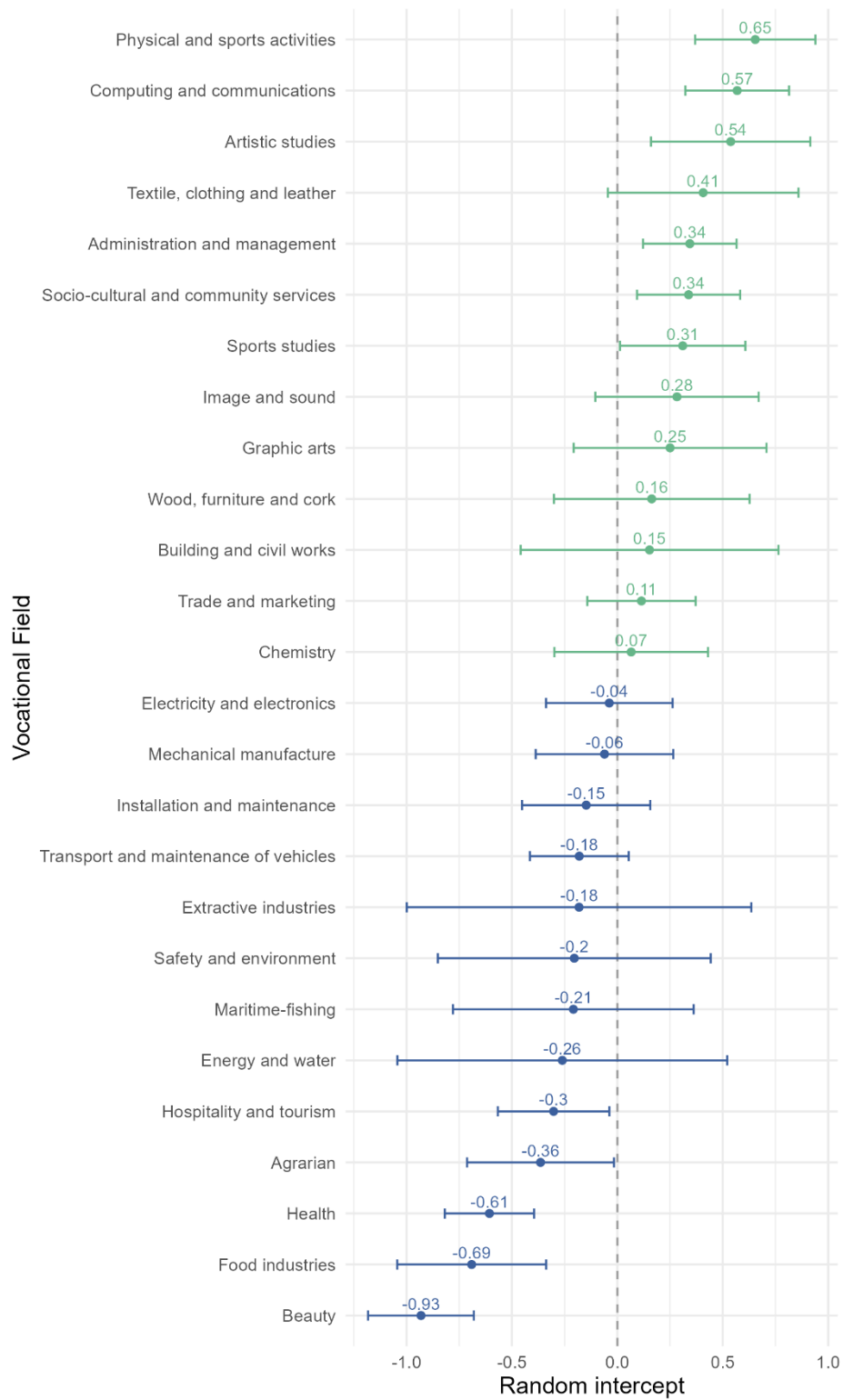
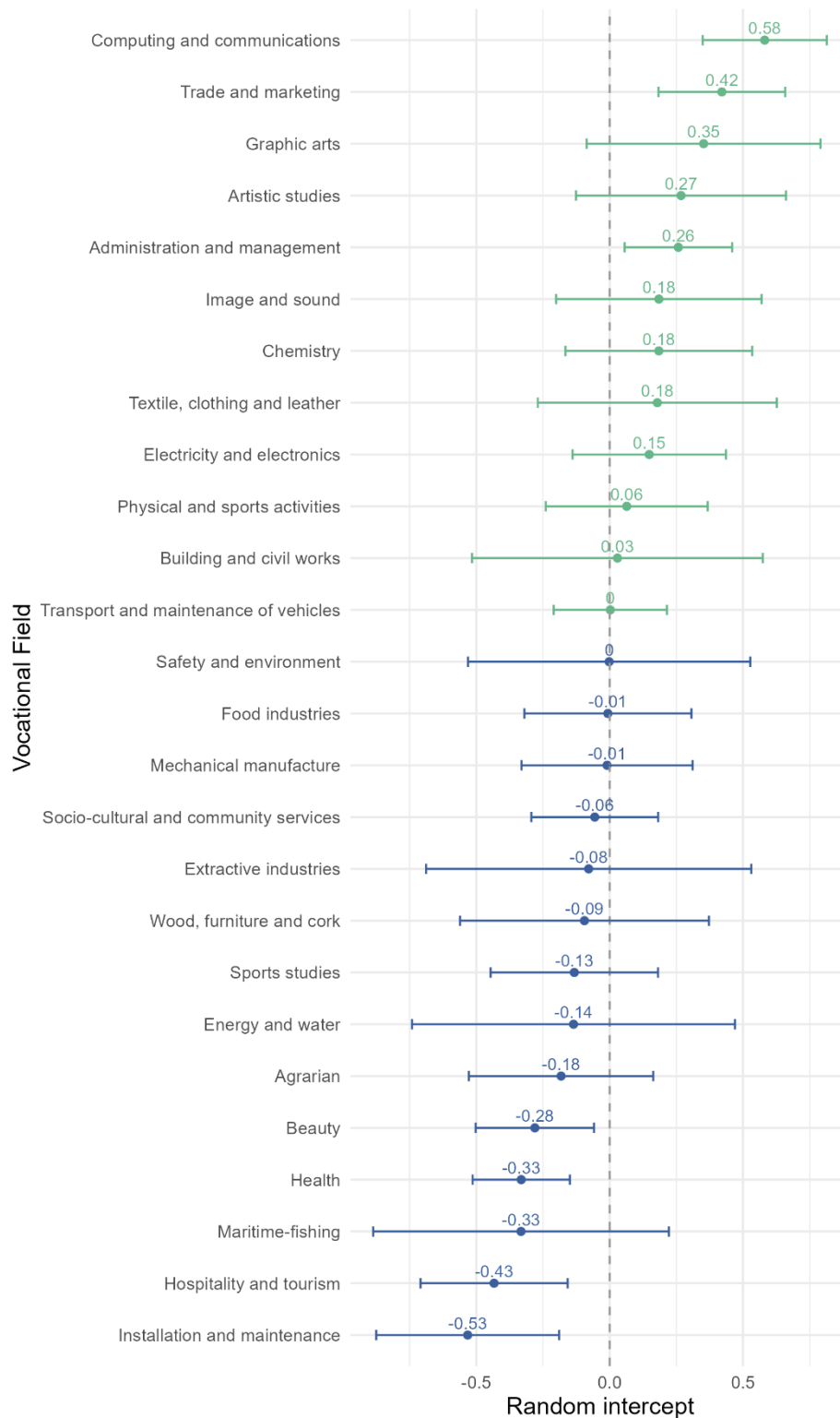


Figure 5: Random intercepts for *Looking for a job* (vs. *Working*) - IVET



8.4.2. Random intercepts for the MLMs in Table 3

Figure 6: Random intercepts for *Continue studying* (vs. *Working*) - HVET

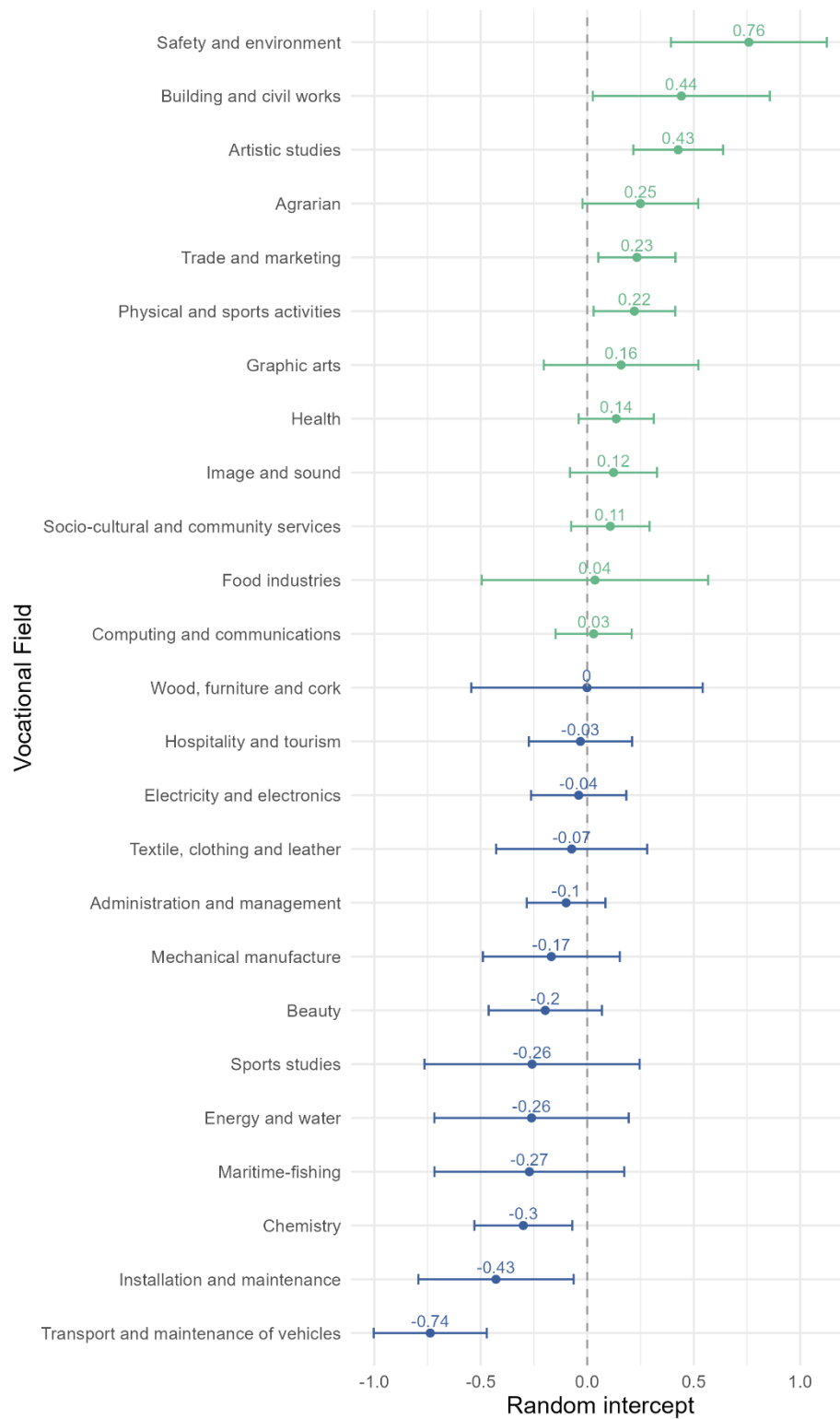


Figure 7: Random intercepts for *Studying and working* (vs. *Working*) - HVET

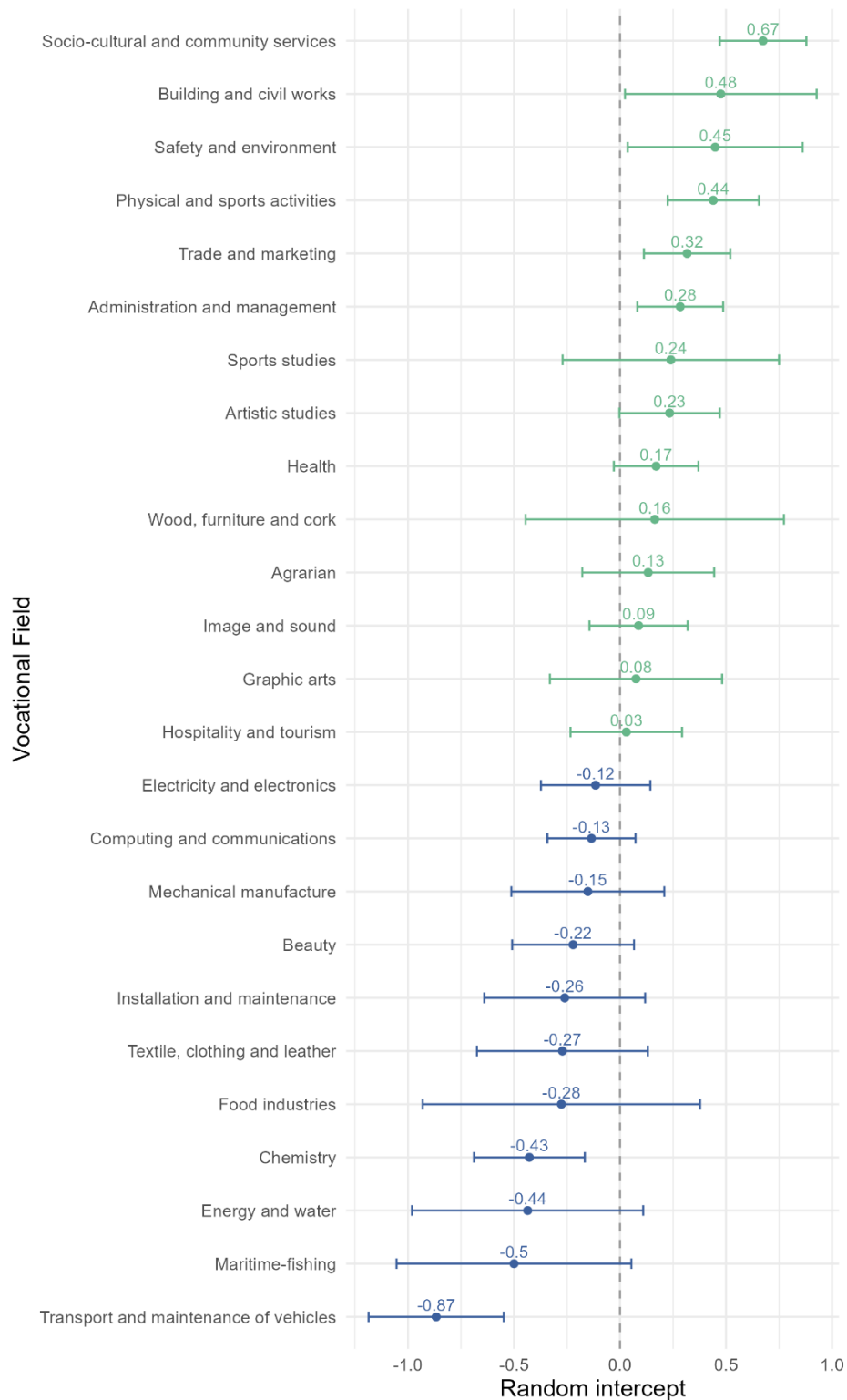
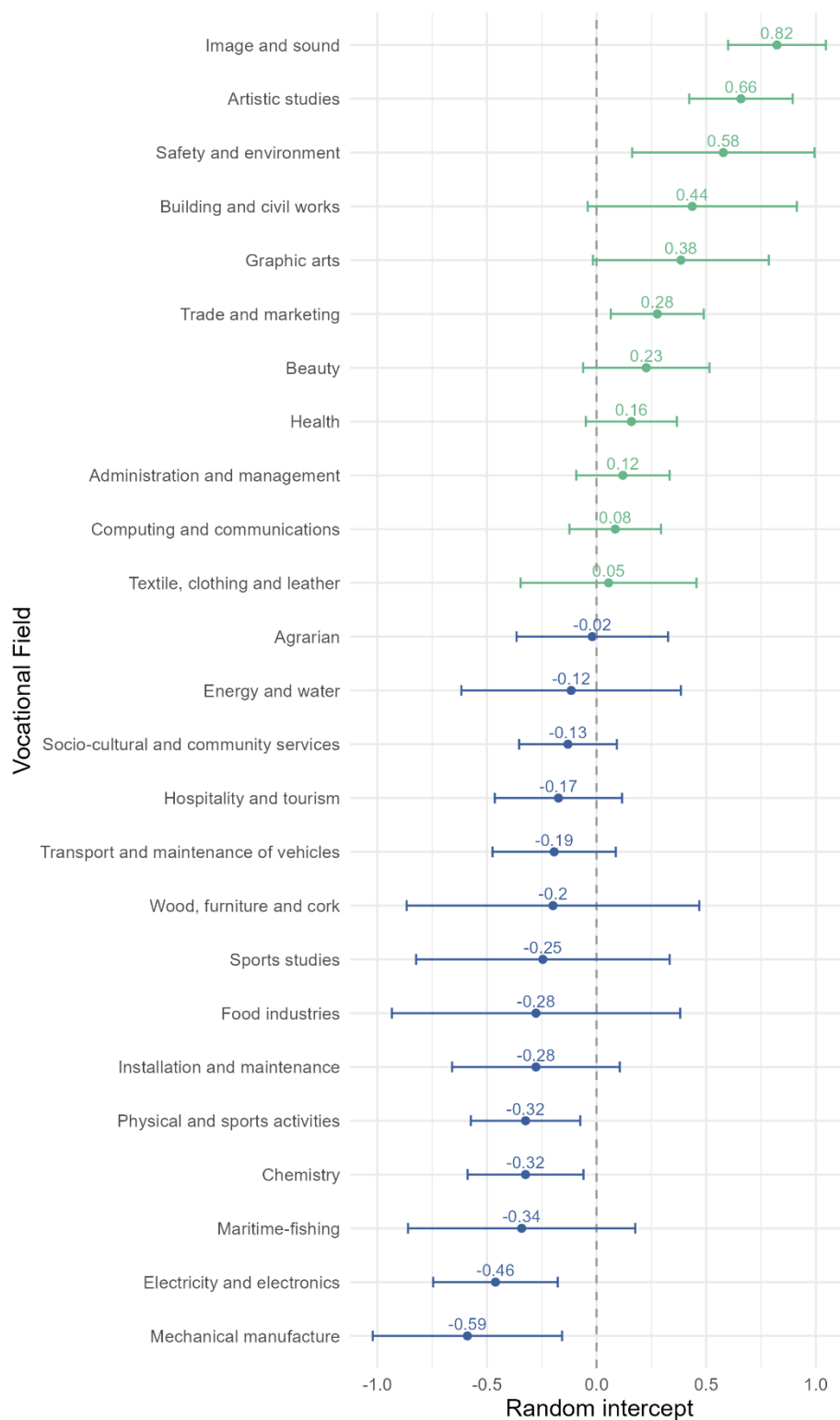
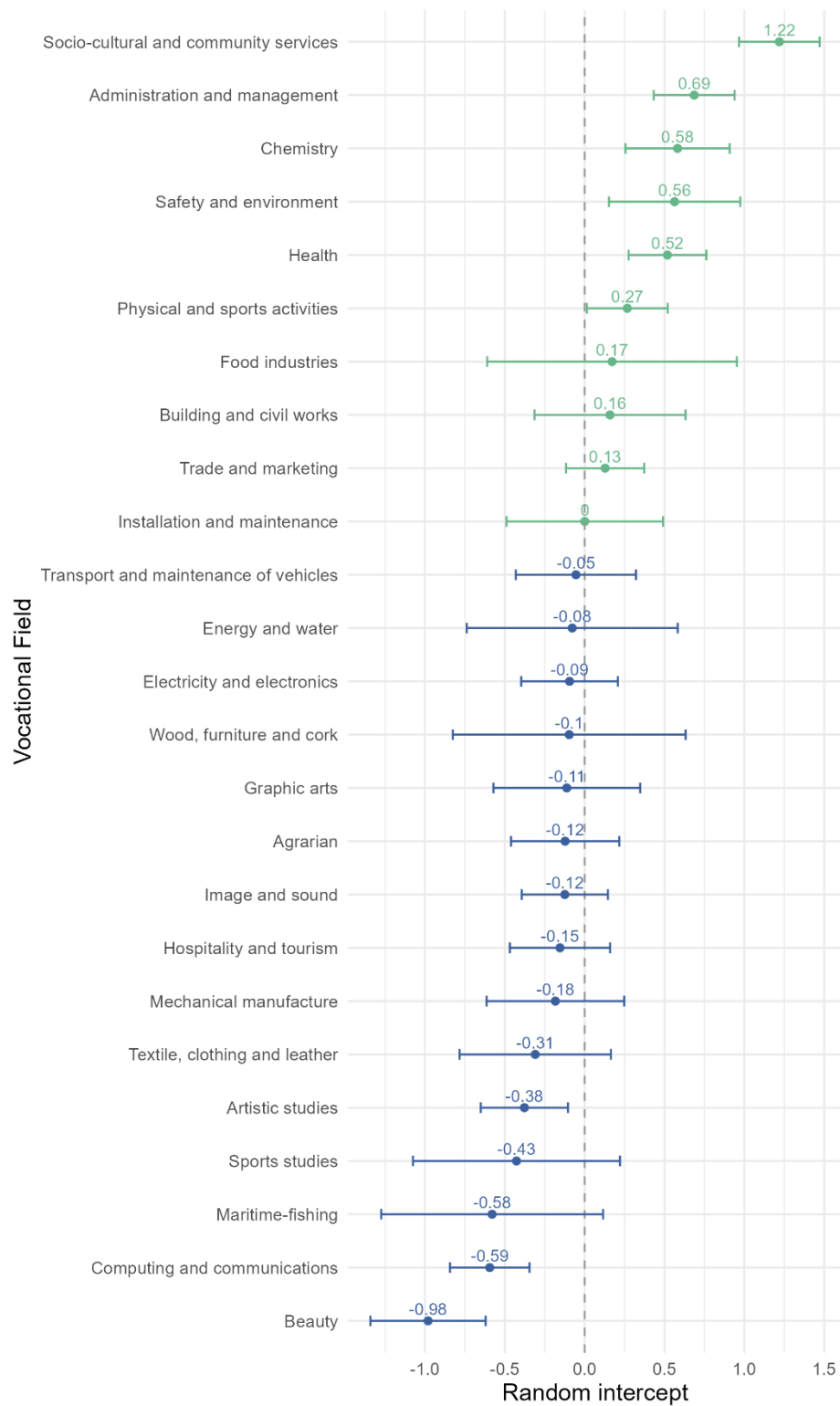


Figure 8: Random intercepts for *Looking for a job* (vs. *Working*) - HVET



8.4.3. Random intercepts for the MLM in Table 4

Figure 9: Random intercepts for *Going to university* (vs. *Other studies*) - HVET



8.4.4. Random intercepts for the MLMs in Table 5

Figure 10: Random intercepts for *Net income* >1200 € (vs. <1200 €)

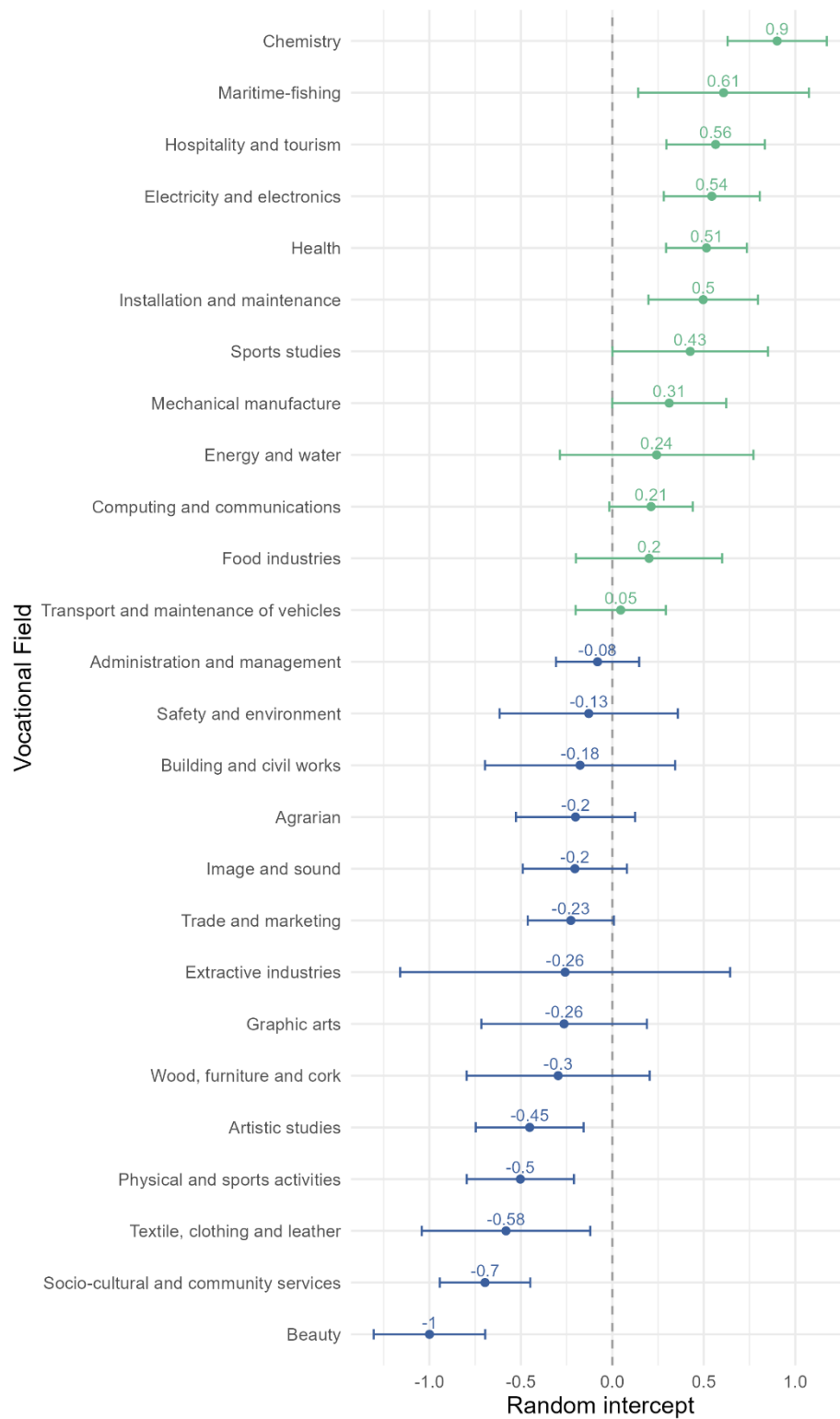


Figure 11: Random intercepts for *Temporal contract* (vs. *Indefinite*)

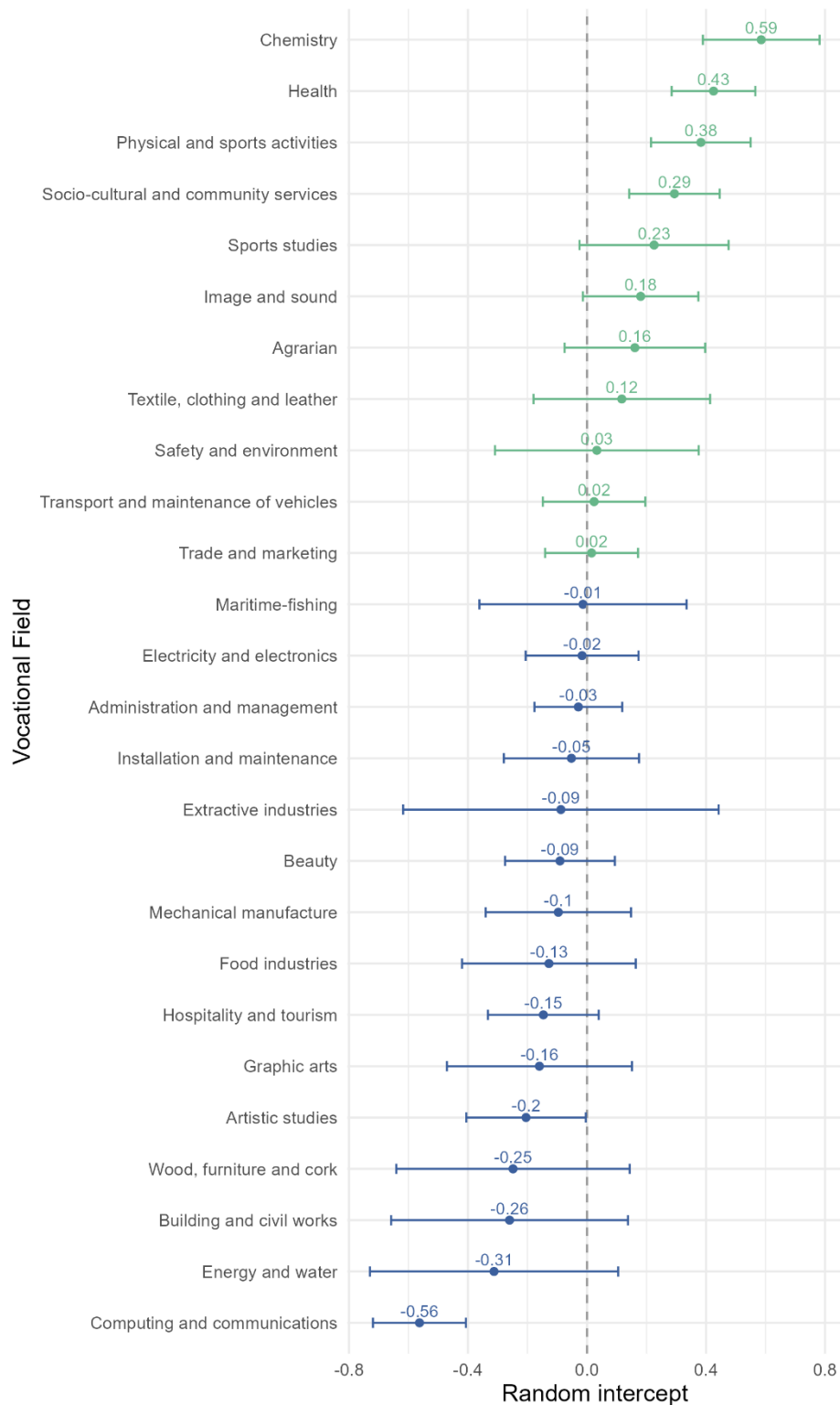


Figure 12: Random intercepts for *Part-time schedule (vs. Full-time)*

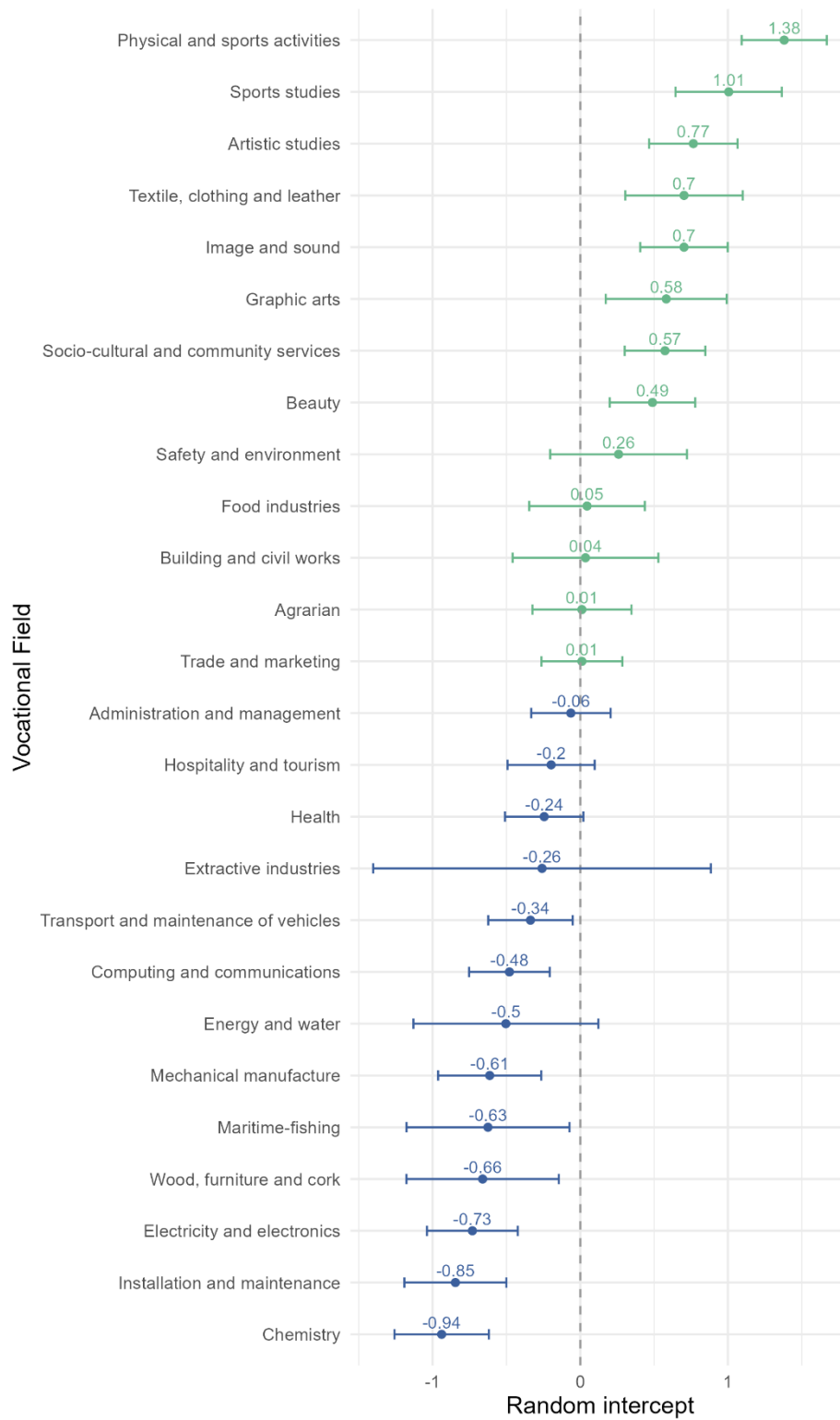
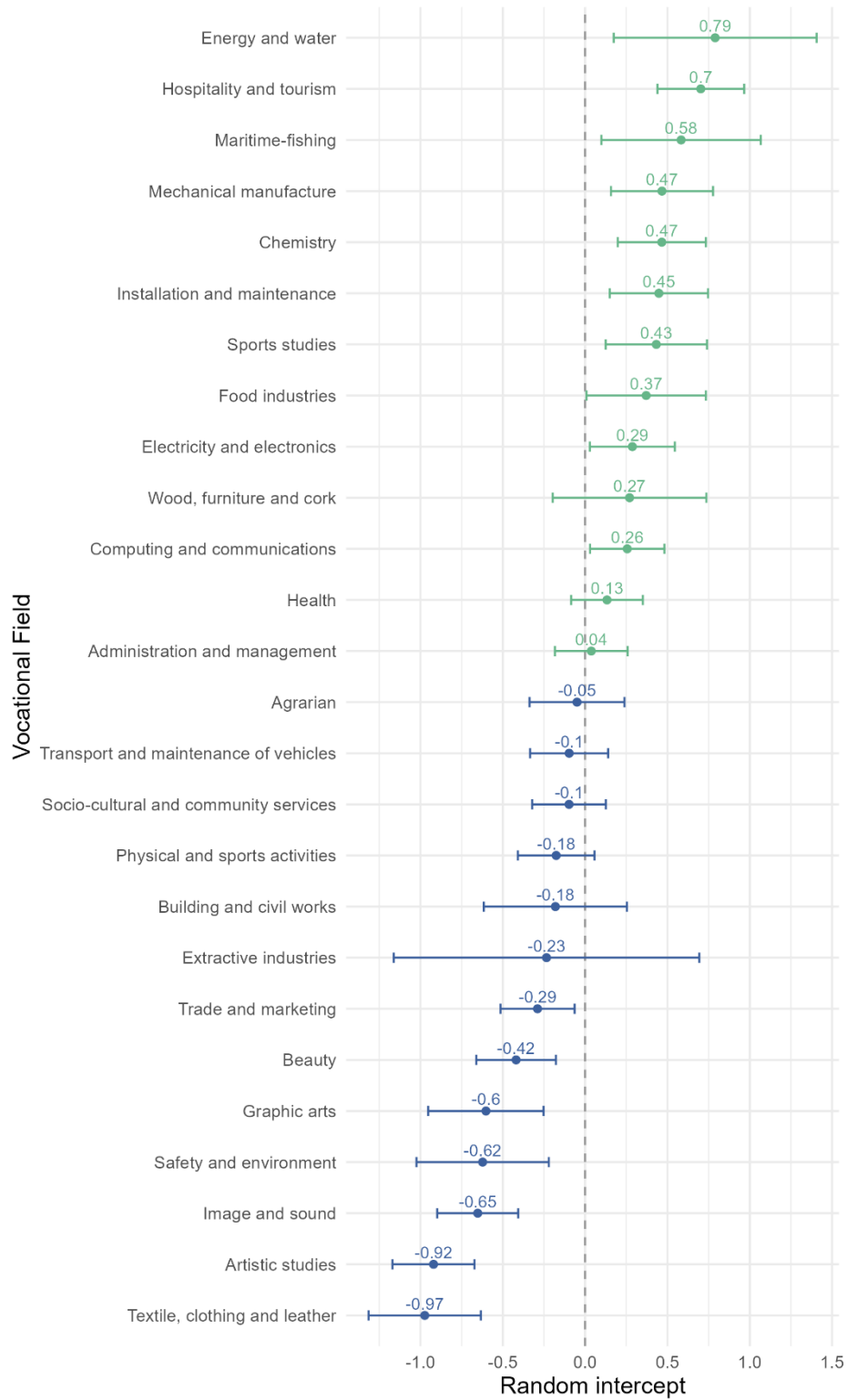


Figure 13: Random intercepts for *Job related to studies* (vs. *Not related*)



8.5. Relationship of random intercepts to the proportion of women and to STEM fields (H2b)

The following figures show the linear regression of random intercepts on the proportion of female students in the field and the boxplot and t-test of random intercepts on the type of field. STEM fields are coloured green and non-STEM fields are coloured blue.

8.5.1. *Net income >1200 € (vs. <1200 €)*

Figure 14: Linear regression of random intercepts (from the MLM for net income) on the proportion of female students in the field

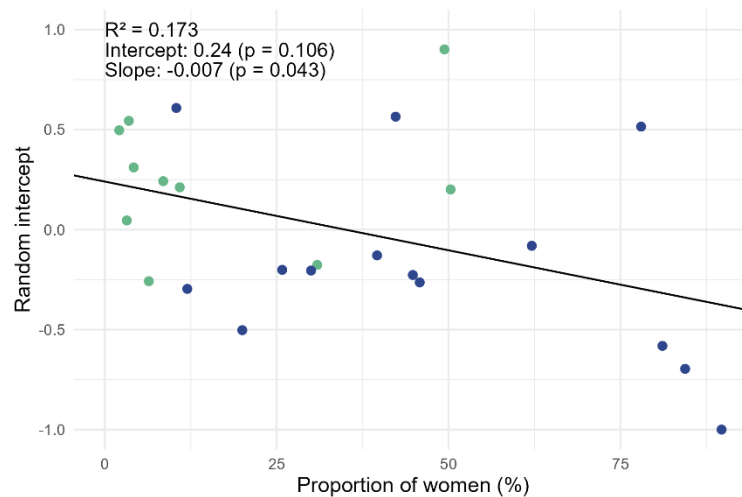
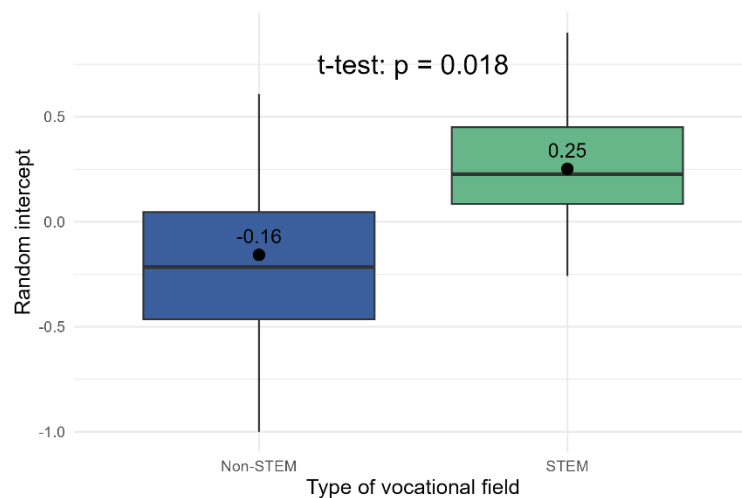


Figure 15: Boxplots and t-test of random intercepts (from the MLM for net income) on the type of field



8.5.2. Temporal contract (vs. Indefinite)

Figure 16: Linear regression of random intercepts (from the MLM for type of contract) on the proportion of female students in the field

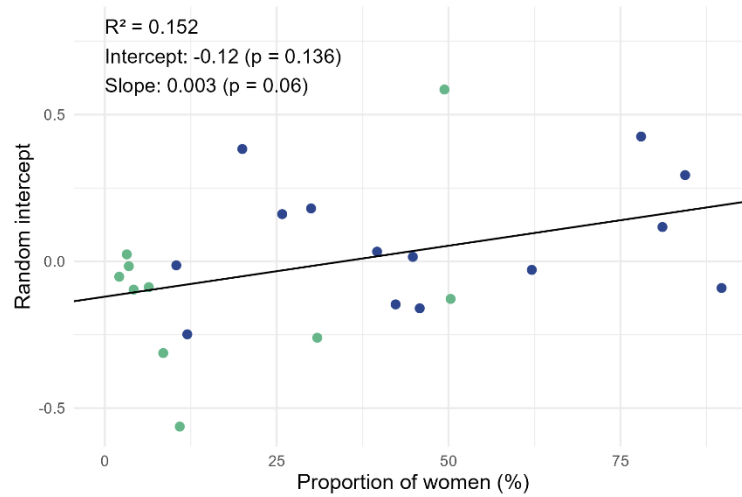
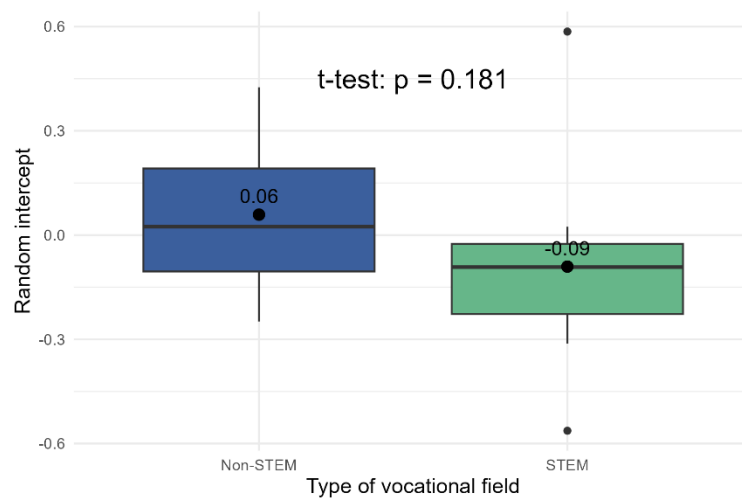


Figure 17: Boxplots and t-test of random intercepts (from the MLM for type of contract) on the type of field



8.5.3. *Part-time schedule (vs. Full-time)*

Figure 18: Linear regression of random intercepts (from the MLM for type of schedule) on the proportion of female students in the field

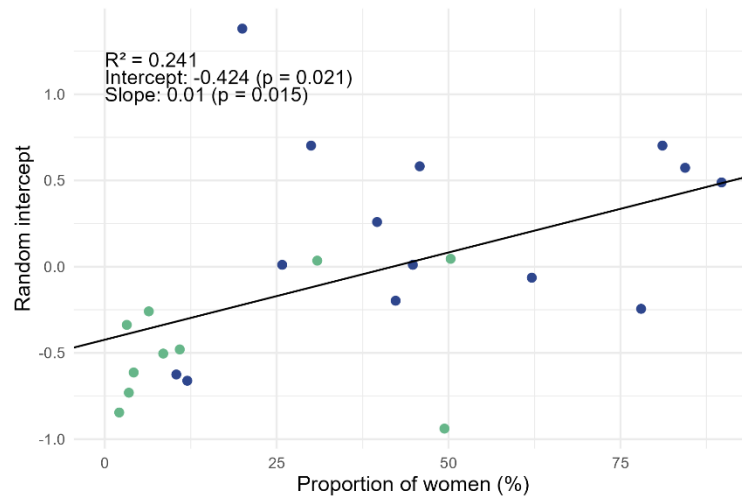
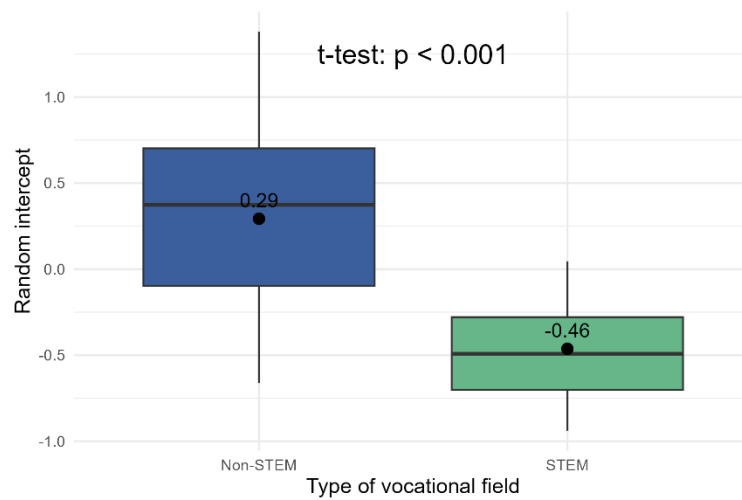


Figure 19: Boxplots and t-test of random intercepts (from the MLM for type of schedule) on the type of field



8.5.4. *Job related to the studies (vs. Not related)*

Figure 20: Linear regression of random intercepts (from the MLM for relation of the job to the studies) on the proportion of female students in the field

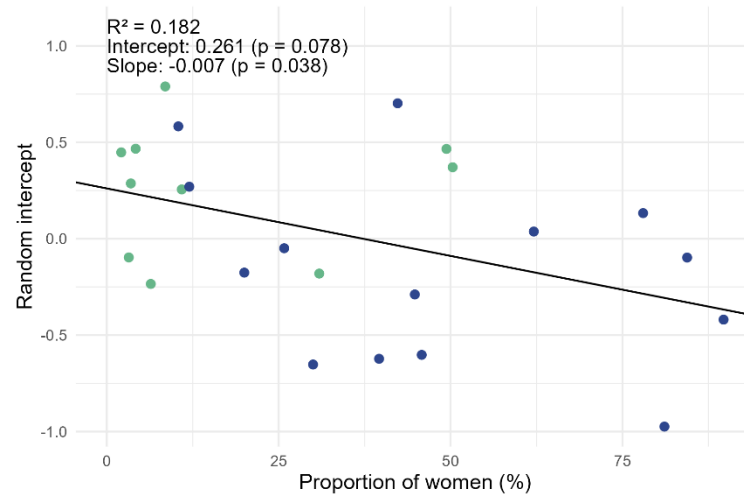


Figure 21: Boxplots and t-test of random intercepts (from the MLM for relation of the job to the studies) on the type of field

