**The meso-social benefits of VET for social groups and communities**

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**Table of contents**

[Abstract 11](#_Toc306798347)

[1 Introduction 12](#_Toc306798348)

[1.1 Background and conceptual model 12](#_Toc306798349)

[1.2 Structure of the report 13](#_Toc306798350)

[2. Meso-social benefits and differential benefits for social groups 14](#_Toc306798351)

[2.1 Social capital 14](#_Toc306798352)

[2.2 Group identity and quality of life: psycho-social benefits of VET 15](#_Toc306798353)

[2.2.1: Identity, belonging and VET 16](#_Toc306798354)

[2.2.2: VET and community mental health 16](#_Toc306798355)

[2.2.3: VET and social reinforcement 18](#_Toc306798356)

[2.3 Benefits for social groups 18](#_Toc306798357)

[2.3.1 Income groups 18](#_Toc306798358)

[2.3.2 Gender 19](#_Toc306798359)

[2.3.3 Household type 19](#_Toc306798360)

[2.3.4 Citizenship 19](#_Toc306798361)

[3.1 Introduction 20](#_Toc306798362)

[3.2 Data 20](#_Toc306798363)

[3.3 Social outcome variables. 23](#_Toc306798364)

[3.4 Social outcomes by social group. 26](#_Toc306798365)

[3.5 Educational variables 32](#_Toc306798366)

[3.6 Control variables 33](#_Toc306798367)

[3.7 Estimation strategy 34](#_Toc306798368)

[3.8 Results 38](#_Toc306798369)

[3.8.1.2 Relations with neighbours. 40](#_Toc306798370)

[3.8.1.3 Chronic health problems. 41](#_Toc306798371)

[3.8.1.4 Self rated health. 41](#_Toc306798372)

[3.8.1.5 Body mass index. 42](#_Toc306798373)

[3.8.1.6 Satisfaction with leisure. 43](#_Toc306798374)

[3.8.1.7 Satisfaction with housing. 44](#_Toc306798375)

[3.8.2 The absolute effects of VET. 46](#_Toc306798377)

[3.8.3 The cumulative effects of VET. 47](#_Toc306798378)

[3.8.4 The positional effects of VET. 48](#_Toc306798379)

[3.8.4.1 The positional effects for the entire dataset. Tables (92-98). 48](#_Toc306798380)

[3.8.4.2 The positional effects for ISCED level one. Tables (99-105). 49](#_Toc306798381)

[3.8.4.3 The positional effects for ISCED level two. Tables (106-112). 50](#_Toc306798382)

[3.8.4.4 The positional effects for ISCED level three. Tables (113-119). 51](#_Toc306798383)

[3.8.5 The effects of VET at the household level. 52](#_Toc306798384)

[*4. Meso-social benefits of VET for underreported social groups and communities.* 53](#_Toc306798385)

[4.1 Introduction 53](#_Toc306798386)

[4.2Methodology 53](#_Toc306798387)

[4.3 Refugee Focus group 54](#_Toc306798388)

[4.3.1 Introduction 54](#_Toc306798389)

[4.3.2 Focus group 55](#_Toc306798390)

[4.3.3 Findings 55](#_Toc306798391)

[4.3.3.1 Social capital 55](#_Toc306798392)

[4.3.3.2 Identity and belonging 56](#_Toc306798393)

[4.3.3.3 Community mental health 57](#_Toc306798394)

[4.4 Roma/Gypsy/Traveller Focus group 57](#_Toc306798395)

[4.4.1 Introduction 57](#_Toc306798396)

[4.4.2 Focus Group 58](#_Toc306798397)

[4.4.3 Findings 59](#_Toc306798398)

[4.4.3.1 Over-arching Themes 59](#_Toc306798399)

[4.4.3.2 Skills 60](#_Toc306798400)

[4.4.3.3 Social capital 60](#_Toc306798401)

[4.4.3.4 Identity and belonging 61](#_Toc306798402)

[4.4.3.5 VET and mental health 62](#_Toc306798403)

[4.4.3.6 VET and social reinforcement 62](#_Toc306798404)

[4.4.4 Conclusions 62](#_Toc306798405)

[4.5 Muslim Focus group 63](#_Toc306798406)

[4.5.1 Introduction 63](#_Toc306798407)

[4.5.2 Focus Group 63](#_Toc306798408)

[4.5.3 Findings 65](#_Toc306798409)

[4.5.3.1 Social capital 65](#_Toc306798410)

[4.5.3.2 Identity and belonging 65](#_Toc306798411)

[4.5.3.3 Community Mental Health 66](#_Toc306798412)

[5. Conclusions 66](#_Toc306798413)

[List of abbreviations 68](#_Toc306798414)

[GNVQ – General National Vocational Qualification 69](#_Toc306798415)

[References 69](#_Toc306798416)

[Appendix 75](#_Toc306798417)

[APPENDIX: Calculating Monetary Values 101](#_Toc306798418)

**Tables**

[Table 1: Income groups in ECHPS 21](#_Toc306798419)

[Table 2: Gender groups in ECHPS 22](#_Toc306798420)

[Table 3: Cohabitation groups in ECHPS 22](#_Toc306798421)

[Table 4: Citizenship groups in ECHPS 22](#_Toc306798422)

[Table 5: Birth place groups in ECHPS 23](#_Toc306798423)

[Table 6: Membership of civic organisations in ECHPS 23](#_Toc306798424)

[Table 7: Relations with neighbours in ECHPS 24](#_Toc306798425)

[Table 8: Satisfaction with housing in ECHPS 24](#_Toc306798426)

[Table 9: Satisfaction with leisure in ECHPS 24](#_Toc306798427)

[Table 10: Self rated health in ECHPS 25](#_Toc306798428)

[Table 11: Chronic health problems in ECHPS 25](#_Toc306798429)

[Table 12: BMI in ECHPS 25](#_Toc306798430)

[Table 13: Gender and self rated health 26](#_Toc306798431)

[Table 14: Gender and chronic health problems 26](#_Toc306798432)

[Table 15: Gender and BMI 26](#_Toc306798433)

[Table 16: Gender and membership of civic organisations 26](#_Toc306798434)

[Table 17: Gender and relations with neighbours 26](#_Toc306798435)

[Table 18: Gender and satisfaction with housing 26](#_Toc306798436)

[Table 19: Gender and satisfaction with leisure 27](#_Toc306798437)

[Table 20: Income and self rated health 27](#_Toc306798438)

[Table 21: Income and chronic health 27](#_Toc306798439)

[Table 22: Income and BMI 27](#_Toc306798440)

[Table 23: Income and membership of civic organisations 27](#_Toc306798441)

[Table 24: Income and relations with neighbours 27](#_Toc306798442)

[Table 25: Income and satisfaction with housing 28](#_Toc306798443)

[Table 26: Income and satisfaction with leisure 28](#_Toc306798444)

[Table 27: Citizenship and self rated health 28](#_Toc306798445)

[Table 28: Citizenship and chronic health problems 28](#_Toc306798446)

[Table 29: Citizenship and BMI 29](#_Toc306798447)

[Table 30: Citizenship and membership of civic organisation 29](#_Toc306798448)

[Table 31: Citizenship and relations with neighbours 29](#_Toc306798449)

[Table 32: Citizenship and satisfaction with housing 29](#_Toc306798450)

[Table 33: Citizenship and satisfaction with leisure 29](#_Toc306798451)

[Table 34: Status and self rated health 30](#_Toc306798452)

[Table 35: Status and chronic health problems 30](#_Toc306798453)

[Table 36: Status and BMI 30](#_Toc306798454)

[Table 37: Status and membership of civic organisations 30](#_Toc306798455)

[Table 38: Status and relations with neighbours 30](#_Toc306798456)

[Table 39: Status and satisfaction with housing 30](#_Toc306798457)

[Table 40: Status and satisfaction with leisure 30](#_Toc306798458)

[Table 41: Birthplace and self rated health 31](#_Toc306798459)

[Table 42: Birthplace and chronic health problems 31](#_Toc306798460)

[Table 43: Birthplace and BMI 31](#_Toc306798461)

[Table 44: Birthplace and civic participation 31](#_Toc306798462)

[Table 45: Birthplace and relations with neighbours 31](#_Toc306798463)

[Table 46: Birthplace and satisfaction with housing 32](#_Toc306798464)

[Table 47: Birthplace and satisfaction with leisure 32](#_Toc306798465)

**Figures**

[Figure 1: Conceptual model of the meso-social and social group benefits of VET 13](#_Toc306798466)

[Figure 2: Participation in continuing education across Europe from 1995 to 2001. 33](#_Toc306798467)

**Executive Summary**

**Introduction**

E1.1: This report for CEDEFOP considers the meso-social benefits for social groups and communities. This is a subject of considerable interest both academically in terms of the contribution of VET at the community level, and in policy terms, as agendas in European countries are orientated towards community cohesion and active, participatory citizenship. This report can be contextualised in terms of a long history of VET as being implicated in mitigating against the disruption of community due to changes in economy and society. Indeed, the focus on community, social groups and VET has been long standing, arising from major shifts in the nature of the global economy in the 21st century (Winch, 2000) from an industrial to a knowledge based economy.

E1.2: We consider that VET has two benefits for groups at the meso-level being social capital formation and psycho-social benefits (group identity and quality of life). We also consider that the benefits of VET might accrue differently to different social groups on the basis of characteristics such as income, gender, household type and citizenship.

E1.3: We would expect people who engage in VET to benefit differentially according to their membership of different social groups. In this report we look at the differential benefits for social groups and communities. For quantitative purposes the five social groups identified are: income groups, gender, household type, citizenship (nationals, EU nationals, and non-national), and birth place groups.

**Methodology**

E2.1: We test the hypothesis that VET is associated with meso-social benefits through the use of the European Community Household Panel Study (ECHP). The data is a longitudinal panel survey covering 15 countries differentiated by the institutional characteristics of their education systems. The first wave of the data is for 1994 and covers around 60500 households (around 130000 adults aged 16 or older), and the last wave is for 2001.

E2.2: Based on the conceptual review we select a number of relevant social benefits from the ECHP (health measures, memberships of civic organisations, relations with neighbours, satisfaction with health and with life) and examine these across a range of social groups (by income, gender, cohabitation status, citizenship and birth location). Although national level analysis is impractical we group nations following the typology used by Sabates et al (2010).

E2.3: Although the ECHP provides a robust dataset for assessing the benefits of VET there are some groups of policy interest which cannot be identified through this data. We use expert focus group methods to examine the meso-social benefits of VET for three groups: the Roma, Refugees and Muslims. We find that there are various issues of identification for these groups with some easier to define than others. However, a commonality identified was that often barriers are faced by these groups in terms of gaining meso-social benefits.

**Conclusions**

E3.1: In our conclusion to the report we focus on three points. Firstly, that VET is important in realising meso-social benefits, particularly in terms of club memberships, but these are contingent on social group membership. Secondly, that some groups who are not usually identifiable in data sets may not gain the same meso-social benefits than the general population. Recognition of different models of VET acquisition may help to reduce the barriers to gaining meso-social benefits for these groups. Thirdly, there is a need for enhanced data on VET and meso-social benefits allowing for different modes of analysis and a greater sensitivity to local and intersectional considerations.

E3.2: This report has shown that there are evidenced meso-social benefits of VET, in particular in terms of club memberships but also (in some cases) in terms of health and psycho-social benefits. As noted in Sabates et al (2010) benefits are particularly pronounced where they are congruent with the welfare system of the country concerned. For instance in systems where the countries have well established vocational routes, the social outcomes of VET tend to be stronger and more significant. In contrast, countries do not show such a strong effect because of the absence of such a deeply rooted VET culture. As a general principle, though, it can be considered that increased investment in VET in Europe is beneficial for meso-social benefits. This gives an enhanced role for VET in terms of not only economic activity but also in terms of active citizenship, civic participation and community cohesion.

E3.3: For the absolute effects of general education and Vet the results are as follows: For participation in clubs, the effect of general education and VET are positive and significant. For relations with neighbours, the effects of VET and general education are thoroughly insignificant. For self rated health, the effect is positive and significant for general education and VET in Europe. . When it comes to BMI, it is possible to see that general education is negatively associated with it in Europe and in systems some systems, while VET decreases BMI only in systems with a strong VET culture. Satisfaction with leisure is negatively associated with both general education and VET. Satisfaction with housing is positively associated with general education in Europe and in most systems, while the relation between VET and satisfaction with housing is significant but weak in Europe.

3.6: When the results are computed by social groups, the picture becomes relatively different. Across all individuals in the sample of European countries, we found that the likelihood of participating in clubs is increasing with income and with education. For Europe as a whole, general education and VET seem to increase the likelihood of participation in clubs for both singles and couples. Furthermore, the findings show that the results are almost identical for both females and males. When it comes to place of birth, it is obvious that people born within the country in which they were surveyed are more likely to participate in clubs independently of the type of education.

3.7: For relations with neighbours, we found that the likelihood of participating in clubs is decreasing when income goes up and when individuals do VET in particular (in Europe as a whole). For marital status, couples have less frequent relations with their neighbours than singles. Moreover, the likelihood of having frequent relations with neighbours is higher for males doing VET and general education in Europe. For self rated health, we can see that the likelihood of chronic health problems decreases with income and with education. For marital status, VET is more beneficial for couples since it reduced the likelihood of having chronic health problems in Europe in general. Across all individuals in the ECHP database, individuals with higher income levels who are doing VET or general education are more likely to report good health.

3.8: Furthermore, satisfaction with leisure decreases with income and with education independently from its type in Europe as a whole. When it comes to gender, couples are less satisfied than singles independently of the education they are undertaking. Across all individuals in Europe, satisfaction with housing is increasing with income and to some extent with education.

3.9: When the positional effects of VET are computed by education levels (ISCED) it is possible to see that the returns diminish for the upper group. This is intuitive because these individuals already have a high level of education and any further increase will have lower returns. The results at the household level are stronger and mostly significant for both VET and general education.

3.10: The meso-social benefits are not shared equally by different social groups. In the quantitative analysis benefits are dependent on income and other social characteristics such as citizenship. In addition there are groups, not frequently identified in social surveys, for whom the meso-social benefits might be mediated by certain barriers. The first thing to note about the groups identified in the qualitative study (Roma, Refugees and Muslims) is that they are heterogeneous and (in particular in the case of Muslims) there were questions from the expert focus groups regarding the identification of group memberships. However, despite the problems in clearly defining these groups there are commonalities in experience. In particular, the difficulty in attaining VET (given barriers to participation) and additionally in converting VET into meso-social benefits. One way to address these problems is through addressing issues of skill recognition in terms of accrediting existing skills. For example, in the case of the Roma there are community skills and competences which might not be recognised by the institutionalised VET system. For Refugees, there is a need to recognise skills and qualifications gained both within and outside of the European Union. This makes systems which recognise different types of VET acquisition across states, particularly the European Quality Assurance Reference Framework (EQAVET) highly relevant.

3.11: The data gathered from the expert panel focus groups has enriched the empirical data gathered from the European Community Household Panel (ECHP) discussed in section 3 of this report, by adding previously unknown knowledge about these under represented communities. The report has also highlighted the need for better data on VET not only in terms of its benefits but also in terms of various sub-populations. The groups assessed through the expert focus groups were not visible in the ECHP as their characteristics (Roma, Refugee status, Faith) are not ascertained. Furthermore, intersectional characteristics (e.g. the ways in which characteristics such as social class interests with faith in realising the benefits of VET) can not be considered. This points towards the need not only for new data (which covers the characteristics of sub-populations) but new types of analysis (which is sensitive to intersectionality) in future attempts to measure the meso-social benefits of VET.

## Abstract

This report for CEDEFOP considers the meso-social benefits for social groups and communities. This is a subject of considerable interest both academically in terms of the contribution of VET at the community level, and in policy terms, as agendas in European countries are orientated towards community cohesion and active, participatory citizenship. In the introductory section we outline the background to the report and our conceptual model. We consider that VET has two benefit groups at the meso-level being social capital formation and psycho-social benefits (group identity and quality of life). We also consider that the benefits of VET might accrue differently to different social groups on the basis of characteristics such as income, gender, household type and citizenship. We then test the hypothesis that VET is associated with meso-social benefits through the use of the European Community Household Panel Study (ECHP). The data is a longitudinal panel survey covering 15 countries differentiated by the institutional characteristics of their education systems. The first wave of the data is for 1994 and covers around 60500 households (around 130000 adults aged 16 or older), and the last wave is for 2001. Based on the conceptual review we select a number of relevant social benefits from the ECHP (health measures, memberships of civic organisations, relations with neighbours, satisfaction with health and with life) and examine these across a range of social groups (by income, gender, cohabitation status, citizenship and birth location). Although national level analysis is impractical we group nations following the typology used by Sabates et al (2010). We find that VET has significant benefits for club membership and some psycho-social / health benefits but these differ depending on the social position of the individual in terms of their membership of social groups. The impact of VET on club membership was particularly marked for those in German speaking countries and was also found to be cumulative at a European level (in that accrued participation in VET led to greater benefits).

Although the ECHP provides a robust dataset for assessing the benefits of VET there are some groups of policy interest which cannot be identified through this data. We use expert focus group methods to examine the meso-social benefits of VET for three groups: the Roma, Refugees and Muslims. We find that there are various issues of identification for these groups with some easier to define than others. However, a commonality identified was that often barriers are faced by these groups in terms of gaining meso-social benefits.

In our conclusion to the report we focus on three points. Firstly, that VET is important in realising meso-social benefits, particularly in terms of club memberships, but these are contingent on social group membership. Secondly, that some groups who are not usually identifiable in data sets may not gain the same meso-social benefits than the general population. Recognition of different models of VET acquisition may help to reduce the barriers to gaining meso-social benefits for these groups. Thirdly, there is a need for enhanced data on VET and meso-social benefits allowing for different modes of analysis and a greater sensitivity to local and intersectional considerations.

# Introduction

## 1.1 Background and conceptual model

This report can be contextualised in terms of a long history of VET as being implicated in mitigating against the disruption of community due to changes in economy and society. Indeed, the focus on community, social groups and VET has been long standing, arising from major shifts in the nature of the global economy in the 21st century (Winch, 2000) from an industrial to a knowledge based economy. Heinz (1999) refers to the history of changes in skills development, and its effect on communities, during this industrialisation. He identifies that leading up to the end of the 19th century demand for particular skills was minimal and work virtues such as punctuality and reliability were sought more than educated workers were which meant that there was a particular drive for employment from communities who excelled in such qualities. This changed in the second phase of industrialisation where mechanical engineering, the chemical industry and automotive manufacturing lead to a strong requirement for skilled vocationally trained workers. The third phase of industrialisation, which is still continuing, involves a surge in information and communications technologies and financial services. This shift requires different skills such as analytical, conceptual and social skills leading to the current knowledge intensive phase in skills development. Key associated socio-economic shifts include factors such as changing patterns of work, family life and community engagement. These periods of industrialisation and post-industrialisation have been times of substantial change and uncertainty for many individuals and communities and the VET sector has had to re-define its role as a result. According to Putnam (2001) these changes have, over generations, brought about a decline in social capital. These changes have facilitated value change and there is a growing concern that there is a disjuncture between economic progress and community cohesion as a result (Kearns, 2004). Changes in agriculture, business, technology and society have had immense impacts on many rural communities while Boethel (2000) suggests that these changes have eroded community cohesion in urban areas. These changes and shifts cause many issues for communities. In this report we examine VET to aid the production of meso-social benefits and benefits for social groups. We confront this problem empirically and posit the following model for the meso-social and social group benefits of VET:-

Figure : Conceptual model of the meso-social and social group benefits of VET

**Existing networks and resources**

(Depending on citizenship / income / gender / household type)

VET

Meso-social benefits:-

Civic participation

Increased interaction with neighbours

Improved quality of life

***(NB – benefits are contingent on social group membership)***

Social group benefits:-

*Micro-social benefits contingent on social group membership*

Figure 1 (above) shows the conceptual model for the report. On the basis of our literature review we consider that individuals from differing social groups (according to citizenship, income, or socio-economic status, gender and household type) will have differences in existing social networks and resources (in particular social capital) which means that the impact of VET will differ according to social group membership. Through VET individuals will gain in terms of meso-social benefits such as civic participation, increased interaction with their neighbours and increased enjoyment of communal arenas such as home and leisure. This will be a benefit for communities in general. However, individuals will also gain in terms of micro-social benefits but these will be contingent upon social group membership. For example, individuals who are poorly networked will be less likely to gain from health benefits arising from VET. Hence we have a conceptual model to show that VET leads to meso and micro social benefits that are mediated by membership of various social groups. According to Feinstein (2002) so-called negative effects of VET as compared to academic qualifications are mainly concerned with selection bias. In this report we condition for a number of variables in order to condition for this type of bias.

## Structure of the report

In section 2 we consider the meso-social benefits of VET. We consider that VET may have benefits in terms of social capital (2.1) and group identity and quality of life (2.2). We then consider the ways in which different social groups may, due to existing social capital endowments, benefit differentially from participation in VET (2.3). This is followed by section 3 that gives the findings from our empirical analysis of the ECHPS (European Community Household Panel Survey) and their interpretation.

# 2. Meso-social benefits and differential benefits for social groups

## 2.1 Social capital

Social capital can be described as comprising shared values, networks and understanding between people which in turn develops trust between people and groups. It is the value an individual gets from a social network. Three forms of social capital exist; bonding social capital, bridging social capital and linking social capital. Bonding social capital refers to relations within groups with a sense of identity and common purpose, such as families and ethnic groups. It can be seen as the ‘glue’ that bonds communities. Bridging social capital refers to relations between groups with significant difference and is critically important in combating exclusion by promoting inclusive, cohesive communities (Putnam, 2001). Linking social capital refers to relations between different social strata where power, social status and wealth are accessed by different groups. Key to social capital is civic participation and relationships between individuals (Putnam, 2001). The significance of education for building social capital in communities has been widely recognised, however the role of VET in developing social capital within communities has received much less attention and until now has not been a significant objective.

There is strong evidence that VET can build social networks. Priest (2009) identifies this community benefit suggesting that enhanced interaction with fellow students and teachers enhances socialisation between the students and in turn with others. Additionally an improved ability to interact with authority occurred through VET. These interactions provided new networks and partnerships. Falk (2001) supports this suggesting that networks that are formed and maintained through the types of interaction associated with VET. Social networks are particularly important to a communities’ ability to address local needs and build up capacity to respond to change. The need for such networks and similar partnerships is a characteristic feature of the emergence of the knowledge economy and is now a widely accepted practice of VET initiatives (Allison, Gorringe & Lacey, 2006). Sanders & Nee (1996) suggest that strong personal ties and collective interests within a family of which a member has experienced VET allow pooling of labour, finances, resources and the ability to draw on these resources when establishing small businesses. This ability to pool resources and draw upon them when required provides the potential to create and develop new learning infrastructures and environments, meaning that a wider proportion of the community can engage in learning activities (Allison, Gorringe & Lacey, 2006).

As well as the general effects of VET on social networks VET has specific social capital benefits for excluded groups. Balatti & Falk (2002) consider the benefits of learning and social capital, identifying the potential to draw on social capital (gaining access to resources that were previously unavailable). They suggest that there is strong evidence that vocational adult learning can build social capital in the community by calling on existing networks and by developing new networks. Additionally the opportunities that CVET provides, facilitates bridging social capital through the ability to interact with groups, situations and contexts outside of their community. Balatti & Falk’s (2002) research included interviews with an African women’s CVET programme which provided support to their claims regarding bonding and bridging capital. The women on the programme were refugees who had varying levels of qualifications but had experienced similar trauma. They had no social contact with each other before attending the training programme despite living in the same geographical area. Throughout the programme their confidence grew and they all began meeting socially on a regular basis, attending each other’s events and supporting each other, they had created a community that they all benefited from (bonding capital) as well as inviting other community groups to meet with them (bridging capital). In support Gartenschlaeger (2009) identified that by providing VET in countries in transition, such as Eastern European economies, disadvantaged and marginalised communities, which were impoverished and lacked prospects (both of which, it is suggested, give rise to radicalism), benefited by a reduction in social tension.

At the level of bridging and linking social capital VET is identified as an important means of strengthening local communities with many community partnerships growing out of community concerns in an attempt to address local problems. Seddon & Billett (2004) suggest capacity building as a characteristic of partnerships involving VET with learning and development having the potential to enhance the ability of individuals and organisations to perform functions effectively, efficiently and sustainably. They argue that such capacity building increases individuals’ potential for action and participation in local governance, benefiting the community. Davey (2005) support this by stating that social partnerships involving VET contribute to broader objectives aimed at strengthening communities by building relationships, working productively and with a diversity of partners to enhance a capacity for local governance. This in turn brings a level of trust and engagement within the community enhancing better governance. Kearns (2004) discusses contributions brought by VET to social capital in communities recognising the ability to build social capital in firms, build networks of businesses, develop employability skills (which benefit employment and society), as well as skills relevant to community development, citizenship and strengthening civil society.

Further benefits of VET to communities include the potential to reduce and / or prevent migration of young members of the community, leaving for larger cities in search of paid work. The skills and opportunities VET provides enables people to start their own businesses, often supplying their community with goods and services it previously lacked, adding value to agricultural products, traditional arts and crafts and preserving the culture and traditions of the community (Seddon & Billett, 2004; McOmish & Perera). Other benefits identified included environmental benefits, such as recycling waste and participating in environmental activities within the community such as planting trees and protecting the natural environment (Balatti & Falk, 2002).

## 2.2 Group identity and quality of life: psycho-social benefits of VET

Aside from the social capital literature we consider that there are a number of meso-social benefits of VET located in the social psychology and psycho-social literatures. Although difficult to measure through standard surveys such as the ECHPs these psycho-social benefits may be reflected in terms of reports of improved quality of life.

### 2.2.1: Identity, belonging and VET

Gofman (1959) suggested that occupation or profession is a primary/major source of one’s own value or view of one’s self and Brown et al (2001) suggest that identity gives a sense of stability during the multiple changes in life. Furthermore occupational identity has traditionally represented a highly significant basis for the social identity of many people, with work often being regarded as a medium for personal realisation of biographic intentions and interests (ibid). Heinz (1999) suggests that the VET sector encourages ‘vocational socialisation’, whereby, training, the working process and career patterns provided by VET, connect the individual with community and provide a form of identity. He suggests that as a key point of reference for an individual’s identity, the vocational learning and development processes are becoming increasingly important as traditional frameworks such as religion, family and social class are becoming less important.

Smith (2001) builds on this work by identifying fundamental human needs (FHN) in relation to social capital, focusing particularly on ‘the need to understand’ and learn within VET. FHN are evolving human needs essential to the well-being and development of an individual’s potential. They are seen as ontological, few, finite and classifiable, being constant through all cultures and history (Max-Neef, Elizalde & Hopenhayn, 1991). According to Max-Neef et al (1991) the FHN are; subsistence, protection, affection, understanding, participation, leisure, creation, identity and freedom. The FHN continue to exist even when they are not being satisfied, however serious harm can be caused to personal well-being and ones full potential if any FHN is not being meet at any given time. Smith (2001) posits that the well-being of a community depends on how individuals respond to others FHN’s in their community and vice versa. Social capital is referred to within this context as “an accumulation of accessible cognitive, relational and structural resources, which enable, guide and direct the processes and procedures of human interaction aimed at satisfying FHN” (Smith 2001). The cognitive dimension in this definition refers to the values, norms and resulting trust, while the relational dimension relates to the embedded nature of some elements of social capital such as trust and reciprocity. Lastly the structural dimension refers to social interaction, networks and the sharing of information and resources. The research studied a community of migrants where levels of unemployment where high, Smith (2001) identified the migrants ‘need to understand’, their need to learn English language, coupled with their ‘need to participate’ and ‘freedom’ were satisfied through their participation in a CVET program. Through the individuals FHN being satisfied, the community benefitted through access to community resources, networks (including a social network being established between the migrants and the teacher), trust and shared values.

### 2.2.2: VET and community mental health

Psychologically, being part of a group of people with similar attitudes and behaviours in IVET / CVET provides members of that group with a sense of self-validation, a confirmation of the validity of their perceptions as well as a reduction in anxiety (Carlson, Martin and Buskist, 2004; Schacter, 1959; Festinger, 1954). Additionally, Hogg (2000) suggests that being a member of a group can reduce uncertainty about oneself and one’s place in the world. The need to belong, can be thought of as one of the most fundamental of human motives (Baumeister and Leary, 1995). VET can provide people with this sense of belonging and of role models that support community cohesion (Carlson, Martin and Buskist, 2004). Recognition of ‘soft’ skills developed through VET indicates that personal and social skills are enhanced. The ability to work independently, in a team, and using one’s own initiative are skills of benefit to the individual in their work but also in their community (Heinz, 1999; Billett & Seddon, 2004; McOmish & Perera). Heinz (1999) suggested that the development of such ‘soft’ skills promoted an individual’s identity by promoting a sense of social position. The research identified that skills of most importance to companies were tenacity, patience, teamwork, adaptability, tact, discretion, negotiating skills and sensitivity, all of these skills provided by VET are generic and transferable, from job to community.

A further point relates to health and psychological well-being and the suggestion that the VET sector can provide benefits to the community via improving the well-being of the individual. Balatti & Falk (2002) identified improved psychological well-being as a benefit of VET, evidence of this included repairing psychological damage, reducing isolation and loneliness and increasing self-confidence and self-esteem. While superficially these benefits to psychological well-being may seem only a benefit to the individual, we need to consider and recognise the benefit to the community. Mental health issues put enormous strain on community and society as well as on the health service. A reduction in these symptoms by improving psychological well-being may result in there being less pressure on the health, police and other services. Hammond (2004) & Davey (2005) support this with evidence that improved health and increased happiness occurs with each year of VET. Additionally better care of children was identified suggested to be due to the social connectedness of mothers. This reduces the risk of child abuse and social problems within the family (Davey, 2005; Priest 2009).

This psychological well being effect may cross generations. A generational benefit, of VET, to the community is via the effect of parental role modelling, whereby the behaviour of the parent acts as a stimulus for the child’s behaviour. Davey (2005) suggests that parental role modelling is a key to the education levels of the next generation, because children will usually emulate their parent’s achievements. Buchmann and Dalton (2002) provide further evidence in support of the role modelling effect not being just confined to parental role modelling. Here they show that interpersonal relationships (parental and peer) such as those developed in IVET affect an individual’s educational aspirations, primarily by shaping them but additionally by directly influencing them on occasion. These interpersonal relationships provide a source of support and information which can lead to improved academic outcomes. Brassett-Grundy (2004) supports the role modelling effect with qualitative evidence that shows that children emulate and are motivated by their parent’s educational achievements. In addition to this the research includes references to the role modelling effect of other attributes that would be of benefit to the community, such as responsibility, tolerance and respect. The role modelling effect is also shown to operate in VET through an increase in general community well-being (Priest, 2009). In addition, a developing culture of lifelong learning has been identified as a benefit of VET to communities, potentially facilitated by role modelling (Kearns, 2004; Davey, 2005).

### 2.2.3: VET and social reinforcement

Social reinforcement as a path to better health is an emerging concept from “network science”, a field that suggests and examines how behavioural changes, such as health, spread though social networks. These social networks can be virtual, as in social networking sites, but more often are expressed in terms of our relationships with others. Scientists have recognised the effects of social reinforcement in health related behaviours such as drug use and sleeplessness in teenagers, smoking and obesity. However, scientists, such as Dr Christakis, a Harvard Professor, and Professor Fowler, University of California, are now looking to identify how to promote public health via these networks (The New York Times, 2010). Damon Centola (MIT News <http://web.mit.edu/>2010) suggests that people will be more likely to acquire new and better health practices when they are in close contact with people they know rather than having many “long ties”, otherwise thought of as distant connections. This highlights that for change and adoption of new heath practices and ideas, trust is required. Trust is identified in social capital which is a benefit of VET and the ties that this can create could potentially facilitate better health practices.

## 2.3 Benefits for social groups

We would expect people who engage in VET to benefit differentially according to their membership of different social groups. In this report we look at the differential benefits for social groups and communities. For quantitative purposes the five social groups identified are: income groups, gender, household type, citizenship (nationals, EU nationals, and non-national), and birth place groups. It is important to consider here that these groups can and do overlap at times. We shall consider why these groups may be differentially likely to benefit from VET primarily by highlighting differences in their social capital endowments. The differences in endowments mean that certain groups (low income, women, immigrants, marginalised households) are less likely to benefit from VET, lacking the social capital networks necessary to make best use of their qualifications. We supplement this analysis with a discussion of the results from our focus groups on other social factions (Roma, Muslim faith groups and Refugees) as discussed in section 4.1.

## 2.3.1 Income groups

When examining differing income groups we are tacitly discussing classes and / or socioeconomic statuses (SES). A common finding is that those in the middle / upper classes, or higher income groups, have been shown to have more access to social capital resources (information, influence, opportunity and access to financial resources) than those of working class origin with lower incomes. As a result this has contributed to these groups having superior jobs and better pay than the working class and low income groups (Parks-Yancy, DiTomaso & Post, 2006). Furthermore, research examining immigrant self-employment has shown that the odds of self employment for women is 50% higher if they have a school or college degree than if they have less of an education (Sanders & Nee, 1996). This supports the view that the middle and higher classes have better access to social capital resources, in this case enabling them to achieve self-employment, possibly through their social capital resources within their family.

## 2.3.2 Gender

Research has shown that women have lower access to social capital resources and lower returns from social capital resources than men (Parks-Yancy, DiTomaso & Post, 2006; Lin, 2001; Moore, 1990). This appears to be due to men having social ties which are richer in information, influence and opportunity than women’s (Lin, 2001). Women therefore may be hindered, for example in career development and maturation, by their inability to access social capital resources compared to men (Timberlake, 2005). The gender difference in human capital (education, intelligence, skills and experience) is not thought to be as differential as that in social capital, however human capital alone is not enough to succeed and is often strengthened or weakened by available social capital (Timberlake, 2005). Barr (1998) suggests that when women do access networks they are not as effective for women as for men in generating success. A further gender difference is evident when considering the strength of weak ties. Women’s networks are characterised by small, close groups with strong ties, compared with men who tend to have weak ties to a larger network of people. Granovetter (1973) suggests that these weak ties to a larger and more diverse network are more significant and create greater benefits.

## 2.3.3 Household type

Family is an important form of social capital, providing, in many cases, strong personal ties. However this is not always the case, and lack of these ties can facilitate isolation and a reduction in available social capital networks. Family composition has changed over the recent decades from the traditional structure of a couple with children to couples without children and single people with children to a growth in single people with and without children. Therefore the social capital networks associated with household types inevitably will be as diverse. Runyan et al (1996) suggest that for families who have few financial and educational resources social capital is most important. Families can provide essential social capital in the form of mutual obligation and trust which can be highly motivating and encourage cooperation within a group in the pursuit of a common goal (Sanders & Nee, 1996).

## 2.3.4 Citizenship

It could be said that nationals would have better social capital networks than immigrants. Research suggests that immigrant families have strong personal ties within their families (Sanders & Nee, 1996) and as such provide their own sources of social capital. However these are restricted to within their own family and there may be a barrier to these groups knowledge and access to VET. Furthermore, a lack of English language skills could be a mediating factor in these groups remaining isolated and further reducing their access to wider social networks and social capital resources and is often the reason for immigrant self employment (Evans, 1989). For many refugees and immigrants, self employment is an important option in the groups’ upward mobility when faced with limited and restricted employment opportunities. Their access to strong personal ties within the family allows them to pool their social capital resources and utilise their families skills to economise on production and transaction costs. Additionally, the use of family labour and human capital (e.g. Education) can contribute to business longevity (Sanders & Nee, 1996). However, whilst it is recognised that relying on close family ties when starting a business aids refugees and immigrants, it could hinder the businesses continued success if ethnic resources are continually relied on (Kim and Hurh, 1985; Yoon, 1991). Note

The main focus of the literature discussed above has been on the meso social benefits of VET to communities, little discussion has focused on the negative aspects of engaging with VET. This is largely due to a lack of literature covering this topic which may be in part due to a lack of evidence. Although the European Community Household Panel (ECHP) discussed in chapter 3 will highlight some negativity found in the empirical analysis, this of course cannot be sole attributed to VET being the only cause of the negative outcomes. There are often many other confounding variables at play that can and do affect these results, especially with quantitative data, that the cause of the negative effects is often not known. The qualitative literature does not support the empirical analysis on this issue.

3 Findings

## 3.1 Introduction

From the above review of literature we consider that we should expect participation in VET to lead to increased social capital (measured by civic participation or informal social relations with neighbours) and with identity / integration (measured here by a proxy for quality of life indicators being satisfaction with home or leisure). Additionally, we would consider that social benefits would differ between social groups as they possess (amongst other things) differential access to social capital networks.

## 3.2 Data

In this report, the European Community Household Panel (ECHP) is used. The data is a longitudinal panel survey covering 15 countries differentiated by the institutional characteristics of their education systems. The first wave of the data is for 1994 and covers around 60500 households (around 130000 adults aged 16 or older), and the last wave is for 2001. The longitudinal design of the data makes it possible to follow the same individuals and households over time, and hence to apply panel data methods. However, one should note that individuals can move from one household to another during the survey periods (by getting married, by leaving the parental household, etc). Furthermore, the data was developed in a way that makes it fully comparable across countries.

The countries participating in ECHP from the first wave are: Germany, Denmark, Netherlands, Belgium, Luxemburg, France, Ireland, Italy, Greece, Spain, Portugal and the UK. In addition to these countries, Austria joined the survey in the second wave (1995), Finland in the third (1996) and Sweden in the fourth (1997). After the third wave, the ECHP survey was stopped in Germany, the UK and Luxembourg and existing national surveys were used instead.

One of the major objectives of this report is to assess the meso-social and differential social benefits of VET for social groups. In order to do so, we have to select social groups as well as social benefits.

In our analysis, we distinguish between four social groups: income groups (lower, middle and upper income), gender, cohabitation status (single or couple), citizenship (nationals, EU nationals, and non-national), and birth place (within or without the country of residence where the individuals were surveyed). It should be noted that all the statistics computed within this section of the report are for Europe (the entire data set) and for the five groups of countries identified in the typology of VET systems in Sabates et al. These are:

System 1: Germany, Denmark, Luxemburg and Austria.

System 2: Netherlands, Belgium and France

System 3: UK and Ireland

System 4: Italy, Greece, Spain and Portugal

System 5: Finland and Sweden

The proportion of each social subgroup is given in the tables 1 - 5.

Table : Income groups in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Individual income groups** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | 50.69 | 43.25 | 44.87 | 45.6 | 63.79 | 33.35 |
| Middle income | 16.34 | 23.43 | 21.8 | 21 | 0.03 | 33.33 |
| Upper income | 32.97 | 33.32 | 33.33 | 33.4 | 36.18 | 33.32 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Household income groups** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | 34.31 | 33.33 | 33.34 | 33.33 | 35.77 | 33.35 |
| Middle income | 32.39 | 33.33 | 33.40 | 33.33 | 30.91 | 33.33 |
| Upper income | 33.30 | 33.33 | 33.26 | 33.33 | 33.32 | 33.32 |

It is worth noting that two definitions of income were used. The first (the first table) is individual income. The second (the second table) is household income. Household income was computed by averaging individual income at the household level for each wave and each country. The reason for doing it is that individual income might not reflect the true resources of a person. For instance young individuals or women might have a very low individual income but still benefit from a high level of household income in case the main breadwinner (possibly the husband) has a relatively high individual income.

Income groups were constructed by dividing the data set into 3 terciles for lower, middle and upper income. Usually, each tercile should contain 33.33 % of the observations. However, for individual income, the lower tercile contains a much larger fraction. This happens because some individuals aged between 16 and 25 are still in full time education and they do not have a source of income. This is also true for housewives. Hence all individuals without income are in the lowest tercile, and in case their proportion exceeds 33.33 % then the lower income tercile will be larger than one third of the data. The variable we are using to derive these groups is net income from work.

From the first table, we can see that for all systems the lowest tercile is bigger than the middle one, while the upper tercile accounts for approximately one third of the population. Another interesting finding is that in system 4 (the Mediterranean countries) the middle individual income group is almost absent In systems 1, 2 and 3 the middle group accounts for about 20% of the population (the middle group is still smaller than the two other groups). In system 5 (the Nordic countries) it is possible to see that the population is divided equally between the three terciles. This is a reflection of the more homogenous distribution of income within these countries.

When it comes to household income the picture is different since all the categories are relatively balanced with about 33% for each. In system 4, the findings indicate the existence of a traditional division of labour where income is low for some individuals (youth and women) while a single person is working to sustain the family. The reverse is true for the Nordics where the distribution is balanced for both individual and household incomes.

Table : Gender groups in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Male | 48.08 | 48.34 | 47.37 | 47.56 | 48.15 | 49.61 |
| Female | 51.91 | 51.66 | 52.63 | 52.44 | 51.85 | 50.39 |

Table : Cohabitation groups in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | 33.64 | 31.88 | 29.09 | 37.18 | 36.46 | 32.08 |
| Couple | 66.36 | 68.12 | 70.91 | 62.82 | 63.54 | 67.92 |

In all systems, the proportion of couples is by far larger than that of singles. One should note that all systems have similar results on this statistic.

Table : Citizenship groups in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | 1.95 | 5.6 | 1.6 | 1.3 | 0.4 | 1.6 |
| Nationals | 95.77 | 86.74 | 96.48 | 97.87 | 99.41 | 97.29 |
| EU nationals | 2.28 | 7.66 | 1.92 | 0.83 | 0.19 | 1.11 |

Citizenship distinguishes between nationals, immigrants from the EU and immigrants from the rest of the world. However, it does not allow us to identify second or third generation immigrants since these are considered as nationals. Even though, it is still interesting to use this variable in order to identify differences in social outcomes for these groups. One should note that ECHP does not provide information on ethnicity.

Table : Birth place groups in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Birth place** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | 4.1 | 5.52 | 7.97 | 2.20 | 2.44 | 3.45 |
| People born in the country of residence | 95.9 | 94.48 | 92.03 | 97.80 | 97.56 | 96.55 |

Place of birth allows more precision when dealing with immigrant groups. It identifies people who were born outside the country of residence (where they were surveyed) and who got the citizenship of this country. In fact, this group of people would be considered as nationals under the citizenship variable. However, it should be kept in mind that both variables (citizenship and place of birth) do not allow the identification of second and third generation immigrants born inside the country of residence.

## 3.3 Social outcome variables.

For this report, we chose a number of indicators covering different aspects of civic participation, relations with neighbours (social capital), psychological well being (quality of life) and health. For health, we retained Self rated health, chronic health problems, and body mass index. For civic participation and social bonding, we retained membership of civic organisation and relations with neighbours respectively. Finally, for psychological well being, we retained satisfaction with housing and with leisure. In what follows (tables 6 to 12) we present some descriptive statistics using these variables for Europe and the five systems.

Table : Membership of civic organisations in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Membership of civic organisations** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| 1994 | 31.79 | 35.79 | 34.83 | 51.12 | 17.29 |  |
| 1995 | 32.08 | 37.73 | 34.02 | 52.6 | 17.24 |  |
| 1996 | 33.97 | 40.42 | 35.21 | 53.03 | 17.53 | 55.04 |
| 1997 | 33.86 | 40.1 | 35.74 | 51.97 | 18.03 | 59.72 |
| 1998 | 32.27 | 39.98 | 35.46 | 44.68 | 18.59 | 59.76 |
| 1999 | 34.95 | 41.24 | 35.73 | 52.53 | 20.04 | 60.18 |
| 2000 | 33.92 | 54.61 | 36.86 | 46.55 | 20.18 | 62.1 |
| 2001 | 35.47 | 54.91 | 37.24 | 47.55 | 21 | 69.52 |

For civic participation, we selected only one indicator: membership of civic organisations. The information was obtained from the following question “are you a member of any club, such as sport or entertainment club, a local or neighbourhood group, a party etc?” data is available for all countries and all waves except for Luxemburg, Austria (with information missing for 1994), Germany (with information missing for the last two waves), Finland and Sweden ( with information missing for the first two and first three waves respectively), and the UK (with information missing for 1998, 2000 and 2001).

There are large differences between the five systems, with the Nordic countries (system 5) coming on top followed by the Liberals (system 3). The Mediterranean countries have the lowest levels of civic participation and central European countries (systems 1 and 2) are middle ranking.

Table : Relations with neighbours in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Relations with neighbours** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Frequent | 46.52 | 35.67 | 15.74 | 49.08 | 64.03 | 41.99 |
| Occasional | 43.99 | 53.79 | 65.99 | 44.83 | 29.99 | 49.04 |
| Rare | 9.49 | 10.54 | 18.27 | 6.09 | 5.98 | 8.97 |

For social bonding, we selected one variable accounting for relations with neighbours. The information is obtained from the question “how often do you talk to any of your neighbours?” The data is available for all countries and waves except for Germany, Luxemburg, Sweden, and the UK (only the first three waves are missing). The findings show that relations with neighbours are the most frequent in the Mediterranean countries, followed by the liberals, Nordics, and finally by central European countries.

Table : Satisfaction with housing in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Satisfaction with housing** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| 2000 | 4.58 | 5.17 | 4.86 | 5.04 | 4.1 | 4.8 |

Table : Satisfaction with leisure in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Satisfaction with leisure** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| 2000 | 4.16 | 4.73 | 4.31 | 4.56 | 3.83 | 4.35 |

The final domain of social outcomes is well being. For this domain, we selected two variables accounting for satisfaction with housing and satisfaction with leisure time. These two variables were already computed and available in the ECHP dataset. The rating of self-reported satisfaction used a 1 to 6 scale with 6 being fully satisfied. We treated these variables as continuous and their averages were computed. The system where people report the highest level of satisfaction with housing is system 1 followed by systems 3, 2, 5 and 4. Similarly, the system where people report the highest level of satisfaction with leisure is system 1 followed by systems 3, 5, 2 and 4.

Table : Self rated health in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Self rated health** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Very good | 2.23 | 2.6 | 2.1 | 1.5 | 2.5 | 0.8 |
| Good | 7.87 | 9.4 | 3.91 | 5.6 | 10 | 4.78 |
| Fair | 24.42 | 25.95 | 26.3 | 19.26 | 24.55 | 24.11 |
| Bad | 42.98 | 38.94 | 50.67 | 41.1 | 41.08 | 41.95 |
| Very bad | 22.5 | 23.11 | 17.02 | 32.54 | 21.87 | 28.36 |

Self rated health was obtained from the question “how is your health in general” with five possible answers ranging from very bad to very good. From the table it is possible to see that system 3 is the one with the highest proportion of people reporting very bad health, followed by system 5, 1, 2 and 4. Further, we can see that in all systems most people report very bad, bad, or fair health. Those reporting good and very good health do not exceed 10% of the population.

Table : Chronic health problems in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chronic health problems** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Yes | 25.52 | 31.77 | 23 | 30.38 | 19.23 | 40.7 |
| No | 74.48 | 68.23 | 77 | 69.62 | 80.77 | 59.3 |

For chronic health problems, we are using the question “are you hampered in your daily activities by any chronic physical or mental health problem, illness of disability?” Compared with self rated health, this variable has one wave less (for 1994). All systems have approximately 20% to 30% of people suffering from chronic health conditions except for system 5 which has a proportion of 40%.

Table : BMI in ECHPS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **BMI average** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| 1998 | 24.87 | 24.73 | 24.58 | 24.64 | 24.93 | 25.03 |
| 1999 | 24.89 | 24.79 | 24.66 | 24.65 | 24.96 | 24.86 |
| 2000 | 24.93 | 24.86 | 24.68 | 24.72 | 24.98 | 24.96 |
| 2001 | 25.02 | 24.89 | 24.76 | 24.77 | 25.09 | 24.04 |

The **body mass index** (**BMI**) is a statistical measure of body weight based on a person's weight and height. Though it does not measure the percentage of body fat, it is used to estimate a healthy body weight based on a person's height. This index was already contained in the ECHP dataset and was only available for the last four waves. Further, this variable was not available for Germany, France, Luxemburg, Netherlands and the UK. The table shows average BMI for each system and for Europe as a whole. We can see that average BMI does not vary much between systems even though it is slightly increasing over this period of time.

## 3.4 Social outcomes by social group.

Table 13: Gender and self rated health

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Self rated health** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Good | 4.1 | 3.7 | 4.9 | 4.1 | 3.9 | 4.2 |
|  | Very bad | 2.4 | 2.9 | 2.4 | 1.7 | 2.9 | 0.9 |
| Male | Good | 4.4 | 4 | 5.1 | 4.08 | 4.3 | 4.1 |
|  | Very bad | 1.9 | 2.2 | 1.9 | 1.3 | 2.2 | 0.8 |

Table 14: Gender and chronic health problems

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Chronic health problems** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Yes | 27.02 | 33.67 | 24.25 | 32.44 | 20.58 | 42.73 |
| Male | Yes | 23.88 | 29.72 | 21.61 | 28.11 | 17.77 | 38.6 |

Table 15: Gender and BMI

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **BMI** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Average | 24.37 | 24.23 | 24.12 | 24.11 | 24.42 | 24.5 |
| Male | Average | 25.52 | 25.43 | 25.29 | 25.28 | 25.6 | 25.45 |

Table 16: Gender and membership of civic organisations

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Membership of civic organisations** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Yes | 27.82 | 34.52 | 31.57 | 45.15 | 12.61 | 58.08 |
| Male | Yes | 39.47 | 48.37 | 39.9 | 57.88 | 25.12 | 64.46 |

Table 17: Gender and relations with neighbours

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Relations with neighbours** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Frequent | 48.71 | 38.19 | 16.87 | 50.34 | 67.12 | 41.89 |
| Male | Frequent | 45.63 | 32.97 | 14.49 | 47.71 | 60.68 | 42.1 |

Table 18: Gender and satisfaction with housing

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Satisfaction with housing** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Average | 4.55 | 5.16 | 4.85 | 5 | 4.14 | 4.85 |
| Male | Average | 4.54 | 5.13 | 4.82 | 5.04 | 4.16 | 4.79 |

Table 19: Gender and satisfaction with leisure

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Gender** | **Satisfaction with leisure** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Female | Average | 4.18 | 4.8 | 4.35 | 4.59 | 3.85 | 4.43 |
| Male | Average | 4.15 | 4.66 | 4.31 | 4.56 | 3.87 | 4.34 |

Tables 14 – 19 (above) provide the outcome variables by gender. In all systems, the percentage of males reporting good health is higher than that of females, and the reverse is true for very bad health. When comparing systems, we find that system 1 and system 4 have the highest rate of people reporting very bad health. In contrast, Nordic countries have the lowest rate of males and females reporting very bad health, and the figures are almost the same for men and women. For chronic health problems, we find that females report more problems than men. Further, system 5 comes on top on this indicator for both men and women followed by systems 1, 3, 2 and 4. Men have a higher BMI than females and the results are almost identical between systems. When it comes to participation in civic organisations, males are more active than females. However, females have more frequent relations with their neighbours. For satisfaction with housing and with leisure time, the figures are almost identical for both.

Table 20: Income and self rated health

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **Self rated health** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Good | 36.60 | 33.30 | 42.57 | 38.41 | 35.08 | 33.90 |
|  | Very bad | 3.73 | 4.92 | 3.93 | 2.68 | 3.76 | 2.03 |
| Middle income | Good | 47.57 | 40.68 | 55.71 | 44.78 | 50.28 | 43.53 |
|  | Very bad | 0.99 | 1.19 | 1.08 | 0.92 | 1.28 | 0.48 |
| Upper income | Good | 50.63 | 44.74 | 58.27 | 42.46 | 51.78 | 48.65 |
|  | Very bad | 0.48 | 0.77 | 0.55 | 0.47 | 0.40 | 0.14 |

Table 21: Income and chronic health

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **Chronic health problems** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Yes | 33.34 | 43.67 | 34.68 | 41.42 | 25.01 | 58.19 |
| Middle income | Yes | 22.54 | 24.67 | 15.39 | 24.77 | 14.63 | 33.58 |
| Upper income | Yes | 15.05 | 21.92 | 12.58 | 19.44 | 8.55 | 29.68 |

Table 22: Income and BMI

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **BMI** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Average | 25.17 | 25.22 | 25.14 | 24.84 | 25.16 | 25.43 |
| Middle income | Average | 24.00 | 23.75 | 23.55 | 23.62 | 24.17 | 24.26 |
| Upper income | Average | 24.85 | 24.95 | 24.68 | 24.87 | 24.76 | 25.22 |

Table 23: Income and membership of civic organisations

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **Membership of civic organisations** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Yes | 27.18 | 36.92 | 32.44 | 44.13 | 15.69 | 58.35 |
| Middle income | Yes | 40.71 | 39.50 | 34.59 | 50.32 | 17.19 | 59.53 |
| Upper income | Yes | 39.72 | 47.90 | 40.41 | 62.38 | 24.54 | 66.02 |

Table 24: Income and relations with neighbours

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **Relations with neighbours** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Frequent | 54.48 | 58.71 | 18.81 | 58.71 | 68.34 | 46.06 |
| Middle income | Frequent | 35.17 | 46.58 | 16.60 | 46.58 | 63.05 | 41.79 |
| Upper income | Frequent | 38.65 | 37.58 | 11.08 | 37.58 | 55.71 | 38.15 |

Table 25: Income and satisfaction with housing

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **Satisfaction with housing** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Average | 4.49 | 5.25 | 4.90 | 5.06 | 4.12 | 4.93 |
| Middle income | Average | 4.69 | 5.00 | 4.75 | 4.94 | 3.93 | 4.74 |
| Upper income | Average | 4.58 | 5.13 | 4.82 | 5.02 | 4.23 | 4.82 |

Table 26: Income and satisfaction with leisure

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Income** | **Satisfaction with leisure** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Lower income | Average | 4.32 | 5.04 | 4.65 | 4.78 | 3.99 | 4.75 |
| Middle income | Average | 4.27 | 4.61 | 4.24 | 4.52 | 3.83 | 4.32 |
| Upper income | Average | 3.89 | 4.44 | 3.97 | 4.33 | 3.63 | 4.12 |

Tables 20 – 26 provide cross tabulations of individual income by the outcome variables. In all systems, self rated health seems to be positively related to income levels. The higher income is, the larger the proportion of individuals reporting good health, and the reverse is true for very bad health. The findings are similar for chronic health problems. The higher income is, the lower the proportion of people reporting chronic health conditions. When it comes to BMI, we find that the middle income group has the lowest value on the index followed by the upper income group and then by the lower income group.

Membership of civic organisations as well seems to be positively correlated with income, since the higher income is the larger the proportion of individuals participating in civic organisations is. However, relations with neighbours seems to operate in the opposite direction with those with the lowest income having more frequent relations with their neighbours. This is an indication that different forms of social capital, civic participation and social bonding do not necessarily work in the same way. The findings on satisfaction with leisure and with housing are very similar for all income groups, and both variables do not behave exactly as expected with lower income groups being more satisfied in some of the systems.

Table 27: Citizenship and self rated health

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Self rated health** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Good | 43.32 | 43.27 | 45.50 | 44.53 | 39.68 | 40.38 |
|  | Very bad | 3.35 | 3.65 | 3.95 | 4.05 | 1.54 | 1.30 |
| Nationals | Good | 42.84 | 38.64 | 50.87 | 39.10 | 41.08 | 42.02 |
|  | Very bad | 2.21 | 2.51 | 2.12 | 1.49 | 2.58 | 0.88 |
| EU nationals | Good | 42.52 | 39.21 | 46.03 | 39.27 | 49.54 | 36.51 |
|  | Very bad | 3.05 | 3.51 | 4.00 | 1.13 | 1.23 | 1.64 |

Table 28: Citizenship and chronic health problems

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Chronic health problems** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Yes | 25.97 | 27.61 | 20.68 | 35.99 | 13.90 | 32.15 |
| Nationals | Yes | 25.26 | 31.99 | 23.03 | 29.17 | 19.27 | 40.84 |
| EU nationals | Yes | 28.09 | 33.01 | 25.02 | 21.73 | 10.48 | 41.09 |

Table 29: Citizenship and BMI

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **BMI** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Average | 24.54 | 24.72 | 24.29 | 22.11 | 24.67 | 24.31 |
| Nationals | Average | 24.93 | 24.83 | 24.63 | 24.68 | 24.99 | 24.99 |
| EU nationals | Average | 24.89 | 23.17 | 25.63 | 25.26 | 24.06 | 24.88 |

Table 30: Citizenship and membership of civic organisation

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Membership of civic organisations** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Yes | 17.80 | 15.68 | 12.76 | 49.42 | 13.52 | 39.57 |
| Nationals | Yes | 33.06 | 43.49 | 36.26 | 47.94 | 18.64 | 61.61 |
| EU nationals | Yes | 25.58 | 21.57 | 20.90 | 44.57 | 19.72 | 55.94 |

Table 31: Citizenship and relations with neighbours

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Relations with neighbours** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Frequent | 31.12 | 30.70 | 15.53 | 35.89 | 56.15 | 26.54 |
| Nationals | Frequent | 46.83 | 35.77 | 15.67 | 49.28 | 64.08 | 42.14 |
| EU nationals | Frequent | 32.55 | 37.80 | 19.05 | 43.06 | 60.34 | 33.03 |

Table 32: Citizenship and satisfaction with housing

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Satisfaction with housing** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Average | 4.20 | 4.20 | 4.18 | 4.95 | 3.97 | 4.45 |
| Nationals | Average | 4.55 | 5.17 | 4.86 | 5.02 | 4.15 | 4.83 |
| EU nationals | Average | 4.69 | 4.80 | 4.68 | 4.86 | 4.41 | 4.73 |

Table 33: Citizenship and satisfaction with leisure

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Citizenship** | **Satisfaction with leisure** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Non-nationals | Average | 4.13 | 4.40 | 4.12 | 4.42 | 3.81 | 4.10 |
| Nationals | Average | 4.17 | 4.75 | 4.34 | 4.59 | 3.87 | 4.39 |
| EU nationals | Average | 4.24 | 4.49 | 4.20 | 4.35 | 3.92 | 4.39 |

Tables 27 – 33 provide the outcome variables by citizenship. In systems 1 and 3, the proportion of non-nationals and EU nationals reporting good health is larger than that of their national counterparts. Further, the proportion of non-nationals reporting good health is larger than that of the EU nationals. In contrast, in systems 2 and 5, the proportion of nationals reporting good health is larger. In system 4, EU nationals come on top followed by nationals and non-nationals. The proportion of individuals reporting chronic health problems is larger among EU nationals followed by nationals and then non-nationals in systems 1, 2 and 5. In system 3, non-nationals come on top followed by nationals and EU nationals, and in system 4 nationals come on top followed by non-nationals then by EU citizens. For BMI, the numbers are very similar and no particular pattern can be identified.

In all systems, the proportion of individuals involved in civic organisations is higher among nationals followed by EU citizens except in system 3 (Liberals) where non-nationals are the most involved followed by nationals and then EU citizens. This finding is intuitive since, it is expectable that nationals are more concerned with issues relating to their country. Similarly, relations with neighbours are more frequent among nationals followed by EU citizens and non-nationals in all systems without exception. Concerning satisfaction with housing and leisure, nationals report higher levels of satisfaction in general followed by EU citizens and non-nationals.

Table 34: Status and self rated health

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Self rated health** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Good | 40.34 | 36.48 | 46.99 | 37.86 | 39.82 | 39.05 |
|  | Very bad | 2.58 | 3.09 | 2.77 | 1.77 | 2.83 | 1.13 |
| Couple | Good | 44.22 | 40.05 | 52.05 | 43.02 | 41.81 | 43.34 |
|  | Very bad | 2.05 | 2.40 | 1.97 | 1.45 | 2.43 | 0.77 |

Table 35: Status and chronic health problems

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Chronic health problems** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Yes | 24.91 | 29.35 | 25.09 | 29.82 | 18.65 | 40.10 |
| Couple | Yes | 25.85 | 32.87 | 22.28 | 30.72 | 19.57 | 40.93 |

Table 36: Status and BMI

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **BMI** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Average | 23.93 | 23.97 | 23.90 | 23.66 | 23.91 | 24.17 |
| Couple | Average | 25.47 | 25.25 | 25.03 | 25.44 | 25.60 | 25.36 |

Table 37: Status and membership of civic organisations

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Membership of civic organisations** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Yes | 31.13 | 39.46 | 33.04 | 47.70 | 17.97 | 58.02 |
| Couple | Yes | 34.50 | 41.99 | 36.55 | 53.48 | 18.99 | 62.70 |

Table 38: Status and relations with neighbours

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Relations with neighbours** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Frequent | 45.01 | 32.00 | 14.65 | 49.13 | 59.24 | 38.69 |
| Couple | Frequent | 47.61 | 37.53 | 16.27 | 49.07 | 66.75 | 43.36 |

Table 39: Status and satisfaction with housing

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Satisfaction with housing** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Average | 4.45 | 5.04 | 4.75 | 4.89 | 4.10 | 4.69 |
| Couple | Average | 4.60 | 5.20 | 4.88 | 5.10 | 4.18 | 4.88 |

Table 40: Status and satisfaction with leisure

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohabitation status** | **Satisfaction with leisure** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| Single | Average | 4.31 | 4.85 | 4.47 | 4.70 | 4.05 | 4.56 |
| Couple | Average | 4.10 | 4.69 | 4.28 | 4.51 | 3.76 | 4.33 |

Tables 34 – 40 provide the outcome variables by habitation status. Across all systems a larger proportion of couples report good health in comparison with singles. For chronic health conditions, the results are more or less the same for both groups, with couples reporting slightly higher more chronic health problems (except for system 2). When it comes to BMI, couples have the higher average BMI across all systems.

In all systems, the proportion of couples who are members of civic organisations is always higher than that of single individuals. Couples also have more frequent relations with their neighbours than singles (except in system 2 where the numbers are the same for both categories). In all systems, couples are more satisfied with housing than singles and less satisfied with leisure.

Table 41: Birthplace and self rated health

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **Self rated health** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Good | 41.74 | 39.53 | 44.11 | 35.51 | 41.10 | 48.83 |
|  | Very bad | 2.67 | 1.99 | 4.27 | 0.69 | 2.02 | 1.05 |
| People born in the country of residence | Good | 42.04 | 36.03 | 48.90 | 40.79 | 41.11 | 46.10 |
|  | Very bad | 2.26 | 1.57 | 2.71 | 1.56 | 2.60 | 0.72 |

Table 42: Birthplace and chronic health problems

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **Chronic health problems** | **Europe** | **System 1** | **System 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Yes | 21.26 | 21.91 | 24.40 | 19.14 | 14.92 | 34.03 |
| People born in the country of residence | Yes | 23.42 | 26.50 | 21.64 | 30.67 | 19.54 | 37.40 |

Table 43: Birthplace and BMI

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **BMI** | **Europe** | **System 1** | **System 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Average | 24.74 | 24.83 | 25.30 | 25.10 | 24.46 | 24.67 |
| People born in the country of residence | Average | 24.98 | 24.85 | 24.64 | 24.68 | 25.04 | 25.19 |

Table 44: Birthplace and civic participation

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **Membership of civic organisations** | **Europe** | **System 1** | **System 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Yes | 25.80 | 33.80 | 23.10 | 44.61 | 15.48 | 50.42 |
| People born in the country of residence | Yes | 31.10 | 54.75 | 32.55 | 51.15 | 18.72 | 55.68 |

Table 45: Birthplace and relations with neighbours

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **Relations with neighbours** | **Europe** | **System 1** | **System 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Frequent | 35.95 | 35.32 | 12.42 | 49.17 | 56.19 | 36.13 |
| People born in the country of residence | Frequent | 49.30 | 35.77 | 11.26 | 50.48 | 64.39 | 42.30 |

Table 46: Birthplace and satisfaction with housing

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **Satisfaction with housing** | **Europe** | **System 1** | **System 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Average | 4.47 | 4.67 | 4.59 | 4.79 | 4.11 | 4.70 |
| People born in the country of residence | Average | 4.50 | 5.18 | 4.79 | 5.03 | 4.15 | 4.83 |

Table 47: Birthplace and satisfaction with leisure

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Birth** | **Satisfaction with leisure** | **Europe** | **System 1** | **system 2** | **System 3** | **System 4** | **System 5** |
| People born abroad | Average | 4.17 | 4.64 | 4.22 | 4.30 | 3.85 | 4.25 |
| People born in the country of residence | Average | 4.14 | 4.75 | 4.29 | 4.60 | 3.87 | 4.40 |

Tables 41 – 47 provide outcome variables by birthplace. On the one hand, for self rated health the picture is mixed. The proportion of people born within the country of residence and who report good health is larger than that of people born aboard in systems 2, 3 and 4 while the reverse is true for systems 1 and 5. On the other hand, the proportion of individuals reporting chronic health problems and born outside the country of residence is lower than that of those born within this country (except for system 2). For BMI, the findings are mixed and no particular pattern can be identified.

As expected, the proportion of individuals born within the country of residence and involved in civic organisations is larger than that of those born outside the country of residence. This is intuitive since it is expected that the former are more concerned with their country’s affairs. We find the same results for relations with neighbours, even though the difference between the proportions is smaller. Concerning satisfaction with housing and leisure, we find that people born within the country of residence are more satisfied than those born outside it, and this is true across all systems and for both measures.

## 3.5 Educational variables

In order to estimate the impact of VET on the aforementioned social outcomes we have to distinguish between academic and vocational qualifications.

ECHP contains data on the highest qualifications achieved by every individual. These achievements were classified into four categories: (i) recognised third level education, (ii) second stage of secondary level, (iii) first stage of secondary level, and (iv) less than secondary education. Unfortunately, we are unable to differentiate whether these highest qualifications were obtained from a vocational or an academic route or a combination of both. Apart from the highest qualifications achieved, ECHP contains information on the episodes of education and training that took place during the year previous to the interview. Education and training was classified into general education, vocational education or language courses (or other adult education courses) as well as all the combinations between these different types of education. In our report, we are reclassifying these variables into three categories: (i) no education at all, (ii) general education, (iii) and VET. The aim of this classification is twofold: first, to isolate individuals who had undertaken VET courses alone (or in conjunction with language courses) from the rest of individuals and then to be able to measure the association of VET with social outcomes for these individuals compared with other individuals. Note that the proportion of individuals participating in different types of courses across Europe between 1995 and 2001 was given in Sabates et al. Around 10 per cent of individuals participated in VET or VET and language courses and around 8 per cent participated in general education or general education and language courses. Participation in combination of VET and general education courses and language courses was relatively small (Figure 2, below).

Figure 2: Participation in continuing education across Europe from 1995 to 2001.



It should be noted that in Sabates et al, the authors distinguished between IVET/CVET formal/informal VET and sources of funding. This will not be done in this report. In Sabates et al, the objective was to assess the social outcomes of VET in general (in Europe and by system). However, in our case, we have to assess the social outcomes of VET for social groups. In our analysis, we have seven outcomes and five social groups. Thus we have to undertake at least 35 regressions. Including these distinctions will only lead to the fractioning of the dataset (the small number of observations for each subsample will impair estimation) and since only 10% of the entire sample undertook VET, dividing the latter into IVET/CVET or formal/informal and then into social groups might lead to completely insignificant results. In Sabates et al, the authors did not have this constraint since they did not have to deal with social groups.

## 3.6 Control variables

The ECHP data set contains variables that can be used as controls which will allow us to identify whether any association between VET and social outcomes is the result of these factors. In our models the controls we are using are the same as our social groups in addition to some other variables. In fact we are including income groups, gender, cohabitation status, citizenship and place of birth in addition to employment status and a full range of year dummy variables. The highest level of educational attainments (classified in ISCED levels) is also used to assess the positional effects of VET.

In order to measure the impact of VET on social outcomes for social groups, we are interacting these social groups with VET episodes over time. In other words, if we are interacting VET with income, then the rest of the social groups can be considered as controls.

It is also worth noting that when interacting income with education episodes we used household income in order to account for the fact that people living in the same household might benefit from the pooled resources. However, when income was used as a control variable (for the interactions between education episodes and social groups other than income) both individual and household income generated the same results. In these equations the results are not sensitive to which type of income we are using.

## 3.7 Estimation strategy

In order to measure the effect of VET on social outcomes for social groups the following model will be estimated using fixed effects panel data models:



i Denotes an individual, t a time period and c a system.

Denotes social outcomes of individual i in time period t living in system c. S is a function of the following:



Vocational education and training undertaken by the individual in each period.



a matrix of individual demographic characteristics which vary over time, and across countries and individuals such as income, marital status, citizenship, employment status, and cohabitation status.



is an interaction term designed to measure the effect of belonging to a particular social group interacted with episodes of VET. The belonging to these social groups might vary over time.



Individual time invariant fixed effects (treated as intercepts in fixed effects models).



Period heterogeneity that affects all individuals in a particular year. These are included as year dummies.



Time-varying individual heterogeneity such as changes in self-efficacy, self-esteem or aspirations.



A measurement error which is assumed to be random with a zero mean and a constant variance.



It should be noted that in fixed effects panel data models, it is not possible to include time invariant variables or time invariant heterogeneity (system specific effects). In order to overcome this limitation, we are estimating the model by system and by subsamples of the dataset accounting for gender, place of birth, and for the highest level of education (for positional effects of VET).

Studies using cross-sectional data (which do not contain a time dimension) or panel data (which contain a time dimension, but it is ignored in the estimation) tend to employ multivariate regression analysis to estimate the parameters of the model. Whether the analysis is linear or non-linear depends on the nature of the dependent variable. For continuous dependent variables, the most common estimation method is linear regression. For dichotomous, ordered or categorical dependent variables, the most common estimation methods are non-linear (logit). Further, estimation methods which ignore the panel structure of the data may include country fixed effects, by means of individual country dummy variables. Including control variables in the analysis allows us to control for factors that may influence social outcomes and to investigate whether variations in outcome are due to VET or to other factors.

Ignoring the time dimension of the data forces the estimation of parameters to make comparisons between average **levels** of social outcomes for different groups of individuals. For the particular case of VET, this estimation strategy compares social outcomes for individuals who were engaged in VET against those who were not, and it compares social outcomes of particular social groups against the reference group. However it does not relate the variation in social outcomes over time to the variations in VET and in social factors over time.

In contrast, the time dimension of the data can be used to estimate parameters that relate the average change in social outcomes with the average change in explanatory factors over time. For the particular case of VET, this method estimates whether average changes in social outcomes are associated with average changes in VET episodes for each individual. This estimation strategy only allows for the inclusion of control variables that change over time, for example income. Empirically, this model is estimated using random or fixed effects.

Fixed effects estimation absorbs the effect of time-invariant heterogeneity with the inclusion of individual intercepts in the model. Random effects estimation models this heterogeneity as a random disturbance. Or in other words, time-invariant heterogeneity is treated as a random error with a mean of zero and a constant variance. This assumes that the unobserved time-invariant heterogeneity is not related to the decision to engage in VET or to any other independent variables. This assumption is very strong for our model since it poses that random effects are not correlated with any of the included independent variables. Mundlak (1978) proposed that the correlation between the explanatory variables and the unobserved time-invariant heterogeneity can be explicitly modelled and dealt with in the estimation. The approach consists of including the average value of time-dependent variables (average levels of VET episodes over the time period) in the estimation. This takes out the bias on the estimate of VET caused by correlation of VET and unobserved time-invariant heterogeneity.

The decision of whether to use fixed or random effects is not straight-forward when dealing with non-experimental data, as in our case.[[1]](#footnote-1) For this report, we opted for the use of fixed effects as the aim is to estimate a model in changes (this was also used in Sabates et al). In other words, we estimate whether an individual’s change in social outcomes is associated with changes in VET episodes (whether year on year individuals took VET courses).

Another type of unobservable heterogeneity is cross-sectional individual-invariant factors , which affect equally all individual observations in one period but not in others. In other words, these are time effects specific to each period. An example of this type of heterogeneity would be the introduction of a national policy that may affect social outcomes for all individuals living in a particular period. It is relatively straight-forward to model this heterogeneity by introducing one indicator variable for each period in the panel data. This approach is similar to the inclusion of country dummy variables to condition out for country specific fixed effects.



The last type of heterogeneity is individual time-varying within country heterogeneity . Examples of this type of unobservable variable are motivation, self-esteem, aspirations, and self-efficacy. These are features of the individual that may contain stable elements but also elements which can be assumed to change over time. In the ECHP there are no measurements of these variables, and even if there were, we would not be able to include all the individual factors that may determine one person’s involvement in civic activities or her decision to undertake VET courses. Hence, we have no other option than to assume that the effect of the unobserved individual time-varying heterogeneity has the property of a random error. Therefore, we do not model explicitly this time-varying heterogeneity but assume that it is incorporated in the error term.



In this report we estimate all models using fixed effect panel data regressions.

We explore the following specifications:

1. For **social groups**: we explain variations in social outcomes in terms of variations in VET episodes over time for individuals across the European countries. As noted before, in fixed effects models it is not possible to include time invariant variables. Thus when it comes to variables such as gender, we divide the dataset into two samples for males and females and we estimate the model for each. In contrast, variables that change over time are included as dummies. In this model, we interact VET episodes with social groups (to identify the impact of VET on social outcomes for social groups) while considering others as control variables.
2. For **absolute effects** of VET: we estimate the aforementioned specification without any interaction terms. We include episodes of VET and general education (the base group is no education at all) as well as all other controls mentioned before.
3. For the **cumulative effects** of VET: we interacte VET with wave dummies (the base group is doing VET in period 1) and then we compare the cumulative returns to VET if the individual does VET in the subsequent period. In order to conclude that VET effects are cumulative, the effect of these interaction terms has to be positive and increasing over time.
4. For **positional effects** of VET: we include VET and general education episodes and the percentage of those who undertook VET and general education in the same period and the same country. This will allow us to understand how the percentage of VET (coverage of VET) affects its global impact. This model is estimated twice, the first time with the entire dataset and the second by the highest level of education achieved (ISCED levels). Since the highest level of education achieved does not vary over time, we had to divide the dataset into three subsets and to carry the estimation for each.
5. At the **household level**: we aggregate the individual data at the household level then run the regressions (using the same aggregated controls) in order to assess the effect of VET and general education on aggregated outcomes. In these regressions we include an additional control variable taken from the household questionnaire (hf002). It accounts for the ability of the household to make ends meet. It should be noted that this variables is not an individual level variable, it is only collected at the household level. One should also note that the estimation at the household level is carried out using simple OLS regressions. This is done because individuals move from one household to another over time (by getting married or just moving out from the parental household, etc). This has two implications, first the composition of the household vary over time (so household 1 in wave one does not necessarily include the same individuals as household one in wave 6). Secondly, each household is only present for three or four waves in the dataset. Hence households are not like individuals and panel methods cannot be used for these regressions, since the household is not consistent as an identification variable.

It is worth noting that the outcome variables have been recoded for the purpose of the estimation. Membership of clubs is a binary variable (0 no, 1 yes). Social relations with neighbours is a binary variable (0 occasional, 1 frequent). Self rated health is a binary variable (0 bad, 1 good). Chronic health problems is a binary variable (0 no, 1 yes). BMI is a continuous variable. Satisfaction with housing and with leisure are on a 6 point likert scale. They were treated as continuous.

On the one hand, the estimation for the binary variables was quarried out using non-linear Logits for panel data. On the other hand the estimation for the continuous variables was quarried out using linear panel data methods.

All these specifications are estimated for the entire dataset (Europe) and by system of VET (the five systems).

## 3.8 Results

The tables are presented in the appendix of this report. Note that (r.g.) means reference group, (n.s.) means non-significant, (+) means a positive association, and (-) a negative one. The systems are: System 1 (Germany, Denmark, Luxemburg and Austria), System 2 (Netherlands, Belgium and France), System 3 (UK and Ireland), System 4 (Italy, Greece, Spain and Portugal), and System 5 (Finland and Sweden).

3.8.1 The Benefits of VET for social groups.

As we said before, in order to assess the impact of VET for social groups, we are interacting education episodes with each of the social groups while keeping the rest of them as controls. Education episodes take three values (no education at all, vocational education and general education). And social groups are income groups (lower income, middle income and upper income), marital status (Single and couple), citizenship (non-national, national and EU national), Gender (male, female), and place of birth (within the country of survey or without it). Note that since gender and place of birth do not vary over time, it is not possible to include them in the basic fixed effects panel data model. Instead we estimate the model for each of the groups (by dividing the dataset). For income, citizenship and marital status we do interact them with education episodes.

3.8.1.1 Participation in clubs.

In what follows (Tables 48 – 52) we present the results for club participation (binary variable) while interacting education episodes with the different social groups.

Across all individuals in the sample of European countries, we found that the likelihood of participating in clubs is increasing with income and with education. In fact, among those who did not undertake any education, those belonging to the upper income group are more likely to participate in clubs. Similarly, those who undertook VET and general education (for all income groups) are more likely to participate in clubs than those who did not do any education. One should keep in mind that the base group is lower income individuals who did not undertake any education.

In system 1, undertaking VET is positively associated with participation in clubs (while general education has an insignificant effect), except for the middle income group. This is probably the reflection of the apprenticeship and VET culture in German speaking countries and in Denmark which has VET traditions close to those of Germany. In contrast, in system 2, general education has a positive effect on participation in clubs for lower and middle income groups while the effect is negative for VET (for middle and upper income). This might also be the reflection of education traditions emphasising the role of general encyclopaedist education in this syetm. In system 3, both general education and VET have a mostly insignificant effect on participation in clubs for all income groups. In system 4, both general education and VET have a positive effect on the likelihood of participating in clubs for all income groups. In system 5, it seems that general education is not the driving force behind participation in clubs. In fact, only upper income individuals have a higher likelihood of participating in clubs. In contrast VET is beneficial for both middle and upper income groups.

For marital status, the results are the following. For Europe as a whole, general education and VET seem to increase the likelihood of participation in clubs for both singles and couples (the base group being singles who did not undertake any education). In system 1, only singles benefit from VET (this is probably because singles have more time to be involved in clubs). In contrast, in System 2 singles benefit from general education instead of VET. In both systems, 1 and 2, couples not doing any education have a lesser likelihood of participating in clubs than the base group (singles not doing any education). In system 3, VET and general education do not have any effect on participation in clubs. In contrast, in system 4, both VET and general education increase the likelihood of participation in clubs for both singles and couples. The results for system 5 are almost the same (the only difference is that general education does not benefit couples).

When education episodes are interacted with citizenship, it is possible to see the effects on participation in clubs are somewhat insignificant for both VET and general education. While the effects for those who did not undertake any education seems to be more significant but of the unexpected sign (nationals and EU nationals not doing any education seem to participate less than non-nationals). This clearly indicates that citizenship is not a major variable according to which VET and general education operate. This happens probably because the population of non-nationals and EU nationals is too small in comparison with the population of nationals. In addition to this, the characteristics of immigrants differ between systems. In countries with selective immigration (UK) Non-nationals tend to be more educated or of a higher social class than the native population, the reverse is true in countries where immigration is not selective (mainly dominated by refugees).

As said before, gender is a time constant variable and cannot be included in the fixed effect estimation. Therefore, we are estimating different equations for males and females. The findings show that the results are almost identical for both females and males. In fact, in Europe both VET and general education have a positive effect on the likelihood of participation in clubs for both sexes. When the estimation is done by system, general education increases the likelihood of participation in clubs in systems 2 and 3 while VET has an insignificant effect. The reverse is true for systems 1 and 5. Only in system 4, both VET and general education have a positive effect on participation in clubs. These results also reflect the established VET traditions in German-speaking and Nordic countries. On e should note that VET helps the creation of professional identities and this may encourage participation.

When it comes to place of birth, it is obvious that people born within the country in which they were surveyed are more likely to participate in clubs. In contrast, the results are almost completely insignificant for the group of individual born outside the country. For the group born within, both VET and general education have a positive effect (in Europe in general and for systems 4 and 5). In system 1 only VET increases participation, and in system 2 only general education increases it. This is also a reflection of the importance of VET in German-speaking countries and of the importance of general education in the countries with encyclopaedist traditions. When comparing citizenship groups with place of birth, it is obvious that the latter is more relevant in explaining changes in individual behaviour.

## 3.8.1.2 Relations with neighbours.

In what follows (Tables 53 – 57) we present the results for relations with neighbours (binary variable) while interacting education episodes with the different social groups.

Across all individuals in the sample of European countries, we found that the likelihood of having relations with neighbours decreases when income goes up and when individuals do VET in particular. In fact, upper income individuals are less likely to have frequent relations with their neighbours independently of the education they undertook, and this holds in all systems. This is probably true since social bonding within a community works better for lower income groups. In addition to this, the relation gets slightly less significant for those who undertook general education in comparison with those doing VET (for middle income in Europe and system 1, and for upper income in system2 and 5).

For marital status, couples have less frequent relations with their neighbours than singles. The possible reason is that couples are likely to have children and thus less time to devote to social relations with neighbours. Note that the relation is positive only for singles doing general education in Europe in general and in system 3.

When it comes to citizenship and place of birth, the effect of education episodes (no education at all, VET, and general education) interacted with the different citizenship and place of birth groups is overwhelmingly insignificant. This is a clear indication that relations with neighbours do not differ much between these groups. Hence, citizenship and place of birth are not the relevant social groups that explain differences in this social outcome.

For gender, the findings differ between males and females. The likelihood of having frequent relations with neighbours is higher for males doing VET and general education in Europe and in system 5. In system 1, only general education has a positive effect (the rest of the systems have insignificant effects). For females, VET has a negative impact on relations with neighbours in Europe and in systems 3 and 4, while the effect for general education and in the other systems is insignificant.

## 3.8.1.3 Chronic health problems.

In what follows (Tables 58 – 62) we present the results for chronic health problems while interacting education episodes with the different social groups.

Across all individuals (for Europe in general), we can see that the likelihood of chronic health problems decreases with income and with education. However, when the results are computed by system, the picture becomes different. For those not doing any education, the upper income group and middle income groups have lower likelihoods of suffering from chronic health problems than the base group (lower income individuals not doing any education). For those doing VET or general education, only in system 5 the relation is negative and significant for all income groups. This is mainly the result of wide available healthcare and of the universal welfare system in Finland and Sweden.

For marital status, VET is more beneficial for couples since it reduced the likelihood of having chronic health problems in Europe in general and in systems 3 and 5. VET is also beneficial for singles at a global European level. In contrast, general education benefits both singles and couples in Europe and in system 5.

When it comes to citizenship and place of birth the results are mixed and somewhat unexpected. For instance, among those not doing any education, nationals and EU-nationals seem to have a higher likelihood of having chronic health problems than non-nationals (in Europe and system 5). For those doing VET, nationals have a higher likelihood of chronic health problems (In Europe and in systems 4 and 5) than the base group (non-nationals not doing any education). For the group of individuals doing general education the results are insignificant.

The results for female and males are quite similar. In Europe and system 5, both VET and general education reduce the likelihood of having chronic health problems for both sexes (in system 5 it is probably the effect of the Nordic welfare system). In contrast, in system 4 VET increase the likelihood of chronic health problems for males, and both VET and general education increase it for females.

One possible reason why the effect is positive for some categories might be related to the kind of job people exercise. People undertaking VET might be doing manual labour which leads to more chronic health problems. Note that the effect of occupation and industry does not affect the results of fixed effects models unless occupation and industry are varying over time. Unfortunately the variable in ECHP that controls for the type of job or industry contains too many missing values.

## 3.8.1.4 Self rated health.

In what follows (Tables 63 – 67) we present the results for self rated health while interacting education episodes with the different social groups.

Across all individuals in the ECHP database, individuals with higher income levels who are doing VET or general education are more likely to report good health. When the estimation is done by system, the effects are still positive and significant in system 5 for all income groups. Again, VET and general education seem to be the most beneficial in system 5 probably because of the existence of a universal welfare system.

The results by marital status are almost identical for both sexes. In fact, both sexes report better health when they are doing VET and general education in comparison with the base group (singles not doing any education). These results hold for Europe and for system 5. In system 2, only VET has a positive and significant effect on self rated health. In system 3 only couple doing VET seem to benefit.

For citizenship and place of birth, the results are mostly insignificant and of the unexpected sign. For EU-nationals the findings are insignificant independently of education (except in Europe and in system3 where the effect is negative). For nationals, the findings are negative in Europe and in system 3 independently of education. The unexpected sign we found here largely depends on the type of immigrants each country has.

The results by gender are mostly insignificant and they are identical for both sexes. In fact those doing Vet and general education (in Europe and in system 5) are the only ones to report better health than the base groups (individuals not doing any education). In system 5, this might also be the reflection of the welfare system and the availability of healthcare.

## 3.8.1.5 Body mass index.

In what follows (Tables 68 – 72) we present the results for body mass index while interacting education episodes with the different social groups. Note that BMI is a continuous variable.

In system 5, all groups have a lower BMI than the reference group (individual with low income not doing any education). In contrast, in system 4 VET increases BMI for the upper income group, while in system 3 general education benefits lower and middle income individuals. As previously discussed, in system 5 the availability of healthcare and probably better prevention might be the reason why the effect is negative.

For marital status, the effect is positive for couples independently of education. In contrast, only general education for singles (in Europe and in systems 3 and 5) has a negative effect on BMI. One reason behind these findings is that couples must be older than singles and hence have a higher BMI. In other words, when people get older they tend to have a higher income and a higher BMI. Hence these two are positively correlated independently of education. This suggests the existence of interaction effects between income and time dummy variables. Further, general education might be more suited for preventing overweight in systems 3 and 5.

When it comes to citizenship and place of birth, the results are thoroughly insignificant. In other words, citizenship and place of birth are variables that do not affect BMI.

For males, VET increases BMI in Europe in general while general education reduces it in Europe and in systems 4 and 5. For females, both VET and general education increase BMI in system2 and reduce it in system 5.

## 3.8.1.6 Satisfaction with leisure.

In what follows (Tables 73 – 77) we present the results for satisfaction with leisure while interacting education episodes with the different social groups. Note that satisfaction with leisure was treated as a continuous variable (it is ordinal on a 6 point likert scale).

For all individuals across Europe, satisfaction with leisure decreases with income and with education (both VET and general education). In fact upper income individuals tend to be less satisfied than the base group (lower income not doing any education). This happens because these individuals tend to be overwhelmed by their work responsibilities and they tend not to have enough time for leisure. Similarly satisfaction with leisure tend to decrease with general education (for all income groups) and with VET (only for upper income). When the results are divided by system the findings are: for system 3, the effects are positive for middle income individuals not doing any education, the effect is also positive for lower and middle income individuals doing general education. . In system 1, all individuals doing VET as well as lower and middle income individuals doing general education are less satisfied with leisure than the base group. In systems 4 and 5, the results are mostly insignificant for those doing VET (this indicates that they are as satisfied as the base group), while they are negative independent of income for those doing general education in system 4. In system 5, only lower income individuals doing general education seem to be less satisfied than the base group. Note that these results are intuitive, higher income individuals and those involved in education have less time to spend on leisure than the base group, thus they might be less satisfied.

When it comes to gender, couples are less satisfied than the base group independently of the education they are undertaking. This is probably because they have more familial responsibilities that prevent them from fully enjoying their time. For singles the results are mixed. Among those doing VET; singles in systems 1 and 2 are less satisfied than the base group, while in system 4 they are more satisfied. For singles doing general education; singles in systems 2 and 4 are less satisfied than the base group while singles in system 3 are more satisfied.

For citizenship, the base group is non-nationals not doing any education. In comparison with this category, only nationals seem to substantially differ (The results for EU-nationals are mostly insignificant).In fact, among those not doing any education nationals in Europe in general, and in systems 1 and 4 are less satisfied than the base group. For those doing VET, non-nationals (in Europe and in systems 4 and 5) and nationals (in Europe and in systems 1, 2 and 4) are less satisfied than the base group. And for those doing general education; non-nationals (in systems 1 and 4) and nationals (in Europe and in systems 1, 2 and 4) are less satisfied than the base group. As said before, in order to understand these differences, one has to know the characteristics of the different groups since non-nationals and immigrants differ between systems based on the characteristics of immigration systems.

For gender, males doing VET are less satisfied than males not doing any education in Europe and in systems 1 and 2. While those doing general education are less satisfied in Europe and in systems 2, 4 and 5. For females, those doing VET are less satisfied in systems 1 and 2 while being and satisfied in system 4. In contrast, those doing general education are less satisfied in Europe in general and in systems 2 and 4, while being more satisfied in system 3. Again the negative relation between education and satisfaction with leisure can be attributed to the fact that people doing education have less time for leisure.

For place of birth, the relation is mainly negative for both of the groups (born within or without). For those born within the country of survey, doing VET is negatively associated with satisfaction with leisure in systems 1 and 2, while being positively associated with it in system 4. For those doing general education the relation is negative in Europe in general and in systems 2 and 4. For those born outside the country of survey, doing VET is negatively associated with satisfaction with leisure in Europe and in systems 2 and 5. For those doing general education, the relation is negative in Europe and in systems 2 and 4 while being positive in system 3.

## 3.8.1.7 Satisfaction with housing.

In what follows (Tables 78 – 82) we present the results for satisfaction with housing while interacting education episodes with the different social groups. Note that satisfaction with housing is treated as a continuous variable (it is ordinal on a 6 point likert scale).

Across all individuals in Europe, satisfaction with housing is increasing with income and to some extent with education. In fact among those not doing any education, being an upper income individual increases satisfaction in Europe and in all systems. For those doing VET, lower income individuals (in system4) and middle income individuals (in Systems 1.2.3 and 4) and upper income individuals (In Europe and in all systems) tend to have higher satisfaction with housing than the base group. For those doing general education, the lower income group are more satisfied with housing than the base group (In Europe and in systems 2, 3 and 4). Middle income individuals are also more satisfied with housing in Europe and in all systems. In conclusion we can say that both VET and general education increase satisfaction with housing, with general education being more effective for lower and middle income individuals.

For gender, couples not doing any education and those doing VET seem to be more satisfied than the base group (singles not doing any education). This is probably because couples are older in age and they have better access to the real-estate market. In contrast, singles doing general education are more satisfied with their housing conditions than the base group. In other words, general education can also improve the benefits that individuals extract from their housing.

For citizenship, the results are mainly insignificant except for those doing general education. In fact the effect is positive for non-nationals in system 2, for nationals in systems 2 and 5, and for EU-nationals in system 2. For place of birth, only those born within the country of survey tend to benefit from VET (in Europe and system 4) and general education (in Europe and systems 2, 4 and5). One of the reason is that people born within the country of survey have easier access to mortgages and to the real-estate market, and are also likely to have inherited property from their families. Hence they tend to be more satisfied with their possessions.

For gender, those doing general education are more satisfied than the base group while the effects of VET are almost completely insignificant for both sexes. More precisely, the effect of general education on satisfaction with housing is positive for males in Europe and in systems 2 and 4, and for females in Europe and across all systems.

3.8.1.8 Conclusion on the Benefits of VET for social groups.

*The main findings from the above analyses can be summarized as follows.* In system 1 where the countries have well established vocational routes, the social outcomes of VET tend to be stronger and more significant. In contrast, countries in system 3 do not show such a strong effect because of the absence of such a deeply rooted VET culture. As a general principle, though, it can be considered that increased investment in VET in Europe is beneficial for meso-social benefits. This is a clear indication that the role of VET is not only confined in its direct economic returns but extend beyond these to include social and non-market benfits related health, personal satisfaction and community cohesion.

To be more precise the findings showed that across all individuals in the sample of European countries, the likelihood of participation in clubs is increasing with income and with education. For Europe as a whole, general education and VET seem to increase the likelihood of participation in clubs for both singles and couples. Furthermore, the findings show that the results are almost identical for both females and males. When it comes to place of birth, it is obvious that people born within the country of survey are more likely to participate in clubs independently of the type of education they are undertaking.

For relations with neighbours, we found that the likelihood of having frequent relations is decreasing when income goes up and when individuals do VET in particular (in Europe as a whole). For marital status, couples have less frequent relations with their neighbours than singles. Moreover, the likelihood of having frequent relations with neighbours is higher for males doing VET and general education in Europe and in system 5. For self rated health, we can see that the likelihood of chronic health problems decreases with income and with education. For marital status, VET is more beneficial for couples since it reduced the likelihood of having chronic health problems in Europe in general and in systems 3 and 5. Across all individuals in the ECHP database, individuals with higher income levels who are doing VET or general education are more likely to report good health. Furthermore, satisfaction with leisure decreases with income and with education independently from its type in Europe as a whole. When it comes to gender, couples are less satisfied than singles independently of the education they are undertaking. Across all individuals in Europe, satisfaction with housing is increasing with income and to some extent with education.

## In what follows, we will interpret the results on the absolute, cumulative and positional effects of VET. Recall that the absolute effects are computed using the same procedures as for social groups but without including any interaction terms. In other words we are including education episodes separately and socio-economic groups as control variables. Hence the coefficients are for Europe and by system (and no longer by social groups). In the cumulative effects of Vet we are interacting VET episodes with wave dummies to investigate whether the returns of VET are increasing over time. For the positional effects, we are including the percentage of individuals doing Vet and general education and we are doing the analyses for the whole dataset (Europe) and by ISCED groups.

## 3.8.2 The absolute effects of VET.

In what follows (tables 83-84), we present the results on the absolute effect of VET and general education on the seven social outcomes. Note that in this section there are no interactions between social groups and education episodes. However, social characteristics are included as controls. Note that in the tables we present the regression coefficients as they are (not odds ratio). In other words, we don’t present point estimates for binary outcomes, but the actual regression coefficients (from the logit). Furthermore, the use of individual and household income as control variables generated identical results.

For participation in clubs, the effect of general education and VET are positive and significant in a number of systems. In fact, for general education they are positive and significant in Europe, system2 and 4. For VET, they are positive and significant in Europe, system1, 4 and 5. One should note that effects of VET are much higher than those of general education. The main reason is that VET plays a major role in creating and maintaining professional identities and thus it has a positive and strong effect on participation in clubs, unlike general education. Further, it is possible to notice that VET has a far stronger effect in system 1(the German speaking countries) than general education. This is due to the strong apprenticeship culture in these countries. In contrast, general education is more important in system 2 which has a more comprehensive encyclopaedist education. In system 3 (the liberals) VET and general education seem to be unrelated to participation in clubs. In system 4, both VET and general education have an almost identical positive effect on participation in clubs. In System 5 the effect of Vet is positive and high while that of general education is insignificant. This is also due to the existence of strong professional identities.

For relations with neighbours, the effects of VET and general education are thoroughly insignificant. As we have seen before, the effects were significant when education episodes were interacted with income and gender. However, when the absolute effects were computed they were insignificant. This finding indicates that VET and general education don’t affect relations with neighbours directly and their effect transits through income and gender.

For self rated health, the effect is positive and significant for both general education and VET in Europe in general and in system 5. For Europe the effects of VET and of general education are of the same magnitude. **While in system 5, general education is associated with better reported health.** It should be noted that in system 5 (the Nordics) this positive relation might indicate better prevention through education. One should also note that in these countries healthcare is universal.

For chronic health problems, general education decreases the likelihood of chronic problems in Europe and in system 5. While VET decreases it in Europe and system 5 while increasing it in systems 1 and 4. **Note that the effects of general education in reducing chronic health problems in Europe and in system 5 are much higher than those of VET.** **This indicates that prevention might be more effective through general education.** Note that VET in systems 1 and 4 is associated with higher chronic health problems. This is probably due to the kind of job exercised by individuals undertaking VET (their jobs are more likely to involve physical effort).

When it comes to BMI, it is possible to see that general education is negatively associated with it in Europe in general and in systems 3 and 5, while VET decreases BMI only in system 5 (its effect is still weaker than that of general education). **Hence it is possible to say that general education is more effective in preventing obesity.**

Satisfaction with leisure is negatively associated with both general education and VET. And the coefficients are relatively of similar magnitude in Europe and in system 4where general education has a more negative effect. The impact of VET and general education is negative and significant in Europe and in systems 1, and 2.

On the other hand satisfaction with housing is positively associated with general education in Europe and in systems 2, 3, 4 and 5. While the relation between VET and satisfaction with housing is significant but weak in Europe and in system 4. This is an indication that general education increases the psychological satisfaction that people extract from housing. This might also be caused by the fact that people with general education are more likely to have better occupations and hence are more likely to have better housing conditions.

## 3.8.3 The cumulative effects of VET.

In what follows (tables 85 - 91), we present the results for the cumulative effects of VET over time. For VET to have a cumulative effect, the effect should be significant and growing over time. In other words, if an individual undertook VET each period (in the 8 ECHP waves) the impact of VET on social outcomes should be growing over time. Note that wave 1 is the reference category.

For participation in clubs, VET has a cumulative effect in Europe in general and in systems 1, 4, and 5. In system 1 the start value of the regression coefficient is 0.14 in wave 2 and the highest is in wave 8 (0.29). In system 2 the effect increases from wave 2 to wave 7 then drops in wave 8. In system 5, the effect fluctuates between wave 4 and wave 8. For relations with neighbours, only system 4 seems to have a cumulative effect over time. In wave 2 the effect is negative and significant (-0.12) and it increase until reaching (0.27).

For self rated health, VET does not have a cumulative effect over time. In fact the effect is insignificant across all systems except in system 5 where it is decreasing. The results are almost the same for chronic health problems (except in Europe). In fact, in Europe undertaking VET over time reduces the likelihood of having chronic health problems (between wave 4 and wave 8). For BMI the effects are not very consistent. They are mainly insignificant, and when they are, it is only for two waves by system.

Satisfaction with leisure and housing are similar to BMI. The effect is significant only for a couple of waves by system and the difference between the waves is too small to say that the effect is growing over time. Hence it is possible to conclude that VET does not have a cumulative effect over time for these two social outcomes.

## 3.8.4 The positional effects of VET.

In this subsection, we present the results on the positional effects of VET. As previously mentioned, in this model we include education episodes over time (no education at all, VET, and general education) and the percentage of individuals undertaking VET and general education in each period. This will allow us to understand how the percentage of VET (coverage of VET) affects its global impact. This model is estimated twice, the first time with the entire dataset and the second by the highest level of education achieved (ISCED levels). The model is also estimated for Europe and by system. Since the highest level of education achieved does not vary over time, we had to divide the dataset into three subsets and to carry the estimation for each.

## 3.8.4.1 The positional effects for the entire dataset. Tables (92-98).

First, it should be noted that the effect of the percentage of individuals doing VET or general education is by far lower than the direct effect of doing VET or general education. In other words, the direct effect is always higher than the spill over effect.

For participation in clubs, the effect of VET is positive and significant in Europe and in systems 1, 2, 4 and 5. In contrast, the effect of the percentage of individuals doing VET is negative and significant in the same systems, even though it is far smaller than the direct effect of VET. So it possible to say that doing VET increases the likelihood of participating in clubs and this effect is mitigated by the percentage of individuals doing VET. This is intuitive, if the coverage of VET widens then participation in VET would not be a major element differentiating individuals.

For relations with neighbours, the effects are almost insignificant for all systems except for VET in system 1 where VET has a positive effect and the percentage of individuals doing VET has a negative one, and in system 4 where general education has a positive effect and the percentage of individuals doing general education has a negative one.

For self rated health, the effects of VET are negative in Europe and in systems 3 and 4 while being positive in system 5. The effect of the percentage of individuals doing VET has a positive effect on self rated health in Europe and in system 3 and a negative effect in system 5. In contrast, general education has a positive effect on self rated health in Europe and in systems 4 and 5. And the percentage of individuals doing general education is also positive in Europe and in system 5. This indicates, than unlike VET, in some systems general education and its spill over effect are positive.

For chronic health problems, the effects of Vet are mostly insignificant. In contrast, general education reduces the likelihood of chronic health problems in Europe and in systems 4 and 5, while the effect of the percentage of individuals doing general education is positive (in the same systems). This is also an indication that general education is more effective in reducing chronic health problem even if the impact is slightly mitigated by the percentage of individuals doing it.

The results for BMI are similar to those for chronic health problems. The effects of VET are almost completely insignificant across all systems, while those of general education are negative in Europe and systems 1, 3, and 5. The effect of the percentage of individuals doing general education is positive in the same systems. (Note that in system 2 the sign of the effects of general education is reversed).

For satisfaction with leisure, the effect of VET is negative in Europe and in systems 1 and 5, while the effect of the percentage of individuals doing VET is positive is systems 1 and 5. On the other hand, the effect of general education is negative in systems 2 and 4, while the effect of the percentage of individuals doing general education is insignificant except in system 5 where it is negative.

For satisfaction with housing, the effects of VET and the percentage of people doing VET is insignificant almost in all systems. In contrast, the effect of general education is positive in Europe and in systems 1, 4 and 5. The effect of the percentage of individuals doing general education is positive in the same systems. Again the spill over of general education slightly mitigates the main effect.

## 3.8.4.2 The positional effects for ISCED level one. Tables (99-105).

The same model was estimated by the highest level of education attained. There are three levels with the third being the highest. It should be noted that for level one the results diverge from those computed with the entire dataset.

For participation in clubs, the effect of VET is positive and significant in Europe and in systems 1, 4 and 5. In contrast, the effect of the percentage of individuals doing VET is negative and significant in the same systems, even though it is far smaller than the direct effect of VET. So it possible to say that doing VET increases the likelihood of participating in clubs and this effect is mitigated by the percentage of individuals doing VET.

For relations with neighbours, the effects are almost insignificant for all systems except for VET in Europe where it has a negative effect and the percentage of individuals doing VET has a positive one.

For self rated health, the effect of VET and the percentage of individuals doing VET is insignificant across all systems. In contrast, the effects of general education are positive and significant in Europe and in systems 4 and 5. But in Europe and in system 4, these effects are tempered by the percentage of individuals doing general education. Note that the results for general education are similar to those obtained for the entire dataset. However, the results of VET diverge significantly. This indicates that the general negative effect of VET on self rated health does not exist for the lowest educational group.

For chronic health problems, the effects of VET and the percentage of individuals doing VET are completely insignificant across all systems. In contrast, for general education the effect is negative in Europe and in system 5; while the effect of the percentage of individuals doing general education is insignificant in all systems except in Europe where it is positive.

For BMI, the effects of VET and the percentage of individuals doing VET are completely insignificant across all systems (except system 3). On the other hand, the effect of general education on BMI is negative in Europe and in system 5, while the effect of the percentage of individuals doing VET is positive in the same systems. Note that the results for BMI for the lowest level of ISCED deviate to some extent from the results for the entire dataset. This indicates that the relation between education and the outcome variable varies according to the highest level of education achieved.

For satisfaction with leisure, the findings vary from those obtained with the entire dataset. In fact, the results for VET are similar, but those for general education vary significantly. General education has a negative impact on satisfaction with leisure in system 4 and a positive one in system 5. The percentage of individuals doing VET has the reversed effect in both systems.

For satisfaction with housing the effects of VET vary slightly, while those of general education are almost the same as when the estimation was carried with the entire dataset.

## 3.8.4.3 The positional effects for ISCED level two. Tables (106-112).

For participation in clubs, the findings for ISCED level two are similar to those obtained with the entire dataset. The only minor difference is that the spill over from VET is absent in Europe and in system 1. Similarly, the effects of VET and general education and their respective spill-over are mostly insignificant when it comes to relations with neighbours.

For self rated health, the effects of VET are less significant than those obtained from the entire dataset. In fact, the negative effect found in Europe and systems 3 and 4 disappears. The results obtained for general education are almost the same as before.

For chronic health problems, the results obtained for the ISCED (level two) subsample are similar to those obtained with the entire dataset. Despite that, there are some slight variations. The spill over of VET is no longer significant in Europe but become significant in system 4. For general education the results are also similar except that they are insignificant for system 4.

The findings for BMI vary slightly for general education, while those for VET are mostly insignificant across all systems. In fact, the effect of general education and its spill over become insignificant in systems 2 and 3, while in system 4 the effect of general education is positive and that of the spill over is negative.

For satisfaction with leisure there are some slight variations between the general model and the one estimated with level two ISCED subsample. For instance, in the subsample, VET losses its negative effect on satisfaction with leisure in Europe and in system 5. And the effect of general education becomes positive in systems 1 and 5 while being insignificant in all other systems.

For satisfaction with housing, the findings are exactly the same as those obtained with the entire dataset.

## 3.8.4.4 The positional effects for ISCED level three. Tables (113-119).

The findings for ISCED level three vary significantly from those obtained using the entire dataset. In fact for all outcome variables, the findings are less significant than before.

For participation in clubs VET has a positive effect in Europe and in systems 1, 2, and 4. The effect is mitigated in Europe and system 1 by the spill over from the percentage of individuals doing VET. On the other hand general education has a negative effect in Europe and this effect is mitigated by the spill over.

For relations with neighbours both VET and general education and their spill over have insignificant effects on the outcome variable. For self rated health, VET has a negative effect on the outcome variable in Europe and in system 4; this effect is slightly tempered by the spill over. The effect of general education is completely insignificant across all systems.

For chronic health problems, VET has a positive effect in system 4 and a negative one is system 5 (only in system 5 the effect is mitigated by the spill over). The effect of general education is completely insignificant across all systems.

For BMI, the results are mostly insignificant for both VET and general education. For satisfaction with leisure, the findings are insignificant for VET. In contrast general education has a positive effect in system 4 and a negative one in system 2. These effects are mitigated by their spill over. For satisfaction with housing, the findings are also insignificant for both VET and general education.

It should be noted that the high degree of insignificance for the level three ISCED sub-dataset is intuitive. Since these individuals have already achieved the highest level of education, any marginal increase in education through learning episodes over time will have a minimal impact on the outcome variables. In other words, the return to VET and to general education decrease with the highest level of education achieved (decreasing returns).

## 3.8.5 The effects of VET at the household level.

In this section (table 120), we present the results at the household level. Note that in this model the data was aggregated (averaged) at the household level. In other words we are estimating the impact of the percentage of individuals doing education (whether VET or general) on the percentage of individuals reporting a particular outcome (everything being at the household level).

For participation in clubs, the effect of both VET and general education are positive and significant across all systems. The effect of general education is also higher than that of VET in all systems. The impact of education at the household level can be seen as a spill over effect. The more individuals are doing education in a household the more its members are involved in clubs.

For relations with neighbours both VET and general education have a significant negative effect. This indicated that the more educated individuals get within a household the less relation its members will have with their neighbours. Note that the effect of general education in system 3 is positive and than of VET in system 2 is also positive. It is worth noting that the effect of general education is negative and higher in absolute terms than that of VET.

For self rated health, the effect of education is positive for both VET and general education (except for VET in system 3). This is an interesting finding because it means that individuals report better health when they or other members of their household are doing education. Note that for this outcome variable too, the effect of general education is higher than that of VET.

For chronic health problems, general education reduces the possibility of having chronic problems across all systems. While the effect of VET is positive in Europe and in systems 1 and 3, and negative in systems 2, 4, and 5. It is possible to say, that general education reduces chronic problems probably because of the preventive content of this type of education. In contrast, VET increases the likelihood of chronic problems in some systems because of the nature of the job exercised by individuals undertaking VET.

For BMI, the effect is negative across all systems and for both VET and general education. The effect of general education is higher in absolute terms than that of VET. This is an indication that undertaking any form of education will have a positive effect on other members of the household (through a reduction of their BMI).

For satisfaction with leisure, the effect of VET and general education are both negative across all systems, and that of general education is higher in absolute terms. This indicates that, in a household, when the percentage of individuals doing education increases people tend to have less time to enjoy leisure.

For satisfaction with housing, the results are mixed. General education has a positive effect in Europe and in systems 2, 3, and 4 and a negative one in systems 1 and 5. On the other hand, VET has a positive effect in Europe and in system 4 while the effect is negative in systems 1, 2, 3, and 5.

# *4. Meso-social benefits of VET for underreported social groups and communities.*

## 4.1 Introduction

Although the ECHP allows us to gain some information on various social groups (in terms of income and citizenship) there are other groups for whom we do not have information. Whilst examining the meso-social benefits of VET it is essential that this lack of knowledge is addressed. Therefore, in conjunction with CEDEFOP, we have identified three groups or communities who are underreported in terms of VET and for whom there is no data in the ECHP. We have conducted expert focus groups for each identified group in order to gain knowledge and understanding of their needs in terms of VET. The three groups identified are the Gypsy/Roma/Traveller group, Refugee’s and Muslim/Faith groups. Presently there is little research on their vocational education and training needs and of the benefits to these groups at a social and community level. We hence develop new expert knowledge of this area as well as provide implications for policy in terms of community cohesion and resilience for these groups (in terms of VET). It is also hoped that this research will make an important contribution in assessing the vocational education and training needs of these groups as well as influencing European policy and practice.

## 4.2Methodology

The three focus groups were held in Rome, Brussels and London. Participants were invited to attend and were given a letter explaining the project and the aims of the focus group. A topic guide was produced by the researchers in order to guide the discussions and make sure all areas of interest were covered. The focus groups were audio recorded and transcribed for analysis.

## 4.3 Refugee Focus group

## 4.3.1 Introduction

A refugee can be defined as a person who has been forced to leave his/her home and seek refugee elsewhere. This definition is defined more precisely in Article 1 of the United Nations Convention Relating to the Status of Refugees (1951(as amended by the 1967 protocol)) in which it states a refugee is;

*"a person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.."*

The 1967 protocol expanded the concept of a refugee to include people who had fled due to war or other violence in their home country.

There is a paucity of research which looks at Refugees and vocational education and training (VET) in Europe. However, some research suggests that as a group, Refugees face difficulty integrating in to the labour market due to poor education and financially constraints making access to education from vocational education centres difficult if not impossible (Duong & Morgan, 2001). Either a highly skilled VET course would require at least a lower secondary education, which many refugees would not have, or the cost of the course exceed the refugees financial capabilities. The courses that refugees could access are thought to be minimal in duration and therefore do not give an adequate education or training for them to integrate into the labour market. Duong & Morgan (2001) suggest further reasons for low enrolment figures of refugees in VET in their study in Vietnam, one of which is due to the popular belief that manual work is less worthy than other forms of employment. However, Crisp, Talbot & Cipollone (2001) considered that one benefit of VET for Refugees is the acquisition of skills required for repatriation both in terms of economic and social skills.

Further barriers identified in previous research, facing Refugees accessing VET involves the formal education they may have acquired from outside the EU often not being recognised. This lack of recognition of previous education can be compounded, for women especially, by xenophobia, racism, and sexism (Clayton, 2005). Furthermore, Grey (2005) identified that very few Refugees gained employment in the UK in the skilled occupations they had held prior, and that 36% of Refugees failed to find any employment while the majority of those who did, found low skilled work with no possibility of moving into higher skilled work in their lifetime.

The previous research is limited and there is a specific paucity of research identifying the benefits for this group from VET. The expert focus group conducted as part of this study aimed to make an important contribution in assessing the vocational education and training needs of Refugees in order to influence European policy and practice.

## 4.3.2 Focus group

The researchers chairing this European expert panel focus group were;

Dr Charlotte Chadderton and Casey Edmonds from the University of East London.

The expert participants were;

Maren Gag - is working for passage, a non profit organisation in Hamburg/Germany. She is coordinator in the department “Migration and International Cooperation” and is currently (since 2001) leading networking projects (FLUCHTort Hamburg PLUS), which works with different sub-projects and partners dealing with counselling, education, training, and placement in companies for labour market integration of refugees and asylum seekers. It also involves institutions such as vocational schools, chambers of commerce and skilled trades, and companies.

Claudia Zaccai – is professor and chair of “Migration Studies” at the University of Rome, “La Sapienza”. She has many years of experience in projects, including European Union initiatives, concerning integration and adult education: recognition of cultural diversity and social equality for members of migrant communities.She has collaborated on a regular basis (1990 – 2001) with the “Italian Refugee Council”.

Her research focus is on forced migration, gender persecution and the right of asylum. She also carried out research on the process of integration (models of inclusion and exclusion), migrant political participation (active citizenship), transnationalism and dual citizenship, the specificity of women in contemporary migration flows to Europe, specifically the gender approach in policy making for the special needs of migrant adult education.

Carolina Marin and Corina Popa – experts on the situation in Romania,

Ruth Hawthorn – expert on the situation in the UK

Anne Bathily – expert on the situation in Belgium

Susanne Wiborg –is a senior lecturer at the Institute of Education. She specializes in comparative history of education and Scandinavian politics of education covering areas such as secondary education systems, comprehensive schooling, and private education.

## 4.3.3 Findings

## 4.3.3.1 Social capital

A key benefit of VET for refugees to Europe is the acquisition of social capital, including the building of social networks both within and between communities which are examples of bonding and bridging social capital. Refugees can benefit best from VET in countries with the dual system of VET and academic routes to work, where VET has high status and large numbers of nationals partake, such as Germany and Denmark (where a third of the youth cohort enters into VET, either as an apprentice or starting in school). In those countries where VET is under-valued, considered a second class education for the long term unemployed and disadvantaged, refugees too are less likely to value it or benefit from it. This differentiation is particularly important as many refugees want to work on arrival, rather than returning to education. It is important to note that the dual system is under threat in Denmark, where there is a move to include more academic learning into VET to increase its prestige.

A further important point is that VET is most likely to lead to the acquisition of social capital where it leads to employment. This can be bonding social capital in terms of making the ‘weak ties’ which lead to employment. However, this is significantly more likely in countries where there are equal employment rights for all applicants. In Germany and Denmark, for example, the law ensures that a non-EU national will only get a job if the employer can prove that no EU applicants can fulfil the role.

## 4.3.3.2 Identity and belonging

Participation in VET has the potential to assist social integration and feelings of belonging to the host society. This works best in tandem with systems in which refugees can gain leave to remain, residency permits and work permits with relative ease. This encourages the development of both bonding social capital (developing social relationships in a country amongst other refugees) and bridging social capital (developing links between different groups over time). The status of refugees varies greatly throughout Europe, and changes over time depending on national politics, leading to different levels of toleration. Furthermore, access to social rights, economic rights and support is largely restricted even among those with tolerated statuses. In Germany, for example, refugees can wait up to 20 years for a work permit. In Romania, refugees with permission to remain still do not receive social or economic rights. This is in contrast to Denmark, where those with leave to remain have access to social security, state subsides, free education, healthcare and a monthly subsidy from the government. In the UK this group receives British citizenship and corresponding rights, however the process to getting leave to remain is complex and difficult.

Public perception of immigration and ‘foreigners’ greatly influences policies and attitudes towards refugees, affecting access for refugees to VET, types of VET available and experiences in education and training placements. Media attention in the UK, Germany, Italy and Denmark has been very negative, arousing fears of an ‘influx of foreigners’, incompatible with the national way of life, and restrictions have been introduced on immigration. It was reported however, that racism and anti-immigration feeling was low in Romania, where immigrants are tolerated with curiosity.

Feelings of belonging and access to VET are also enhanced in countries where language courses are offered and easily accessible. Most European states appear to provide some sort of language training (encouraging the development of bridging social capital), however, in practice services are frequently inadequate. This gap is sometimes filled by third sector organisations free of charge, although the lack of official accreditation of such courses can also prove a problem for access to VET.

Free and flexible childcare potentially allows refugees, particularly women, to benefit more fully from VET provision and enhances social integration and belonging. However, this is not always available, and where it is available to nationals, it may not be available to refugees. In Germany, for example, pre-school childcare is only available to working mothers. In addition, 4 and 5 year olds have to pass a German language test before being allowed to continue with their education.

## 4.3.3.3 Community mental health

VET potentially enhances both individual and community mental health, including self-confidence, aspirations and collective responsibility. This could be enhanced by improved recognition of refugees’ prior qualifications and skills. This is problematic across the EU. In part this is due to lack of documentation and language barriers, but several countries refuse to recognise non-European qualifications, or do not have systems in place to convert them. It was also reported that non-academic skills tend not to receive recognition. This frequently means that highly qualified and skilled individuals either have to retrain from the start, or remain in low skilled jobs, with a corresponding adverse effect on confidence and aspirations. Indeed, in many countries there is little incentive to change this as employers benefit from a pool of low-skilled workers.

## 4.4 Roma/Gypsy/Traveller Focus group[[2]](#footnote-2)

## 4.4.1 Introduction

Groups of people referred to as Gypsies, Roma or Traveller live as minority communities across all European countries (Liégeois and Gheorghe, 1995). They largely share an ethnic background that can be traced to a migration of people from Northern India who travelled through Asia and the Middle East before settling across Europe (Kenrick, 2004). Despite having a commonly shared heritage they represent a diverse range of peoples whose lives have inevitably been shaped by the different paths taken and as a result of differing engagement with other native populations.

One constant within the history of Gypsy, Roma and Traveller populations has been the longstanding racism and persecution experienced by most (Hancock, 1987; Bhopal & Myers, 2008). At worst this has materialised in the shape of the enslavement of Gypsy, Roma and Traveller communities and the genocide of Gypsies in the Second World War. Such persecution remains a daily factor recently demonstrated in the enforced expulsions of Gypsies and Roma from France and the fingerprinting of all Gypsies and Roma in Italy including 80,000 children (Myers: 2012 forthcoming).

The schooling of Gypsies and Roma is one area, (amongst many), which has consistently been identified as failing to deliver satisfactory or useful levels of education. In many countries across Europe Gypsy and Roma children at best receive primary schooling with very few transferring to secondary schools, and of those that do transfer to secondary school many drop out early. Many Gypsy and Roma children still receive no institutional education at all. For many families the decision not to attend schools is based partly upon the hostile reception faced by Gypsy and Roma children and also upon the perception that the education they will receive will not necessarily be useful to their way of life. Whilst VET has not been researched in the same depth as schooling there is anecdotal evidence that Gypsies and Roma rarely access such training programmes and that VET itself is rarely an option for students attending schools. In principle however VET would appear to be an attractive option to communities who might prefer their children to learn more practical skills related directly to employment.

## 4.4.2 Focus Group

Whilst the education of Gypsy and Roma students attending school has been widely researched across Europe, the subject of Vocational Educational Training (VET) remains largely overlooked. In 2010 the University of East London were commissioned by CEDEFOP (the European Centre for Development and Training) to run an expert focus group to examine the community benefits of vocational educational training for Gypsies and Roma living in Europe. The researchers chairing this focus group were Casey Edmonds from The University of East London and Martin Myers. The focus group drew together the following national experts:

Dr Mikael Luciak - studied Education at the University of Vienna, Counseling at San Francisco State University, and Social and Cultural Studies in Education at UC Berkeley. He held positions as assistant professor at the Vienna University of Economics and the University of Vienna and currently is a post-doc researcher at the Department of Education, University of Vienna, Austria and a board member of the International Association for Intercultural Education (IAIE). His research focuses on the schooling of ethnic minorities and migrants in comparative perspective, inclusive education and equity, as well as vocational rehabilitation and disability studies. Dr. Luciak conducted various research projects and published a variety of journal articles, book chapters, and research reports on the educational situation of Roma.

Camilla Nordberg – expert on Finland

Tommaso Vitale – has an M.A. in Political Sciences (1999) and a Ph.D. in Sociology (2003). He is Associate Professor of Sociology at Sciences Po (Paris, France), where he is the scientific director of the biannual master “Governing the Large Metropolis”. His main research interests are in the fields of Comparative Urban Sociology and of Urban Politics where he has published books and articles on conflicts and urban change, on spatial segregation, on social service planning, and on élite and local governance of industrial restructuring. In the field of Romany Studies, he has conducted several research projects and has written on comparative urban policies towards Roma in Italy, on vocational training, on pedagogy and the Sinti and he has coordinated a special issue on innovation in education and the Roma.

Maria Casa Nova – is assistant professor at Department of Social Sciences of Education, Institute of Education, University of Minho, Portugal. She has a Masters in Intercultural Education and a PhD in Socio-Anthropology of Education and Culture

She coordinates the following disciplines: Multiculturality and Education, citizenship and social inclusion and Educational policies. She has participated in many research projects focusing on the Gypsy community and written extensively on the topic.

Silvia Carrasco – is Professor of Social Anthropology at the UAB Department of Social and Cultural Anthropology, she has been visiting scholar in several universities in Europe and in North and South America and has published extensively from her work in applied social research. She is also in charge of EMIGRA, a research group on educational issues among minorities and immigrant groups. In the area of Roma studies, she has conducted research on Spanish Gypsy/Roma educational integration, and was co-director and co-author (together with Jose Eugenio Abajo and the Spanish AEG, or Association of Educators with Gypsies) of the only study so far on conditions for and impact of achievement on young Roma social integration with a gender perspective. 

Martin Myers – expert on situation in the United Kingdom

Whilst the focus group was deliberately convened in order to consider VET from an open-ended perspective, the following two areas were flagged up as being of particular interest:

* What are the barriers to participation in vocational education and training for Gypsy, Roma and Traveller communities?
* What are the community benefits of participation in vocational education and training for Gypsy, Roma and Traveller communities?

## 4.4.3 Findings

## 4.4.3.1 Over-arching Themes

Whilst the focus of discussion was obviously around VET specifically and issues related to education more generally the nature of any discussion about Gypsy and Roma communities necessarily touches upon their wider societal positioning. A number of emergent themes came to the fore, which inevitably influenced much of the wider debate and to some degree positioned participants. So for example, although the focus group was driven by CEDEFOP and UEL, two organisations not associated with work around Gypsy/Roma issues, there was a sense in which inevitably the discussion was situated within discourses driven by earlier (generally academic) debates. There were long discussions about terminology that to some extent went unresolved, (British and Iberian participants preferring the use of self-ascription by people calling themselves Gypsies, whereas in most other European countries this is often regarded as a racist term with preference given to the use of ‘Roma’). These are longstanding debates and inevitably colour the overall discussion of more specific areas of work e.g. vocational training. Similarly the wider political and social positioning of Gypsy/Roma communities as marginal groups generally disliked by wider European populations has an overarching influence across debates about any area of interest to Gypsies and Roma. The marginal position of Gypsies and Roma materialise differently across Europe from the extremes of Roma sites been deliberately torched in Italy and some East European countries to lower levels of racism reflected in media reporting in countries such as the UK.

Less controversially but still of importance in terms of any debate about Gypsy and Roma communities is the absence of detailed and accurate information about the numbers of individuals belonging to such communities in most European countries, of the numbers accessing education in any form and the numbers of people who would access VET if it was more easily available. In many countries this is complicated by families who will discretely hide their Gypsy/Roma ethnicity in order to ease access to education and other institutions. Such invisible populations of Gypsy and Roma communities (i.e. families who do not advertise their ethnicity) are often examples of more successful families who are accessing wider educational opportunities. Participants also noted that VET varies from country to country. In some countries it is not associated with schooling but is funded as post-compulsory education. In other countries it is a feature of secondary schooling and also post-compulsory education.

## 4.4.3.2 Skills

As would be expected the prime benefits associated with vocational training are related to learning new skills that will lead to sustainable future employment. Across Europe Gypsy & Roma communities do stress that vocational training would particularly benefit their situation. In part this reflects the economic situation of communities that have experienced the erosion of economies that have served them well in the past but have now become identified as outmoded ‘traditional’ means of earning a living (e.g. much of the agriculture sector or working with animals). Many of the poorest families currently rely on state benefits and often do not have a skills base to pass on. VET could be an alternative to those aspects of sedentary education that are undoubtedly failing to equip students with skills appropriate to their later life and deliver opportunities to acquire different skills (e.g. IT skills) not widely available within the community. This means that bridging social capital is particularly important.

## 4.4.3.3 Social capital

The building of social capital is regarded as one of the most important benefits of VET. Gypsy and Roma are most likely to benefit from VET opportunities where schools and other educational institutions are willing to engage with these communities. The level of engagement with Gypsy and Roma communities across European educational institutions varies considerably. Frequently, there are barriers to access which range from the low-level racism that materialises in many institutions as a generalised hostility towards Gypsies and Roma students, to institutions that refuse to educate people from these communities at all. Particular problems abound in terms of VET, for example in many countries they will never be offered work placement opportunities.

Gypsy and Roma are also most likely to benefit where VET systems are flexible, with opportunities for accessing vocational training throughout an educational trajectory. For example, vocational training is often only a part of later secondary education (in some countries the last year or two years), so opportunities through schooling can be missed entirely, as many Gypsy and Roma communities desire to start a family at a younger age than considered normal in the wider population. In other countries where VET might be accessed through colleges rather than schools from the age of 16 or 18 years there are additional problems: access to some VET requires formal qualifications based upon earlier school attendance and even in circumstances where such qualifications are not required, potential Gypsy and Roma students are distanced and disengaged from the education processes that might flag up VET possibilities. The level of drop-out from secondary education is a significant issue and at its most extreme effects almost the entire Gypsy and Roma population. (In the north of Portugal for example only 8 children continued with secondary education in 2007/8).

Gypsy and Roma are most likely to benefit from VET in cases where the provision of a useful education is a priority. In some countries state/school sponsored VET programmes might have underlying agenda of reducing school drop-out rates rather than providing useful education. Persuading Gypsy and Roma students to enter VET in such cases reinforces stereotypes about their tendency to fail in school and not go to university for example. It also tends to promote stereotyped options for Gypsy and Roma students e.g. hairdressing for girls, rather than sustainable skills such as IT training that might be far more beneficial in the future. Thus state programmes promoting VET need to offer genuine opportunities rather promoting ineffective programmes designed to maintain the status quo.

VET programmes are most effective at building social capital where links are developed between Gypsy and Roma communities and employment opportunities outside of the community (bridging social capital). Often VET which is provided by unofficial i.e. non-state organisations such as churches or charities emphasises these organisations’ stereotypes about Gypsy/Roma communities and delivers training that might be inappropriate to generating future viable means of employment, or is overly specific to the ‘Gypsy/Roma’ community i.e. educating community workers to work within the community.

## 4.4.3.4 Identity and belonging

VET has the potential to improve social integration of Gypsy and Roma by disrupting many of the negative stereotypes that tend to define Gypsies. Both the positioning and perception of Gypsies and Roma within wider society, and the view of many Gypsy and Roma communities that integration with the non-Gypsy world is a danger which threatens cultural erosion could potentially be challenged by their successful engagement in VET.

In many respects Gypsy and Roma communities already participate in informal, largely family generated VET with for example parents passing on skills to their children. Many families will stress that the failure of schools in particular and education more widely is substituted by the success their own training has in terms of making their children financially secure. A formal recognition of this informal learning might increase levels of belonging to society.

## 4.4.3.5 VET and mental health

Access to VET has the potential to allow, encourage and support Gypsy and Roma to adapt to roles that would raise their standing with the wider population. It would broaden their employment options from the ‘traditional’ employment options that are themselves stigmatised, to which they are limited in many countries, and therefore potentially raise aspirations and community confidence.

## 4.4.3.6 VET and social reinforcement

VET, like other education opportunities, is also a means of accessing wider rights associated with citizenship. In countries where there is an active desire to improve the situation for Gypsy & Roma communities (Austria, Finland, UK perhaps) VET could target the wider stereotypes of Gypsies. In the poorest communities a sense that VET addresses issue such as lack of self-esteem seems to resonate with Gypsy and Roma not being considered citizens. This raises some issues about the integration of Gypsy and Roma communities within wider VET schemes or whether or not specific schemes should be made available to this group. In some respects in order to address the wider issues of citizenship, racism, negative stereotypes and intolerance towards these communities then the issue maybe more about how Gypsy and Roma communities become engaged within wider programmes as a matter of course.

Access to VET may have a positive impact on wider issues in the lives of Gypsy & Roma communities, including family concerns, problems with police, health issues.

## 4.4.4 Conclusions

The first and almost inevitable conclusion is that there is very little research around vocational training and Gypsies and Roma and that it would be of great benefit to carry out further research into this area. In particular such research should consider the wider implications of addressing clear skills shortages within many parts of the Gypsy and Roma communities. Whilst it seems obvious that improving families’ lives through educational opportunities that result in new employment opportunities is a good thing, there will be many Gypsies and Roma who fear the consequent effects of cultural erosion and the loss of traditional choices in their lives. Wider implications also include the need to challenge the negative stereotypes that abound about Gypsies and Roma and to consider how providing VET may change the public perception of these groups. The potential linkage between VET, employment and citizenship is one that in principle should mean that VET delivers significant improvements to Gypsy and Roma lives. However there are clear examples of educational programmes, including VET programmes that have resulted in the reinforcement of stereotypes about Gypsies and Roma. Well-designed vocational training could be used to deliver new sustainable, skills to communities who have generally not benefited from traditional sedentary educational practice. Such training should preferably address or at the very least be acutely conscious of the structural deficiencies that contribute to Gypsies and Roma being marginalised.

## 4.5 Muslim Focus group

## 4.5.1 Introduction

A Muslim can be defined as an adherent of Islam. Research suggests that the demographics of Muslims are largely situated in [Indonesia](http://en.wikipedia.org/wiki/Islam_in_Indonesia), [South Asia](http://en.wikipedia.org/wiki/South_Asia), Central Asia, the Middle East and [Sub-Saharan Africa](http://en.wikipedia.org/wiki/Islam_in_Africa) (Miller, 2009). Additionally, further sizeable communities of Muslims are found in [China](http://en.wikipedia.org/wiki/Islam_in_China), [Russia](http://en.wikipedia.org/wiki/Islam_in_Russia), and parts of the [Caribbean](http://en.wikipedia.org/wiki/Caribbean). It is suggested that converts to the Muslim faith and Muslim immigrant communities are found in almost every part of the world (Miller, 2009). The absence of previous literature on the Muslim community and VET may be in part due to most countries not categorising communities by their religion. As such reviewing known knowledge in this area is problematic. Additionally, the little previous research appears to focus on Muslim immigrants and education in general which is a homogenous group in itself, not specifically defined by the religion but by their immigrant status. In depth knowledge of the achievement of young people from immigrant families has been obtained from the PISA and IGLU international comparison studies (Gesemann 2006) however there is no information in these on the religious affiliation of the young people or their communities.

## 4.5.2 Focus Group

Out of the three expert panel focus groups conducted as part of this research the Muslim community focus group was the only one whose participants were not only experts in the field but also members of the community themselves. The researchers chairing this expert panel focus group were; Casey Edmonds and Dr Charlotte Chadderton from the University of East London. The national expert participants were;

Mohammed Moustakim from the University of East London who spoke of the situation in France and the UK,

Rania Hafez - is an academic and education campaigner who writes on  
professionalism, pedagogy and teacher education. As Director of  
Post-Compulsory Education and Training at the University of East London  
she has worked closely with many teachers and lecturers in London  
colleges and schools and is a staunch advocate of the 'Teachers' Voice'.  
In 2009 Rania founded the professional network 'Muslim Women in Education', a group that promotes the classical Islamic tradition of education based on rationality, knowledge and understanding.

Jan Germen Janmaat - is a senior lecturer in comparative social science at the Institute of Education, London. He is interested in the formation of civic values and identities among native and immigrant youth and in the role of education in promoting these qualities. He also leads the MA module Minorities, Migrants and Refugees in National Education Systems. He has published widely on these matters in journals such as *Ethnic and Racial Studies, Journal of Ethnic and Migration Studies, International Sociology*and*Comparative Education Review.*

Farid Panjwani from Aga Khan University who spoke of the situation in Holland and the UK

Sadaf Rizvi, Institute of Education – expert on Muslim schooling in Europe

**Note on methodology**

The term ‘Muslim community’ was contested by participants and there was confusion over who is referred to by the term ‘Muslim’. The participants argued that there is no single, Muslim community. Muslims come from a range of vastly different cultural backgrounds, and many have lived in Europe for generations and are fully integrated in European societies, whereas others may be recent immigrants.

The participants did not consider ‘Muslims’ to be a particularly disadvantaged group, and felt the research promoted a deficient view of a very plural group.

There was a feeling that immigrants who are Muslims, or Muslims from specific cultural or class backgrounds, might merit more research on grounds of their immigrant status or class or cultural background.

## 4.5.3 Findings

## 4.5.3.1 Social capital

Whilst it is widely accepted that VET does have the potential to enhance social capital, it needs to be emphasised that Muslims are not necessarily without social capital. Many have been born and schooled in Europe and are well-integrated into their societies. There is a perception that Muslims are less well-integrated than they actually are.

VET particularly has the potential to enhance social capital in countries where craftsmanship and blue collar work has higher status and is seen as a valid alternative route to the academic one, such as Germany and Holland, where there is an institutionalised system, technical universities and strong unions. It was reported that in Germany, the apprenticeship route is well taken up by Turkish children. It was also reported that the benefits for social capital were higher in flexible VET systems where VET qualifications are more challenging, include elements of general education (particularly numeracy and literacy and critical thinking), can lead to high status employment or university, and ultimately, offer social mobility. The inflexible VET systems of France and the UK are seen as dead-ends by many social groups, including Muslims. Benefits are also higher in countries with a non-flexible labour market, such as Germany, where a VET qualification will lead to employment. In the UK, with an extremely flexible labour market, employers will hire a person with a degree rather than a VET qualification (GNVQ or BTEC).

It was suggested that many people may be missing out on good VET options because of poor advice and guidance. Staff giving careers advice may be influenced by stereotypes and perceive visible minorities (a group to which Muslims are likely to belong) as experiencing language problems and discourage them from applying for high status VET. Staff may also not be trained or experienced in explaining a complicated education system to people who do not have the family experience to fall back on, which, again, may include many Muslims.

It was argued that for individuals with views strongly influenced by religious prejudice, VET has the potential to change attitudes and enhance inclusion, for example in educating people around the tolerance of homosexuality and women in leadership positions.

## 4.5.3.2 Identity and belonging

Participation in VET does have the potential to enhance feelings of social belonging. However, it was reported that racism and Islamaphobia, particularly since 9/11, both overt and covert, is a problem across Europe, and greatly influences individuals’ experiences in places of work and training and perceptions of how they might be treated if they do take part in formal VET. This includes overt discrimination such as a Muslim name being a disadvantage on a CV, and more covert racism such as women wearing headscarves being patronised. There is widespread awareness among young Muslims in Germany and Holland that racial and religious discrimination in the workplace is rife, and some may avoid VET and opt for work in the family or community business instead.

Among some Muslim groups, there is a high level of informal learning and skills gained in family and community businesses, including women doing cooking and sewing in the home, and men working as taxi drivers and in catering. This may be partly due to an avoidance of racism in the workplace, and partly because amongst practising Muslims, women should not mix with men outside the family. If this informal learning were formally recognised, these groups might feel a higher level of belonging to society.

If formal VET is to have a positive impact on individuals’ feelings of belonging, this should be in collaboration with citizenship rights for immigrants. This may affect a disproportionate number of Muslims. In Germany, for example, a country which has only recently declared itself a country of immigration, there was a longstanding perception that guest workers (mostly Muslims) would return to their countries of origin. It remains very difficult for those without German parents to gain German citizenship, and therefore some educational routes are closed to them as non-German nationals.

## 4.5.3.3 Community Mental Health

Whilst others have argued that participation in VET enhances community self-confidence and aspirations, our participants argued that particularly families who have recently immigrated from India or Pakistan to the UK (who tend to be Muslims) do not tend do vocational training as they already have high aspirations and have immigrated precisely in order to increase social mobility and therefore go for academic routes and positions.

Young Muslims in countries where there is an early selection system in education, such as Germany, are underachieving at school. This may be partly due to low teacher expectations and lack of support for second language learners. This group seems to be self-excluding from post-compulsory formal education options because of this earlier discrimination, and is therefore missing out of the potential benefits. This impacts negatively on both bridging and linking social capital.

## 5. Conclusions

This report has shown that there are evidenced meso-social benefits of VET, in particular in terms of club memberships but also (in some cases) in terms of health and psycho-social benefits. As noted in Sabates et al (2010) benefits are particularly pronounced where they are congruent with the welfare system of the country concerned. For instance in system 1 where the countries have well established vocational routes, the social outcomes of VET tend to be stronger and more significant. In contrast, countries in system 3 do not show such a strong effect because of the absence of such a deeply rooted VET culture. As a general principle, though, it can be considered that increased investment in VET in Europe is beneficial for meso-social benefits. This gives an enhanced role for VET in terms of not only economic activity but also in terms of active citizenship, civic participation and community cohesion.

For the absolute effects of general education and Vet the results are as follows: For participation in clubs, the effect of general education and VET are positive and significant. For relations with neighbours, the effects of VET and general education are thoroughly insignificant. For self rated health, the effect is positive and significant for both general education and VET in Europe and in system 5. Further, the effects of general education on chronic health problems in Europe and in system 5 are much higher than those of VET. When it comes to BMI, it is possible to see that general education is negatively associated with it in Europe and in systems 3 and 5, while VET decreases BMI only in system 5. Satisfaction with leisure is negatively associated with both general education and VET. Satisfaction with housing is positively associated with general education in Europe and in systems 2, 3, 4 and 5, while the relation between VET and satisfaction with housing is significant but weak in Europe and in system 4.

When the results are computed by social groups, the picture becomes relatively different. Across all individuals in the sample of European countries, we found that the likelihood of participating in clubs is increasing with income and with education. For Europe as a whole, general education and VET seem to increase the likelihood of participation in clubs for both singles and couples. Furthermore, the findings show that the results are almost identical for both females and males. When it comes to place of birth, it is obvious that people born within the country in which they were surveyed are more likely to participate in clubs independently of the type of education.

For relations with neighbours, we found that the likelihood of participating in clubs is decreasing when income goes up and when individuals do VET in particular (in Europe as a whole). For marital status, couples have less frequent relations with their neighbours than singles. Moreover, the likelihood of having frequent relations with neighbours is higher for males doing VET and general education in Europe and in system 5. For self rated health, we can see that the likelihood of chronic health problems decreases with income and with education. For marital status, VET is more beneficial for couples since it reduced the likelihood of having chronic health problems in Europe in general and in systems 3 and 5. Across all individuals in the ECHP database, individuals with higher income levels who are doing VET or general education are more likely to report good health.

Furthermore, satisfaction with leisure decreases with income and with education independently from its type in Europe as a whole. When it comes to gender, couples are less satisfied than singles independently of the education they are undertaking. Across all individuals in Europe, satisfaction with housing is increasing with income and to some extent with education.

When the positional effects of VET are computed by education levels (ISCED) it is possible to see that the returns diminish for the upper group. This is intuitive because these individuals already have a high level of education and any further increase will have lower returns.

The results at the household level are stronger and mostly significant for both VET and general education.

However, the meso-social benefits are not shared equally by different social groups. As has been seen in the quantitative analysis benefits are dependent on income and other social characteristics such as citizenship. In addition there are groups, not frequently identified in social surveys, for whom the meso-social benefits might be mediated by certain barriers. The first thing to note about the groups identified in the qualitative study (Roma, Refugees and Muslims) is that they are heterogeneous and (in particular in the case of Muslims) there were questions from the expert focus groups regarding the identification of group memberships. However, despite the problems in clearly defining these groups there are commonalities in experience. In particular, the difficulty in attaining VET (given barriers to participation) and additionally in converting VET into meso-social benefits. One way to address these problems is through addressing issues of skill recognition in terms of accrediting existing skills. For example, in the case of the Roma there are community skills and competences which might not be recognised by the institutionalised VET system. For Refugees, there is a need to recognise skills and qualifications gained both within and outside of the European Union. This makes systems which recognise different types of VET acquisition across states, particularly the European Quality Assurance Reference Framework (EQAVET) highly relevant.

The data gathered from the expert panel focus groups has enriched the empirical data gathered from the European Community Household Panel (ECHP) discussed in section 3 of this report, by adding previously unknown knowledge about these under represented communities. The report has also highlighted the need for better data on VET not only in terms of its benefits but also in terms of various sub-populations. The groups assessed through the expert focus groups were not visible in the ECHP as their characteristics (Roma, Refugee status, Faith) are not ascertained. Furthermore, intersectional characteristics (e.g. the ways in which characteristics such as social class interests with faith in realising the benefits of VET) can not be considered. This points towards the need not only for new data (which covers the characteristics of sub-populations) but new types of analysis (which is sensitive to intersectionality) in future attempts to measure the meso-social benefits of VET.

## List of abbreviations

CVET – Continuing Vocational Education and Training

ECHP – European Community Household Panel Study

FHN – Fundamental Human Needs

IVET – Initial Vocational Education and Training

VET – Vocational Education and Training

## GNVQ – General National Vocational Qualification

BTEC – Business and Technology Education Council Diploma

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## Appendix

***The effects of VET for social groups.***

***Participation in clubs.***

Table 48: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | n.s. | n.s. | r.g. | n.s. | r.g. | (-) | (-) |
| System 1 | r.g. | n.s. | n.s. | r.g. | (-) | r.g. | n.s. | n.s. |
| System 2 | r.g. | (-) | (-) | r.g. | (-) | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | (+) | r.g. | n.s. | r.g. | (-) | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | n.s. | r.g. | (-) | n.s. |
| System 5 | r.g. | (-) | (+) | r.g. | (+) | r.g. | (+) | (+) |

Table 49: Model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (+) | (+) | (+) | (+) | (+) | (-) | n.s. | n.s. |
| System 1 | (+) | n.s. | (+) | (+) | n.s. | (+) | n.s. | n.s. |
| System 2 | n.s. | (-) | (-) | n.s. | (-) | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (+) | (+) | (+) | (+) | n.s. | n.s. | n.s. |
| System 5 | n.s. | (+) | (+) | (+) | (+) | (+) | (+) | (+) |

Table 50: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (+) | (+) | (+) | (+) | (+) | (-) | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | (+) |
| System 2 | (+) | (+) | n.s. | (+) | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | (+) | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (+) | (+) | (+) | (+) | n.s. | n.s. | n.s. |
| System 5 | n.s. | n.s. | (+) | (+) | n.s. | n.s. | (+) | n.s. |

Table 51: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | (+) | r.g. | (+) | (+) |
| System 1 | r.g. | (+) | n.s. | r.g. | (+) | n.s. |
| System 2 | r.g. | n.s. | (+) | r.g. | n.s. | (+) |
| System 3 | r.g. | n.s. | (+) | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | (+) | (+) |
| System 5 | r.g. | (+) | n.s. | r.g. | (+) | n.s. |

Table 52: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | (+) | r.g. | n.s. | n.s. |
| System 1 | r.g. | (+) | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | (+) | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | n.s. | (+) |
| System 5 | r.g. | (+) | (+) | r.g. | n.s. | n.s. |

***Relations with neighbours.***

Table 53: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | (-) | (-) | r.g. | (-) | r.g. | n.s. | n.s. |
| System 1 | r.g. | (-) | (-) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | (-) | (-) | r.g. | n.s. | r.g. | n.s. | (-) |
| System 3 | r.g. | (-) | (-) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (-) | (-) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 5 | r.g. | (-) | (-) | r.g. | (-) | r.g. | n.s. | n.s. |

Table 54: model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | n.s. | (-) | (-) | n.s. | (-) | n.s. | n.s. | n.s. |
| System 1 | n.s. | (-) | (-) | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | (-) | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | (-) | (-) | n.s. | (-) | n.s. | n.s. | (-) |
| System 4 | n.s. | (-) | (-) | n.s. | (-) | n.s. | n.s. | n.s. |
| System 5 | n.s. | n.s. | (-) | n.s. | n.s. | n.s. | n.s. | n.s. |

Table 55: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | n.s. | (-) | (-) | (+) | (-) | n.s. | n.s. | n.s. |
| System 1 | (+) | n.s. | (-) | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | (-) | (+) | (-) | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (-) | n.s. | (-) | n.s. | n.s. | n.s. |
| System 5 | n.s. | (-) | n.s. | n.s. | (-) | n.s. | n.s. | n.s. |

Table 56: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | (+) | r.g. | (-) | n.s. |
| System 1 | r.g. | n.s. | (+) | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | (-) | n.s. |
| System 4 | r.g. | n.s. | n.s. | r.g. | (-) | n.s. |
| System 5 | r.g. | (+) | (+) | r.g. | n.s. | n.s. |

Table 57: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | (-) | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 5 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |

***Chronic Health problems.***

Table 58: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | (-) | (-) | r.g. | n.s. | r.g. | (+) | (+) |
| System 1 | r.g. | (-) | (-) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | (-) | r.g. | n.s. | r.g. | n.s. | (+) |
| System 3 | r.g. | (-) | (-) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (-) | (-) | r.g. | (-) | r.g. | n.s. | n.s. |
| System 5 | r.g. | (-) | (-) | r.g. | (+) | r.g. | (+) | (+) |

Table 59: model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (-) | (-) | (-) | (-) | (-) | (-) | (+) | n.s. |
| System 1 | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | (-) | n.s. | n.s. | (-) | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | n.s. | n.s. | n.s. | (+) | n.s. |
| System 5 | (-) | (-) | (-) | n.s. | (-) | n.s. | (+) | n.s. |

Table 60: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (-) | (-) | (-) | (-) | (-) | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 2 | (+) | n.s. | (-) | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | (+) | n.s. |
| System 5 | (-) | (-) | (-) | (-) | (-) | n.s. | n.s. | n.s. |

Table 61: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (-) | (-) | r.g. | (-) | (-) |
| System 1 | r.g. | (+) | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | n.s. | r.g. | (+) | (+) |
| System 5 | r.g. | (-) | (-) | r.g. | (-) | (-) |

Table 62: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | n.s. | r.g. | n.s. | n.s. |
| System 1 | r.g. | (+) | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | n.s. | n.s. |
| System 5 | r.g. | n.s. | n.s. | r.g. | n.s. | (+) |

***Self rated health.***

Table 63: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | (+) | (+) | r.g. | (+) | r.g. | (-) | (-) |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | (+) | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | (+) | r.g. | (+) | r.g. | (-) | (-) |
| System 4 | r.g. | n.s. | (+) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 5 | r.g. | (+) | (+) | r.g. | (+) | r.g. | (+) | n.s. |

Table 64: model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (+) | (+) | (+) | (+) | (+) | n.s. | (-) | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 2 | (+) | n.s. | n.s. | (+) | (+) | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | (+) | n.s. | (+) | n.s. | (-) | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. | (-) | n.s. | n.s. | n.s. |
| System 5 | (+) | (+) | (+) | (+) | (+) | n.s. | (+) | n.s. |

Table 65: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (+) | (+) | (+) | (+) | (+) | n.s. | (-) | n.s. |
| System 1 | n.s. | (+) | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 2 | (-) | n.s. | n.s. | (-) | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | (+) | n.s. | n.s. | n.s. | (-) | n.s. |
| System 4 | (+) | n.s. | n.s. | (+) | (-) | n.s. | n.s. | n.s. |
| System 5 | (+) | (+) | (+) | (+) | (+) | n.s. | (+) | n.s. |

Table 66: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | (+) | r.g. | (+) | (+) |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | n.s. | (-) |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 5 | r.g. | (+) | (+) | r.g. | (+) | (+) |

Table 67: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 1 | r.g. | n.s. | (+) | r.g. | (-) | n.s. |
| System 2 | r.g. | n.s. | (-) | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 5 | r.g. | (+) | n.s. | r.g. | (+) | n.s. |

***BMI.***

Table 68: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | n.s. | n.s. | r.g. | (+) | r.g. | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | r.g. | (+) | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | (+) | r.g. | n.s. | (-) |
| System 3 | r.g. | n.s. | n.s. | r.g. | (+) | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | (+) | r.g. | n.s. | n.s. |
| System 5 | r.g. | (-) | (-) | r.g. | (+) | r.g. | n.s. | (+) |

Table 69: model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | (-) |
| System 4 | n.s. | n.s. | (+) | n.s. | (+) | n.s. | n.s. | n.s. |
| System 5 | n.s. | (-) | (-) | (+) | (+) | n.s. | n.s. | n.s. |

Table 70: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (-) | (-) | n.s. | (-) | (+) | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. |
| System 2 | (+) | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. |
| System 3 | (-) | (-) | n.s. | (-) | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. | (+) | n.s. | n.s. | n.s. |
| System 5 | (-) | (-) | (-) | (-) | (+) | n.s. | n.s. | n.s. |

Table 71: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | (-) | r.g. | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | (+) | (+) |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | n.s. | (-) | r.g. | n.s. | n.s. |
| System 5 | r.g. | n.s. | (-) | r.g. | (-) | (-) |

Table 72: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 3 | r.g. | n.s. | (-) | r.g. | n.s. | n.s. |
| System 4 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 5 | r.g. | n.s. | n.s. | r.g. | (-) | n.s. |

***Satisfaction with leisure.***

Table 73: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | n.s. | (-) | r.g. | (-) | r.g. | (-) | n.s. |
| System 1 | r.g. | (-) | (-) | r.g. | (-) | r.g. | (-) | n.s. |
| System 2 | r.g. | n.s. | (-) | r.g. | (-) | r.g. | n.s. | n.s. |
| System 3 | r.g. | (+) | n.s. | r.g. | (-) | r.g. | n.s. | n.s. |
| System 4 | r.g. | n.s. | (-) | r.g. | (-) | r.g. | (-) | n.s. |
| System 5 | r.g. | n.s. | n.s. | r.g. | (-) | r.g. | n.s. | n.s. |

Table 74: model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | n.s. | n.s. | (-) | n.s. | (-) | (-) | (-) | n.s. |
| System 1 | (-) | (-) | (-) | (-) | (-) | n.s. | (-) | n.s. |
| System 2 | n.s. | (-) | (-) | (-) | (-) | n.s. | (-) | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. | (-) | n.s. | n.s. | n.s. |
| System 4 | n.s. | (+) | n.s. | (+) | (-) | (-) | (-) | (-) |
| System 5 | n.s. | n.s. | n.s. | n.s. | (-) | (-) | n.s. | n.s. |

Table 75: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (-) | (-) | (-) | n.s. | (-) | n.s. | (-) | n.s. |
| System 1 | (-) | (-) | n.s. | n.s. | (-) | (-) | (-) | n.s. |
| System 2 | (-) | (-) | (-) | (-) | (-) | n.s. | (-) | (+) |
| System 3 | (+) | (+) | n.s. | (+) | (-) | n.s. | n.s. | n..s |
| System 4 | (-) | (-) | (-) | (-) | (-) | (-) | (-) | n..s |
| System 5 | (-) | n.s. | n.s. | n.s. | (-) | n.s. | n.s. | n.s. |

Table 76: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (-) | (-) | r.g. | n.s. | (-) |
| System 1 | r.g. | (-) | n.s. | r.g. | (-) | n.s. |
| System 2 | r.g. | (-) | (-) | r.g. | (-) | (-) |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | (+) |
| System 4 | r.g. | n.s. | (-) | r.g. | (+) | (-) |
| System 5 | r.g. | n.s. | (-) | r.g. | n.s. | n.s. |

Table 77: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | n.s. | (-) | r.g. | (-) | (-) |
| System 1 | r.g. | (-) | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | (-) | (-) | r.g. | (-) | n.s. |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (-) | r.g. | n.s. | (-) |
| System 5 | r.g. | n.s. | n.s. | r.g. | (-) | n.s. |

***Satisfaction with housing.***

Table 78: Model for those who did not undertake any education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | r.g. | (+) | (+) | r.g. | (+) | r.g. | (-) | n.s. |
| System 1 | r.g. | n.s. | (+) | r.g. | (+) | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | (+) | r.g. | n.s. | r.g. | n.s. | n.s. |
| System 3 | r.g. | (+) | (+) | r.g. | (+) | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | (+) | r.g. | (-) | n.s. |
| System 5 | r.g. | (+) | (+) | r.g. | (+) | r.g. | n.s. | n.s. |

Table 79: model for those who undertook VET.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| VET | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | n.s. | (+) | (+) | (+) | (+) | n.s. | n.s. | n.s. |
| System 1 | n.s. | (+) | (+) | n.s. | (+) | n.s. | n.s. | n.s. |
| System 2 | n.s. | (+) | (+) | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | (+) | (+) | n.s. | (+) | n.s. | n.s. | n.s. |
| System 4 | (+) | (+) | (+) | (+) | (+) | n.s. | (-) | n.s. |
| System 5 | n.s. | n.s. | (+) | n.s. | (+) | n.s. | n.s. | n.s. |

Table 80: Model for those who undertook general education.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| General education | | | | | | | | |
|  | Household Income | | | Marital Status | | Citizenship | | |
|  | Lower | Middle | Upper | Single | Couple | Non national | National | EU national |
| Europe | (+) | (+) | (+) | (+) | (+) | n.s. | n.s. | n.s. |
| System 1 | n.s. | (+) | (+) | (+) | n.s. | n.s. | n.s. | (+) |
| System 2 | (+) | (+) | (+) | (+) | n.s. | (+) | (+) | n.s. |
| System 3 | (+) | (+) | n.s. | (+) | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (+) | (+) | (+) | n.s. | n.s. | n.s. | n.s. |
| System 5 | n.s. | (+) | (+) | (+) | (+) | n.s. | (+) | n.s. |

Table 81: Impact of education episodes by gender.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gender | | | | | |
|  | Male | | | Female | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | n.s. | (+) | r.g. | n.s. | (+) |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | (+) |
| System 2 | r.g. | n.s. | (+) | r.g. | n.s. | (+) |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | (+) |
| System 4 | r.g. | (+) | (+) | r.g. | (+) | (+) |
| System 5 | r.g. | n.s. | n.s. | r.g. | n.s. | (+) |

Table 82: Impact of education episodes by place of birth.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Place of birth | | | | | |
|  | Within | | | Without | | |
|  | No education | VET | General | No education | VET | General |
| Europe | r.g. | (+) | (+) | r.g. | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 2 | r.g. | n.s. | (+) | r.g. | n.s. | (+) |
| System 3 | r.g. | n.s. | n.s. | r.g. | n.s. | n.s. |
| System 4 | r.g. | (+) | (+) | r.g. | n.s. | n.s. |
| System 5 | r.g. | n.s. | (+) | r.g. | n.s. | n.s. |

***The absolute effects of VET.***

Table 83: Participation in clubs, Relations with neighbours, self rated health, chronic health problems.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Participation in clubs | | Relations with neighbours | | Self rated health | | Chronic health problems | |
|  | General edu | VET | General edu | VET | General edu | VET | General edu | VET |
| Europe | 0.01 | 0.17 | n.s. | n.s. | 0.13 | 0.13 | -0.19 | -0.09 |
| System 1 | n.s. | 0.13 | n.s. | n.s. | n.s. | n.s. | n.s. | 0.08 |
| System 2 | 0.21 | n.s. | n.s. | n.s. | -0.11 | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | -0.06 | n.s. | n.s. | n.s. | n.s. |
| System 4 | 0.32 | 0.31 | n.s. | n.s. | n.s. | n.s. | n.s. | 0.18 |
| System 5 | n.s. | 0.14 | n.s. | n.s. | 0.49 | 0.29 | -0.38 | -0.16 |

Table 84: BMI, Satisfaction with leisure, Satisfaction with housing.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | BMI | | Satisfaction with leisure | | Satisfaction with housing | |
|  | General edu | VET | General edu | VET | General edu | VET |
| Europe | -0.13 | n.s. | -0.05 | -0.01 | 0.07 | 0.009 |
| System 1 | n.s. | n.s. | -0.03 | -0.03 | n.s. | n.s. |
| System 2 | n.s. | n.s. | -0.06 | -0.04 | 0.14 | n.s. |
| System 3 | -0.16 | n.s. | n.s. | n.s. | 0.06 | n.s. |
| System 4 | n.s. | n.s. | -0.06 | 0.02 | 0.06 | 0.03 |
| System 5 | -0.45 | -0.11 | n.s. | n.s. | 0.09 | n.s. |

***The cumulative effects of VET.***

Table 85: Participation in clubs.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Participation in clubs | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | 0.14 | 0.1 | 0.12 | 0.12 | 0.14 | 0.16 | 0.29 |
| System 1 | r.g. | 0.24 | n.s. | n.s. | n.s. | 0.17 | n.s. | 0.26 |
| System 2 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 4 | r.g. | 0.26 | 0.28 | 0.2 | n.s. | 0.34 | 0.48 | 0.21 |
| System 5 | r.g. | n.s. | n.s. | 0.11 | 0.17 | 0.11 | 0.15 | 0.25 |

Table 86: Relations with neighbours.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Relations with neighbours | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | n.s. | n.s. | -0.07 | -0.06 | n.s. | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | 0.13 | n.s. | n.s. | n.s. | n.s. |
| System 2 | r.g. | n.s. | 0.17 | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | -0.16 | n.s. | n.s. | n.s. | n.s. |
| System 4 | r.g. | -0.12 | -0.1 | -0.19 | n.s. | n.s. | 0.12 | 0.27 |
| System 5 | r.g. | n.s. | 0.17 | n.s. | n.s. | n.s. | n.s. | n.s. |

Table 87: Self rated health.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Self rated health | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | n.s. | n.s. | 0.19 | 0.23 | n.s. | 0.26 | 0.21 |
| System 1 | r.g. | n.s. | -0.13 | n.s. | n.s. | n.s. | -0.25 | 0 |
| System 2 | r.g. | n.s. | n.s. | n.s. | n.s. | 0.21 | n.s. | 0.17 |
| System 3 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | 0.29 | n.s. |
| System 4 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | 0.15 | n.s. |
| System 5 | r.g. | n.s. | 0.42 | 0.35 | 0.38 | 0.19 | 0.2 | n.s. |

Table 88: Chronic health problems.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Chronic health problems | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | n.s. | n.s. | -0.06 | -0.15 | -0.11 | -0.11 | -0.09 |
| System 1 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | 0.21 | 0.14 |
| System 2 | r.g. | n..s | 0.16 | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 4 | r.g. | 0.33 | 0.31 | 0.19 | n.s. | n.s. | n.s. | n.s. |
| System 5 | r.g. | n.s. | n.s. | -0.14 | -0.28 | -0.13 | n.s. | -0.1 |

Table 89: BMI.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | BMI | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | n.s. | n.s. | n.s. | -0.1 | -0.02 | 0.04 | 0.1 |
| System 1 | r.g. | n.s. | n.s. | n.s. | -0.08 | n.s. | 0.07 | 0.14 |
| System 2 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 3 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | n.s. | 0.28 |
| System 4 | r.g. | n.s. | n.s. | n.s. | -0.08 | n.s. | n.s. | 0.12 |
| System 5 | r.g. | n.s. | n.s. | n.s. | -0.18 | -0.11 | n.s. | n.s. |

Table 90: Satisfaction with leisure.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Satisfaction with leisure | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | n.s. | n.s. | n.s. | -0.04 | -0.02 | n.s. | n.s. |
| System 1 | r.g. | n.s. | n.s. | n.s. | n.s. | -0.09 | n.s. | -0.1 |
| System 2 | r.g. | n.s. | -0.05 | n.s. | n.s. | -0.07 | -0.06 | -0.1 |
| System 3 | r.g. | n.s. | -0.15 | n.s. | n.s. | n.s. | n.s. | n.s. |
| System 4 | r.g. | n.s. | 0.05 | n.s. | n.s. | n.s. | 0.05 | 0.05 |
| System 5 | r.g. | n.s. | 0.06 | n.s. | n.s. | n.s. | n.s. | n.s. |

Table 91: Satisfaction with housing.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Satisfaction with housing | | | | | | | |
|  | Wave 1 | Wave 2 | Wave 3 | Wave 4 | Wave 5 | Wave 6 | Wave 7 | Wave 8 |
| Europe | r.g. | -0.02 | n.s. | n.s. | n.s. | n.s. | n.s. | 0.02 |
| System 1 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | 0.04 | n.s. |
| System 2 | r.g. | n.s. | n.s. | n.s. | n.s. | n.s. | 0.04 | n.s. |
| System 3 | r.g. | 0.09 | n.s. | -0.11 | n.s. | n.s. | -0.05 | n.s. |
| System 4 | r.g. | n.s. | n.s. | 0.03 | 0.04 | n.s. | n.s. | 0.04 |
| System 5 | r.g. | n.s. | -0.05 | n.s. | -0.05 | n.s. | n.s. | n.s. |

***The positional effects of VET.***

***The findings from the entire dataset.***

Table 92: Participation in clubs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Participation in clubs | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (+) | (-) | (-) | (+) |
| System 1 | (+) | (-) | n.s. | n.s. |
| System 2 | n.s. | n.s. | (+) | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (-) | n.s. | (+) |
| System 5 | (+) | (-) | (-) | (+) |

Table 93: Relations with neighbours.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Relations with neighbours | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | (+) | (-) | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | n.s. | n.s. |

Table 94: Self rated health.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Self rated health | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (-) | (+) | (+) | (+) |
| System 1 | n.s. | n.s. | (-) | (-) |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | (-) | (+) | n.s. | n.s. |
| System 4 | (-) | n.s. | (+) | (-) |
| System 5 | (+) | (-) | (+) | (+) |

Table 95: Chronic health problems.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Chronic health problems | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | (-) | (-) | (+) |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | n.s. | (-) | (+) |
| System 5 | (-) | (+) | (-) | (+) |

Table 96: BMI.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | BMI | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (-) | (+) |
| System 1 | n.s. | n.s. | (-) | (+) |
| System 2 | n.s. | n.s. | (+) | (-) |
| System 3 | n.s. | n.s. | (-) | (+) |
| System 4 | (+) | n.s. | n.s. | n.s. |
| System 5 | (-) | (+) | (-) | (+) |

Table 97: Satisfaction with leisure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with leisure | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (-) | n.s. | n.s. | n.s. |
| System 1 | (-) | (+) | n.s. | n.s. |
| System 2 | n.s. | n.s. | (-) | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (-) | n.s. |
| System 5 | (-) | (+) | (+) | (-) |

Table 98: Satisfaction with housing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with housing | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (+) | (-) |
| System 1 | (-) | (+) | (+) | (-) |
| System 2 | n.s. | n.s. | n.s. | (+) |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | (+) | (-) |

***The findings from level one ISCED sub-dataset.***

Table 99: Participation in clubs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Participation in clubs | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (+) | (-) | (+) | (-) |
| System 1 | (+) | (-) | (+) | (-) |
| System 2 | n.s. | n.s. | (+) | (-) |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (-) | n.s. | (+) |
| System 5 | (+) | n.s. | n.s. | n.s. |

Table 100: Relations with neighbours.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Relations with neighbours | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (-) | (+) | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | (+) | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | n.s. | n.s. | n.s. | n.s. |

Table 101: Self rated health.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Self rated health | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | (+) | (+) | (-) |
| System 1 | n.s. | n.s. | n.s. | (+) |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | (-) |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | (+) | n.s. |

Table 102: Chronic health problems.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Chronic health problems | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (-) | (+) |
| System 1 | n.s. | n.s. | (+) | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | n.s. | n.s. | (-) | n.s. |

Table 103: BMI.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | BMI | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (-) | (+) |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | (+) | (-) |
| System 3 | (-) | (+) | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | n.s. | n.s. | (-) | (+) |

Table 104: Satisfaction with leisure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with leisure | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (-) | (+) | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | (+) |
| System 3 | (-) | (+) | n.s. | n.s. |
| System 4 | n.s. | (+) | (-) | (+) |
| System 5 | (-) | (+) | (+) | (-) |

Table 105: Satisfaction with housing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with housing | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (+) | (-) |
| System 1 | n.s. | n.s. | (+) | (-) |
| System 2 | n.s. | n.s. | n.s. | (+) |
| System 3 | (-) | (+) | n.s. | n.s. |
| System 4 | n.s. | (+) | (+) | (-) |
| System 5 | n.s. | n.s. | (+) | (-) |

***The findings from level two ISCED sub-dataset.***

Table 106: Participation in clubs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Participation in clubs | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (+) | n.s. | (-) | (+) |
| System 1 | (+) | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (-) | n.s. | n.s. |
| System 5 | (+) | n.s. | (-) | (+) |

Table 107: Relations with neighbours.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Relations with neighbours | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | (+) | (-) | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | n.s. | n.s. |

Table 108: Self rated health.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Self rated health | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | (+) | (+) | (-) |
| System 1 | n.s. | n.s. | (-) | (+) |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | (+) | (-) | (+) | (-) |

Table 109: Chronic health problems.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Chronic health problems | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (-) | (+) |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | (-) | n.s. | n.s. |
| System 5 | (-) | (+) | (-) | (+) |

Table 110: BMI.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | BMI | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (-) | (+) |
| System 1 | n.s. | n.s. | (-) | (+) |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | (-) | (+) | (-) |
| System 5 | (-) | (+) | (-) | (+) |

Table 111: Satisfaction with leisure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with leisure | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | (-) |
| System 1 | (-) | (+) | (+) | (-) |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | n.s. | n.s. | (+) | (-) |

Table 112: Satisfaction with housing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with housing | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (+) | (-) |
| System 1 | (-) | (+) | (+) | (-) |
| System 2 | n.s. | n.s. | n.s. | (+) |
| System 3 | (+) | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | (+) | (-) |

***The findings from level three ISCED sub-dataset.***

Table 113: Participation in clubs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Relations with neighbours | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | (-) | (+) | n.s. | n.s. |

Table 114: Relations with neighbours.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Relations with neighbours | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | (-) | (+) | n.s. | n.s. |

Table 115: Self rated health.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Self rated health | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | (-) | (+) | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (-) | (+) | n.s. | n.s. |
| System 5 | n.s. | n.s. | n.s. | n.s. |

Table 116: Chronic health problems.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Chronic health problems | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | (+) | n.s. | n.s. | n.s. |
| System 5 | (-) | (+) | n.s. | n.s. |

Table 117: BMI.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | BMI | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | (-) | (+) |
| System 1 | n.s. | n.s. | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | n.s. |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | n.s. | n.s. |
| System 5 | (+) | (-) | n.s. | n.s. |

Table 118: Satisfaction with leisure.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with leisure | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | n.s. | n.s. | n.s. | (-) |
| System 2 | n.s. | n.s. | (-) | (+) |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | n.s. | n.s. |

Table 119: Satisfaction with housing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Satisfaction with housing | | | |
|  | VET | Percentage vet | General | Percentage gen |
| Europe | n.s. | n.s. | n.s. | n.s. |
| System 1 | (-) | (+) | n.s. | n.s. |
| System 2 | n.s. | n.s. | n.s. | (+) |
| System 3 | n.s. | n.s. | n.s. | n.s. |
| System 4 | n.s. | n.s. | (+) | (-) |
| System 5 | n.s. | n.s. | n.s. | n.s. |

***The effects of VET at the household level.***

Table 120: Satisfaction with housing.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Participation in clubs | | Relations with neighbours | | Self rated health | | Chronic health problems | |
|  | General edu | VET | General edu | VET | General edu | VET | General edu | VET |
| Europe | (+) | (+) | (-) | (-) | (+) | (+) | (-) | (+) |
| System 1 | (+) | (+) | (-) | (-) | (+) | (+) | (-) | (+) |
| System 2 | (+) | (+) | (-) | (+) | (+) | (+) | (-) | (-) |
| System 3 | (+) | (+) | (+) | (-) | (+) | n.s. | (-) | (+) |
| System 4 | (+) | (+) | (-) | (-) | (+) | (+) | (-) | (-) |
| System 5 | (+) | (+) | (-) | (-) | (+) | (+) | (-) | (-) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | BMI | | Satisfaction with leisure | | Satisfaction with housing | |
|  | General edu | VET | General edu | VET | General edu | VET |
| Europe | (-) | (-) | (-) | (-) | (+) | (+) |
| System 1 | (-) | (-) | (-) | (-) | (-) | (-) |
| System 2 | (-) | (-) | (-) | (-) | (+) | (-) |
| System 3 | (-) | (+) | (-) | (-) | (+) | (-) |
| System 4 | (-) | (-) | (-) | (-) | (+) | (+) |
| System 5 | (-) | (-) | (-) | (-) | (-) | (-) |

## APPENDIX: Calculating Monetary Values

This section sets out some estimates of the monetary values which can be assigned to the benefits of participation in VET as identified earlier in the report. These estimates are shown in Table A2 at the end of this appendix, while Table A1 shows a necessary intermediate step on the way to the final estimates.

The main objective of our report has been to investigate relationships between vocational training and a range of health/social outcomes. A further question which might be asked is what might such relationships be worth if expressed in monetary values. Expressing results in monetary terms might be useful if one wished, for example, to compare VET participation with other methods of achieving these outcomes. However, assigning monetary values is tricky. It is bound to involve a number of assumptions and is a somewhat speculative exercise. Nonetheless, we attempt some calculations of monetary values here. The calculations were performed for four of the outcomes: self-rated health, chronic health problems, BMI and good relations with neighbours.

In order to calculate the value of VET participation it is first necessary to have some estimates of the monetary value of each of the health/social outcomes. One approach is to directly estimate the value of the outcome. For example, if better health has an impact on wages it would be possible to fit a wage equation to an appropriate labour force dataset and so estimate the effect of health variables on wages after allowing for other factors. However, for some outcomes, such as civic participation or relations between neighbours such a direct approach would not be applicable. Here the approach adopted by social scientists is indirect. A regression equation for wellbeing can be estimated, including both income and other factors such as civic participation among the explanatory variables. It is then possible to calculate how much civic participation is worth expressed as how much additional income would be required to reach an equivalent level of wellbeing for those who do not engage in civic participation. This indirect or ‘shadow pricing’ approach has been used quite often in the academic literature to assign monetary values to social outcome variables. The data requirements are quite high: a survey of individuals containing wellbeing, income and whatever social variables are of interest.

So relevant literature from academic journal articles was reviewed in order to obtain monetary values for the outcomes of interest. This is shown in Table A1.

Table A1: Estimates of the Monetary Value of Social Benefits for the Individual

|  |  |
| --- | --- |
|  |  |
|  | Annual value, in euros |
| Self-rated health | 130,000 to 215,000 |
| Chronic health condition | -600,000 to – 675,000 |
| Good relations with neighbours | 30,000 to 50,000 |
| BMI | -430 to -675 |
|  |  |
| Estimates calculated from Powdthavee (2008) for self-rated health, chronic health, relations with neighbours; from Brunello and D’Hombres (2007) for BMI.  Estimates assume that very poor health in Powdthavee (2008) is equivalent to chronic health problems in ECHP; that good/excellent health compared to fair is equivalent to good self-rated health in our models; and that frequent contact with neighbours in ECHP is the same as talking to neighbours once or twice a week/on most days in Powdthavee (2008).  Where necessary conversion to current (2011) prices assumed an annual price and wage inflation rate of aprox 3%; exchange rates from £ to E of 1.10 to 1.13 were used.  BMI: labour market value only. | |

The monetary valuations of VET participation per individual are shown in Table A2. This table shows the estimated monetary value *per individual per annum* of VET participation. Given the quantification of VET benefits obtained earlier in the report and the monetary values of social outcomes in Table A1, then it is a straightforward exercise in multiplication to obtain a value for VET participation. For example, if VET participation raises the probability of good relations with neighbours by 0.1 and the value of such good relations in terms of individual wellbeing is worth, say, €800, then the value will be 80 euros per individual on average. In other words, an extra 10 individuals out of every 100 now benefit from good neighbourly relations as an outcome of VET, and so the average across the 100 individuals is a gain of 80 euros each.

Referring now to the actual figures in Table A2 it is apparent that, on average, across all countries in the sample, the impact of VET on relations between neighbours was found to be negative (but also non-significant). If we take that estimate and express it as a monetary value then it would be worth from -300 to -500 euros per annum per individual. Taking estimates for each of the five systems, it is apparent that VET impact on neighbourly relations was negative in only two of the systems and was worth up to 2,000 euros per person in System 5.

The impact of VET on self-reported health was estimated as worth between €18,200 and €30,100 per individual across the European countries in the sample as a whole. It can be seen that the impact is negative in some systems but could be positive and worth up to €62,780 per individual in System 5.

Across the European sample as a whole, and in some individual systems, VET participation was associated with a reduction in the likelihood of having chronic health problems. This reduction made a substantial contribution to individual wellbeing, estimated to be worth some €58,800 to €66,100 on average per individual.

Finally, the association of VET with the reduction in BMI was estimated, just in terms of its value in the labour market, at quite small amounts of 2.58 to 4.05 euros per year averaged per individual across Europe, and up to about 78 euros under system 5. It is possible that estimates which took into account impact beyond wages might increase these estimates.

Table A2: The average value of the social benefits of VET per individual

Euros per annum

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  | Euro | Sys1 | Sys2 | Sys3 | Sys4 | Sys5 |
| Good relations with neighbours | -300 to -500 | 300 to 500 | 600 to 1,000 | -2,100 to -3,500 | -600 to -1,000 | 1,200 to 2,000 |
| Self-reported health | 18,200 to 30,100 | -5,070 to -8,385 | 6,240 to 10,320 | 1,040 to 1,720 | -7,020 to -11,610 | 37,960 to 62,780 |
| Chronic health condition | 58,800 to 66,100 | -46,800 to -52,650 | -21,000 to  -23,625 | 3,600 to 4,050 | -115,800 to  -130,275 | 99,600 to 112,050 |
| BMI | 2.58 to 4.05 | -8.17 to -12.83 | -18.92 to -29.70 | 1.72 to 2.70 | -9.46 to -14.85 | 49.88 to 78.30 |

Estimates based on the monetary values shown in Table A1 and the absolute values of VET

1. For further details about when to use fixed versus random effects see chapter 14 in Woodridge (2003) and Hsiao (2003). [↑](#footnote-ref-1)
2. This section was authored by Martin Myers, Dr. Kalwant Bhopal and Casey Edmonds. [↑](#footnote-ref-2)