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VET for the common good

The macrosocial benefits of VET



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Foreword

Europe has recently launched its new strategy for smart sustainable growth: Europe 2020. One of the flagship initiatives supporting the strategy – youth on the move – makes social inclusion (and cohesion) one of its four pillars.

Social cohesion is a term used in social policy, sociology and political science to describe the bonds or ‘glue’ that bring people together in a society, particularly in the context of cultural diversity. According to the Council of Europe’s Directorate General of Social Cohesion, it is the capacity of a society to ensure the wellbeing of all its members, minimising disparities and avoiding marginalisation.

The present study considers the contribution to social cohesion of vocational education and training (VET) and, more generally, the benefits it brings to society as a whole. It analyses how VET can effectively contribute to all three dimensions of the Council of Europe’s definition: well being (longer and better lives); reducing disparity (via the diffusion of political rights and civil liberties); and avoiding marginalisation (through reintegration).

This research confirms that by continuing to invest in all types of education, either general or vocational, Europe may be earning a double dividend in the form of increased competitiveness (through innovation) and of a stronger society.

I trust that this report stresses the importance of VET policies in reaching the new targets set in the European growth strategy, while, at the same time, helping Europe to recover from the recent crisis.

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Acting Director

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Table of contents

Foreword.....	1
Acknowledgements.....	2
List of tables and figures.....	5
Executive summary.....	6
CHAPTER 1. VET at macrosocial level.....	7
1.1. Defining IVET and CVET.....	7
1.2. Defining macrosocial benefits.....	8
CHAPTER 2. VET and human capital.....	11
2.1. VET and the human capital stock.....	11
2.2. Analysis.....	13
2.3. Results.....	15
2.3.1. Political rights.....	15
2.3.2. Civil liberties.....	16
2.3.3. Social unrest.....	16
2.3.4. Riots.....	17
2.3.5. Strikes.....	17
2.3.6. Demonstrations.....	17
2.3.7. Health.....	18
2.3.8. Infant mortality.....	18
2.3.9. Death rates.....	19
2.4. Conclusion.....	19
CHAPTER 3. VET, equity and macrosocial benefits.....	21
3.1. Equity and VET: literature review.....	21
3.2. How can VET contribute to equity?.....	27
3.3. Case studies.....	27
3.3.1. Estonia: tackling issues of reintegration through VET.....	28
3.3.2. Denmark: increasing minority ethnic integration for education equity.....	33
3.3.3. Germany: integrating IVET/CVET to tackle inter- generational inequity.....	41
3.3.4. Spain: improving the articulation between CVET and labour markets for Roma people.....	47
3.3.5. England: the diploma to reduce the academic/vocational divide.....	52

3.4. Conclusions	58
CHAPTER 4. Conclusion: research findings and policy implications	60
4.1. Further research on human capital and increasing VET incidence	60
4.2. VET importance in societal equity.....	61
References.....	62
Annex. The combined dataset	68

List of tables and figures

Tables

Table 1.	Classification of macrosocial benefits.....	9
Table 2.	Relationship between VET and political rights and civil liberties (fixed effect panel regression)	16
Table 3.	The relationship between VET and strikes and riots (fixed effect panel regression).....	17
Table 4.	Summary regression analysis of health and VET variables	18
Table 5.	Summary regression analysis of inequality and VET variables.....	23
Table 6.	Elements of VET that can produce more equitable education systems	27
Table 7.	Vocational education attendance in Estonia.....	31
Table 8.	Training courses by sector	51
Table 9.	The activation of the lines of learning	55
Table A1.	Variables in the dataset	70

Figures

Figure 1.	Integration of IVET and CVET	26
Figure A1.	Ratio of secondary vocational to secondary general education, by country and year.....	71
Figure A2.	Proportions with higher level vocational qualifications, by country and year.....	72
Figure A3.	Political rights variable by country	73
Figure A4.	Civil liberties variable by country	73

Executive summary

This report considers two mechanisms by which initial vocational education and training (IVET) or continuing vocational education and training (CVET) might produce macrosocial benefits. First, the aggregate level of VET qualifications (measured by the incidence of VET qualifications among the population) might cause benefits through increasing the overall level of human capital. Second is its positive influence on education equality. Researching these two calls for very different methodological approaches. In the first case (human capital) an exploratory time-series estimation approach was applied (following Green et al., 2006). It is found that the macrosocial benefits of VET are, largely, equal to those of general education (of comparable level). In the second case (equity) institutional arrangements through which VET may influence education equity were explored qualitatively with selected country case studies. The evidence shows that reducing the academic/vocational divide, reducing tracking (or using IVET to reintegrate onto mainstream tracks), mitigating against gender or ethnic inequality in IVET and CVET, integrating IVET and CVET (for example through a national qualification system spanning both forms of VET) and aiding the transition between VET and labour markets, tend to promote education equality. So long as that appropriate institutional arrangements are made, VET is important for equity and, therefore, for social cohesion.

CHAPTER 1. VET at macrosocial level

1.1. Defining IVET and CVET

Both in academic discourse and in policy there is difficulty in considering VET at macrosocial level. The difficulty arises because the macrosocial level of analysis deals with abstract factors such as social cohesion, anomie (the degree of 'sickness in a society') and system integration (Lockwood, 1999; being the degree to which education systems integrate with labour markets). These seem disconnected from the prosaic operations of VET which are often concerned with skill and human capital formation distinctly microeconomic phenomena at individual level. However, as shown previously (Preston and Green, 2008) for social cohesion it is possible to make conceptual links between VET and the macrosocial; when VET reduces educational inequality between groups it may lead to shared societal norms, decreasing social/class conflict.

In some contexts, it makes sense to talk of an aggregate stock of VET at macro level, such as the total number of individuals with a particular qualification level. In this, we make use of the conventional ISCED categories in defining secondary and higher levels of IVET in the quantitative modelling part of the report (Chapter 2). Such a classification, though, is less robust when considering CVET. Here reaching consensus on even an aggregate level of CVET is difficult 'not only because data are neither consistent nor complete, but also because there is no consensual definition of CVET' (Bohlinger, 2004, p. 2). The parameters of CVET are, therefore, wide and may possibly contain on-the-job training, aspects of adult education, retraining, compensatory vocational education (for a perceived skills deficit) in later life, vocational education for those with special needs and aspects of non-formal and informal education. Across most European countries, CVET is weakly regulated, with few formal qualification structures, and it is hard to arrive at a common definition even within one country (Brockmann et al., 2009). This means that it is very difficult to consider a macro level of CVET. Although it is possible to produce aggregate levels of enterprise training, it is difficult to compare these comparatively in a meaningful way. In our quantitative analysis (Chapter 2), which is at macro level, we cannot distinguish between IVET/CVET. However, in the analysis of VET and equity (Chapter 3) we distinguish between IVET/CVET in the case studies.

1.2. Defining macrosocial benefits

VET policy has often been concerned with societies as a whole, delivering aims which are social as well as economic in nature. This is stressed in the Bordeaux communiqué which reviews the Copenhagen process on enhanced cooperation in VET. The communiqué stresses the need for VET to 'take into account the objectives of social cohesion' (European Commission, 2008, p. 5). However, the measurement of macrosocial benefits of VET, such as social order, is a conceptually distinct problem from the measurement of microsocial benefits. For the latter, methodologically individualistic assumptions are made concerning the relationship between the intervention (VET) and the outcome (the microsocial benefit). Effects are considered to occur through a mechanism at individual level (e.g. human capital formation, value change). The macrosocial level is less well defined both in terms of the nature of benefits and the mechanisms through which VET might provide influence. As a starting point it is important to distinguish between various types of macrosocial benefit. First, there are aggregated macro benefits, being those which could be considered the summation of microsocial benefits. Aggregated benefits can be described as macrosocial if they impact on society (following McMahon, 1999) as a whole, as discussed below. Second, there are 'pure' macrosocial benefits, being those benefits which are not easily aggregated from microsocial benefits. These could be described as 'club goods' or 'public goods'. In the first category (aggregated benefits) we would place collective, or public, health as a form of aggregated microsocial benefit which is also macrosocial in the 'ecological sense'. Here we follow the work of Wilkinson (1996) and Wilkinson and Pickett (2009) in which public health is considered to be an ecological characteristic of societies; this draws on concepts from public epidemiology and refers to those properties which are not ideally reducible to the individual level of analysis. An ecological study in epidemiology is where the units of analysis are populations rather than individuals. Public health is an ecological property of societies that is related to other ecological properties, such as equity, and is not fully reducible to individual decisions or attributes. This allows Wilkinson and Pickett (2009) to infer macro causation between equality of income and macrosocial benefits such as health. We would also place political order in this category, aggregated through the number of political protests (demonstrations) in a country. In summary, there are certain variables which only make sense to observe and measure at macro level (such as political rights which cannot be a property of individuals as it refers to the legal structure of a society) and others which have both individual and macro

properties when aggregated (such as public health which can be an ‘ecological variable’).

Another dimension of macrosocial benefits might be whether they are amenable to cost-benefit analysis or whether they are not directly monetarisable (or may be monetarised with difficulty), that is, whether a cash value can be easily attributed to them. Taking these two dimensions together gives us a new conceptual classification of macrosocial outcomes shown in Table 1.

To illustrate the combinations in Table 1 we give examples of macrosocial benefits, though this not an exhaustive list. The variables used to populate the four different types of macrosocial benefits have been chosen because they are well defined and relatively easy to measure (according to some objective criterion).

Table 1. **Classification of macrosocial benefits**

	Aggregated macro benefits (e.g. aggregated from microsocial benefits) which have ‘ecological properties’ (e.g. greater than their sum of parts)	Pure macrosocial benefits (e.g., not easily aggregated from microsocial benefits) – in economic terminology ‘club goods’ or ‘public goods’
Directly monetarisable benefits (e.g., can be easily monetarised)	Infant mortality; death rates	Strikes
Not directly monetarisable benefits (e.g., cannot be easily monetarised, but may have effects on economic outcomes such as growth)	Demonstrations	Political rights; civil liberties; riots

Mortality rates, as an expression of public health, are both a directly monetarisable benefit (e.g., the benefits of increased life expectancy can be monetarised through calculating the cost of illness to employers and to the welfare state) and one which can be arrived at by aggregating microsocial benefits. Demonstrations, although measured at microsocial level by individual participation in demonstrations, in the aggregate is also a macrosocial variable in being a proxy measure for the degree of political support for the current regime. Some macrosocial benefits, though, are difficult to consider as aggregations. For example, the total number of strikes or industrial disputes, although plausibly transformed into economic costs (e.g. by measurement of lost output), are a collective rather than individual phenomenon. Although industrial disputes are made up (arguably) of individual actions, for a dispute to become officially recorded it needs to meet certain criteria which are interdependent of those decisions but not necessarily reducible to them. Some other benefits, such as

social order (riots where individual participation is not recorded due to their illegal nature), or legal and institutional structures (such as civil and political liberties) are hard to monetarise but are clearly difficult to aggregate from individual actions.

In this report we examine both aggregated and pure macrosocial benefits. Aggregated macrosocial benefits such as public health and demonstrations are significant at macro level, as they have implications for other societal variables, such as social cohesion, through negative externalities. Our coverage of macrosocial benefits is not exhaustive and this is primarily for pragmatic reasons as, particularly in the quantitative analysis, it is difficult to consider benefits for which there is no robust measure over extended periods of time. However, this could be considered in future research as discussed in Chapters 2 and 4.

CHAPTER 2.

Economic growth and macrosocial benefits

2.1. VET and the human capital stock

For McMahon (1999) several benefits of education may be considered as macrosocial. These include health (gross fertility and infant mortality), democratisation and human rights (democratisation, human rights and political stability), environmental (reduced air and water pollution) and reduced national crime and drug use. McMahon's analysis is based on the impact of aggregate levels of education and unfortunately it is not possible to disaggregate this data to isolate the impact of vocational education. Instead, vocational education is classed as being identical to general education in terms of its 'level' and human capital benefits. However, there are a few general pointers as to the ways in which vocational education may lead to macrosocial benefits. First, McMahon considers that endogenous growth theory is important. He considers that the macrosocial benefits of education are both direct (the contributions of education to economic productivity) and indirect, mediation, processes involving economic growth. Education produces '[...] low crime rates, good public health, democratic processes, political stability and other characteristics to which education in the community contributes' (McMahon, 1999, p. 6). Second, there is a time lag between investment in education and a macrosocial effect of at least five and as much as 20 years.

As part of the human capital stock, there are strong reasons to suppose that investment in VET would lead to increases in macrosocial variables such as collective health and reduced crime at an aggregate level. There is some tentative evidence, using human capital theory, to suggest at microsocial level that vocational education may mitigate against certain types of illness and have other microsocial benefits and, therefore, affect aggregate levels of health. In the UK, Feinstein et al. (2003) show that CVET, in terms of taking adult education vocational qualifications between ages 33 and 42, leads to improved health outcomes in terms of obesity and smoking, but not in terms of depression, although effect sizes are small. The rationale for this is complex but it may be that academic qualifications have greater propensity to act on mental health problems than vocational ones due to their greater cognitive content (Wolfe and Haverman, 2001). The positive effect of CVET on health outcomes might, though, be dependent on the type of CVET followed. For example, alcohol consumption

is lower among accredited vocational course attendees than among participants in work-related training. Taking accredited vocational courses reduces alcohol consumption, whereas non-accredited, work-related training increases it.

This is typical of the other findings in the study that shows mixed results as to whether VET has consequences for social benefits. In all cases, the benefits for CVET are not as strong as those for general academic continuing education and training (CET). In the case of social and political attitudes, accredited CVET has an effect on increasing tolerance and lowering political cynicism although, unlike academic CET, there is no effect on civic participation. Feinstein et al.'s (2003) study is unusual in that it disaggregates between CVET leading to a qualification and CVET not leading to a qualification (unaccredited CVET). Perhaps counter-intuitively, the study finds that non-accredited CVET leads to more benefits than accredited CVET. For example, unaccredited CVET leads to significant changes in exercise and life satisfaction, whereas such effects are not found for accredited CVET. At aggregate level we may suppose that VET may have macrosocial consequences through an aggregation of these microsocial mechanisms.

For IVET, Karvonen et al. (2000) show for Finland (using the longitudinal adolescent health and lifestyle surveys) that over a range of health related activities (including smoking, coffee drinking and exercise) vocational qualifications were a protective factor in preventing youth from engaging in unhealthy behaviour. In each of these studies, the mechanisms by which VET has an impact on health are slightly different, embracing changes in both cognition and attitudes. Although these studies use microsocial data, the results can be extrapolated to the macrosocial domain of collective health. Additionally, in terms of crime, longitudinal studies suggest that lack of IVET is a significant factor in reducing criminal activity. Christoffersen et al.'s (2003) study of Danish youth aged between 15 and 27 establishes that vocational training opportunities are negatively associated with higher risks of criminal activities. Vocational training is singled out in this study as the most suitable educational route for the at risk cohort, many of whom lack strong initial general educational qualifications. Loeber and Farrington (2000) also consider a longitudinal study of youth (selected on the basis of risk factors) to ascertain that lack of vocational opportunities within schools in the UK is one risk factor associated with delinquency.

When taken together, these studies suggest that there might be macrosocial benefits in increasing the level of VET qualifications. However, this inference is made from macrosocial studies (such as McMahan, 1999) which do not

disaggregate VET and from microsocial studies. This report considers a further step in conducting an exploratory macrosocial analysis of the benefits of VET.

2.2. Analysis

There are, potentially, many benefits of VET which to consider at macrosocial level. Not all of these are easily measurable but in our empirical analysis we are able to investigate a wide range of such benefits. Through constructing this dataset (see the Annex) we are able to investigate whether macrosocial benefits are associated with human capital components of VET.

The objective of the analysis is to relate measures of social outcome variables to a measure of the extent of VET, in the initial case the proportion in each country with high-level VET qualifications. In assessing the influence of VET, it is essential to control for a range of other factors which might have an effect on the social outcomes of interest, which will be described in detail in the next section.

We have a dataset consisting of repeated country measures over time (spanning a period of 35 years: 1960 to 1995, with observations every five years) and we will apply fixed effects panel regression methods to allow for a range of explanatory variables to influence the outcome of interest while dealing appropriately with the structure of the data (Maddala, 2001; Wooldridge, 2002) ⁽¹⁾.

The outcome for country i at time t can be written as:

$$\text{Outcome}_{(it)} = a_{(i)} + b\text{VET}_{(it)} + c[\text{controls}_{(it)}] + \text{error}_{(it)}$$

where the $a_{(i)}$ terms are the fixed effects, b measures the influence of VET on the outcome and c is a vector representing a set of parameters to be estimated, one for each control variable in the model.

Fixed effects models relate the change in the outcome to the change in the explanatory variables (Allison, 2009). As such, they remove all sorts of country-

⁽¹⁾ This analysis must be considered to be exploratory and certain limitations need to be acknowledged. One specific issue is that some of the variables used as outcomes in the analysis – specifically the political rights and civil liberties variables – only take values between one and seven and this makes it problematic to use linear regression models, which assume a normally distributed variable as the response. In this case ordered models (such as ordered logit or probit) should have been adopted. Similarly, the number of demonstrations, strikes and riots is a strictly positive number and count models should have been used. However, both ordinal and count models are far too demanding for our small data set.

specific unobservable factors which could influence the outcome of interest. We are in a stronger position to state that a statistically significant relationship in a panel fixed effects regression could be causal than if the relationship were merely observed in cross-section data ⁽²⁾. However, even then, we cannot be certain in making causal attribution because, for instance, of unobservable factors which change over time; all such attribution must be cautious.

Given that the objective is to determine whether there are robust associations between VET and each of the outcomes, it is important to control for other relevant factors which could influence the outcomes of interest. More affluent countries tend to invest more in education, including VET, and may also score highly on at least some of the social outcomes. For example, it is the case that high income countries will have better health outcomes such as lower infant mortality rates and crude death rates. To avoid a spurious correlation between the amount of VET and social outcomes, which are both being driven by the level of affluence, the income level of the country must be controlled for. We have GDP per head in the dataset and took the logarithm of this before entering it in the models (to reduce the likelihood of non-constant variance).

The other key question is whether it is education in general which has an impact on social outcomes rather than VET, so we included variables for general education in our models. There are different measures of education and several, in the same model, with a high risk of multicollinearity: the explanatory variables being highly correlated with each other makes it difficult to determine which are really important. Specifications which include a way of measuring general education, but not too many separate measures of it, are superior.

Limiting the number of variables which were put into the models at the same time was particularly important because missing data on some variables made sample sizes, unavoidably, quite small. In the main body of the paper we mostly report models which include VET, GDP and a measure of general education.

An important limitation is that the analyses were mainly concerned with the quantity of VET at macro level. In principle we might also be interested in whether it is the quality of VET, or the type of VET, or some characteristic of the VET system that is relevant. In quantitative analysis, with the data currently available, it is not at all straightforward to analyse such aspects. We do not have

⁽²⁾ Other suggested methods for determining causality, such as Granger causality, are mainly used to test relations between long, macroeconomic time series data and are not appropriate for the short panel data (i.e. only a few observations on each country over time) which we have for this project.

measures of VET quality in our data. However, on types of VET, we were able to distinguish between VET at secondary level and at higher level.

Finally, from the way the VET variables are constructed (% of VET in secondary and tertiary education) it follows that b , the coefficient on the VET variable, must be interpreted as the differential impact of VET education on the outcome; if the coefficient b is not significant, it follows that VET has the same effect on the outcome variable as general education.

2.3. Results

VET may potentially have an effect on various social benefits including political and civil rights, health outcomes, social disorder and unrest. We have multiple measures of each of these outcomes in our dataset and we proceed to consider each type of potential social benefit in turn.

2.3.1. Political rights

The political rights variable is scored from one, the highest level of political rights, to seven, the lowest level of political rights. The measures of VET were used in separate regressions and a set of control variables was experimented with in a range of model specifications. One set of results is shown in Table 2; the full set of models run is in the Annex.

There was some evidence of a positive association between VET at secondary level and political rights. Given the way this variable is scored, the positive nature of the relationship implies that countries in our sample with higher levels of secondary VET showed some tendency to have worse political rights outcomes. However, this was only the case for VET at secondary level. It did not hold for higher-level VET where there was, in fact, no evidence of a relationship with political rights. So the conclusion is not robust to the measure of VET adopted.

There is also a positive association between the share of enrolment at secondary level and political rights.

Also, it should be borne in mind that there was actually very little variation on the political rights variable (Figure A3 in the Annex). Most countries in our sample were adjudged to have generally good political rights throughout the considered period. Among the main exceptions were Spain and Portugal where there was a strong improvement in measured political rights during the observation period due to transitions from autocratic regimes to democratic ones. This suggests that variation in just a handful of countries may be driving the results here.

2.3.2. Civil liberties

For civil liberties it was found that for both measures of VET – secondary and higher levels– there was little or no evidence of a relationship with civil liberties scores in our sample of countries. The results for one model specification are also shown in Table 2. There was some evidence that countries with more secondary education tended to have better (i.e. lower) scores on the civil liberties measure.

The caveats about the measurement raised for the political rights measure also apply here. Like political rights, civil liberties are measured on a one to seven scoring system, and there was little variation in civil liberties scores for the sample of countries included in the regression models (Figure A4 in the Annex). The main exceptions were Spain and Portugal where there was strong improvement during the observation period for reasons outlined above.

The result should be taken with caution. There is very little variation in both measures of macrosocial benefits to tease out the true underlying relationships and the results could be further confounded by the necessarily short list of controls that could be accommodated by the empirical model.

Table 2. Relationship between VET and political rights and civil liberties (fixed effect panel regression)

	Secondary VET		Higher VET	
	Political rights b/se	Civil liberties b/se	Political rights b/se	Civil liberties b/se
VET measure	1.622* [0.786]	0.193 [0.490]	0.063 [0.077]	-0.038 [0.056]
Log(GDP)	-1.338 [1.421]	-0.535 [0.887]	-1.277 [1.127]	-0.109 [0.814]
Higher	-0.020 [0.203]	0.092 [0.127]	-0.037 [0.107]	0.056 [0.077]
Secondary	-0.060 [0.031]	-0.056* [0.025]	-0.048* [0.022]	-0.050** [0.016]
N	58	58	79	79
Groups	16	16	20	20

* p<0.05, ** p<0.01; b = coefficient; se = standard error.

2.3.3. Social unrest

The dataset contains several distinct measures of social unrest including riots, strikes and demonstrations: see the data section above for details on how each of these is measured. These three outcome variables are discussed in turn.

2.3.4. Riots

The VET variable was non-significant in the two models estimated in Table 4; there was no compelling evidence of any link between VET at secondary level and the extent of riots in a society. The same is true for higher VET but general higher education was associated with a tendency for fewer riots to occur in a society.

2.3.5. Strikes

Our analyses of multi-country panel data found no evidence of a relationship between both measures of VET and strike activity (Table 3). There was little evidence that any of the educational variables were linked with strike activity in these models.

An explanation for the lack of statistically significant effects here might be that VET and the other educational variables show a strong upward trend over time in most countries, while strike activity tends to oscillate. For example, strike activity was unusually high in some countries in the late 1960s and early 1970s, driven partly by erosion of real wages as rates of inflation increased.

Table 3. **The relationship between VET and strikes and riots (fixed effect panel regression)**

	Secondary VET			Higher VET		
	Riots b/se	Strikes b/se	Demon- strations b/se	Riots b/se	Strikes b/se	Demon- strations b/se
VET measure	-0.564 [0.691]	-0.040 [0.248]	-0.097 [0.737]	0.190 [0.096]	-0.055 [0.036]	0.389** [0.116]
Log(GDP)	-2.469 [1.540]	0.709 [0.552]	0.774 [1.644]	-1.299 [0.971]	0.532 [0.363]	2.447* [1.174]
Higher	0.134 [0.281]	-0.100 [0.101]	-0.001 [0.047]	-0.482* [0.147]	0.026 [0.055]	0.074* [0.034]
Secondary	0.012 [0.044]	-0.007 [0.016]	-0.265 [0.299]	0.043 [0.028]	-0.012 [0.011]	-1.247*** [0.178]
N	92	92	92	140	140	140
Groups	18	18	18	20	20	20

* p<0.05, ** p<0.01, *** p<0.001; b = coefficient; se = standard error

2.3.6. Demonstrations

The choice of the VET variable has clear consequences for the empirical analysis (Table 4). Using the share of VET in secondary education does not deliver any significant relationship. However, when the share of VET in higher education is used, a positive association between VET and tertiary education and GDP and

the number of demonstrations is found. Only secondary education was negatively related to the number of demonstrations

There is some evidence that higher-level VET was positively related to the demonstrations measure: there was some tendency for demonstrations to be more prevalent in societies with more higher level VET. However, the sensitivity of the result to the measure of VET adopted suggests to take this relationship with due caution.

2.3.7. Health

Health of the population must be one of the most important non-economic outcomes in a society. Is there any evidence that societies with more VET tend, for whatever reasons, to have better aggregate health outcomes? In our analyses we used two fundamental health outcomes: the crude death rate and the infant mortality rate. The empirical results are summarised in Table 4. A study devoted specifically to the detailed investigation of infant mortality and death rates should include other critical variables such as expenditure on health, or other risk factors for infant mortality, such as urban poverty, which could not be included in this analysis. So again, results must be taken with caution.

2.3.8. Infant mortality

There was some evidence of a positive relationship between the amount of VET in a society and infant mortality rates after controlling for other factors, though only the VET at higher level variable reached statistical significance. Once allowance for other variables was made, societies with more VET showed some tendency to have higher levels of infant mortality.

Table 4. Summary regression analysis of health and VET variables

	Secondary VET		Higher VET	
	Infant mortality b/se	Death rate b/se	Infant mortality b/se	Death rate b/se
VET measure	2.476 [1.603]	0.320 [0.219]	0.576* [0.223]	0.011 [0.031]
Log(GDP)	-22.109*** [3.513]	-0.453 [0.497]	-28.477*** [2.252]	0.474 [0.316]
Higher	0.245 [0.663]	0.145 [0.092]	-0.470 [0.342]	-0.107* [0.049]
Secondary	-0.155 [0.122]	-0.036* [0.014]	0.069 [0.071]	-0.020* [0.009]
N	90	91	138	139
Groups	18	18	20	20

* p<0.05, *** p<0.001; b = coefficient; se = standard error.

The positive relationship between VET and infant mortality at aggregate level is an interesting and potentially important finding. However, we need to be cautious: the result was not always statistically significant, depending on what was excluded from the model and the measure of VET used.

2.3.9. Death rates

The VET measures were not associated with the death rate: they were only ever significant in models which (probably inappropriately) omit the level of GDP per head. The principal finding here must be that, with appropriate controls in the model, there was essentially no evidence at all of any relationship between the amount of VET and the death rate in a society.

2.4. Conclusion

Evidence on the social benefits of education has been accumulating in recent years. The analysis of outcomes associated with VET, especially at macro level, has been hampered by the lack of good data and there are few studies in this field. In this research report we have constructed a new dataset to address this important issue better. Our dataset improves on those used in previous studies in several ways. We have a wide range of social outcomes, we draw on data from a range of countries, we use panel data to boost sample sizes, and we include a set of essential control variables such as measures of general education and GDP per head.

The findings will be initially disappointing for those who believe VET to have multifarious benefits at macro level. We have mostly found non-significant relationships between VET and the outcomes of interest, especially after controlling for other relevant factors; VET tends to have an effect on the different outcome variables not different from that of general education (of comparable level). However, the limitations described above should to be borne in mind when considering this conclusion. For some of the response variables, notably demonstrations and some health variables, there is evidence that VET may be associated with worse outcomes. However, the results are not unequivocal and there are some key directions for future research. Even though we have constructed a panel dataset for a range of countries, the sample sizes are quite small, especially when compared with micro datasets on the individual benefits of education. This is largely unavoidable: there are simply too few countries. Also, according to McMahon (1999) it may take at least 20 years for the benefits of education to emerge, which means that even our dataset which spans 30 years

may only just be beginning to capture the benefits of VET. The development of better data, for more countries, with more refined measures of VET and longer time series to boost sample sizes, remains a priority. Research findings are always, in this sense, provisional and there are ways in which the analysis here could be improved on. First, the analysis could be extended to take into account other macrosocial benefits and control variables which might inform the analysis. If a robust time series were available on anti-social (such as stealing or vandalism) or pro-social behaviours (such as helping neighbours) then this would be a potential macrosocial benefit of interest. In particular, this benefit might have implications for competitiveness through possible positive effects on worker productivity. Other social variables, such as corruption in societies, may also be included (Knack and Keefer, 1997) but there is not yet a robust time series for these data. Second, control variables such as health expenditures (with associated effects on infant mortality or the death rate) or unemployment could also be included in the analysis. This would reduce the possibility of omitted variable bias. Third, modelling other possibilities in terms of increasing the efficacy of fixed effects models without reducing variability in the dependent variable could be considered as in other studies of social outcomes (Van Praag and Ferrier-i-Carbonell, 2008).

CHAPTER 3.

VET, equity and macrosocial benefits

3.1. Equity and VET: literature review

According to Green et al. (2006), one of the key mechanisms by which education, and VET, might impact upon macrosocial indicators is through its effects on equity. Although equity and equality are not synonymous (equity relating to the overall distribution of education and income and equality to the positioning of various groups) there are connections. In particular (and as shown in the case studies below) where equality measures encourage reintegration into mainstream VET and employment they can be positive for equity (for further discussion, see Preston and Green, 2008). VET may be considered to be positive for equity through both its equalising and compensatory effects. IVET may be considered to provide a different route for those who would otherwise be excluded from academic qualification routes and may equalise early outcomes. Additionally, CVET may compensate for earlier skills deficits. However, from the evidence on VET and educational equity it is context, not just increased participation in VET, which is important in bringing about equality of outcomes.

In an exploratory analysis, using the dataset considered in Chapter 2, we found that increasing the incidence of VET does not influence the level of education inequality, so VET impact on inequality is equal to that of general education. There are two measures of inequality in our dataset: a Gini index of income inequality and a measure of how unequal education was in each country. Several regression models were estimated for each of these two outcomes. Selected models, controlling for the level of GDP per head and for education at secondary level, are reported in Table 5. A higher incidence of tertiary education was associated with more income inequality: societies where a higher proportion of the population had completed higher education appeared to be less equal. When educational inequality was the outcome, the incidence of tertiary education appears to have a negative effect (societies with higher incidence of tertiary education tend to be more equal), while the incidence of secondary education was negatively associated with it. There was also no evidence of a significant relationship with VET once controls for the amount of education were included in the model specification. We can say, therefore, that increasing levels of VET, at secondary level appear to have a neutral effect on income equality; however, an increase in the incidence of VET at tertiary level might increase the degree of

income inequality. Similarly, increasing the incidence of VET is not detrimental to educational equity (equality) in our analysis. Analyses of educational inequality and macrosocial variables (such as Green et al., 2006) that do not distinguish between vocational/general schooling, because they assume that general and vocational education are identical (Thomas et al., 2003), could be not far off the mark.

Rather than looking simply at the incidence of VET, it is productive to examine the effect of the institutional arrangements of VET for equity. Green et al. (2006) make some general points concerning the conditions which can produce educational equity in a system which can be applied to VET. In particular, comprehensive systems of education where there is parity of status between qualifications are likely to produce equitable outcomes. In support of this, in a comparative study of VET systems in Europe, Van de Werfhorst (2007) considers the relationship between vocational tracking and aggregated active citizenship (which comprises both civic participation and political interest). Van de Werfhorst finds that, in institutionalised systems with a large share of upper-secondary pupils on vocational tracks and early tracking (such as Germany and the Netherlands), there is a significant effect in terms of reducing civic participation. Van de Werfhorst posits that there may be two mechanisms underlying such an effect. First, the physical and social separation between pupils on academic and vocational routes diminishes the development of a common 'civic culture'. Second, employers (who are more likely to be involved in specifying the curriculum content on vocational tracks) do not have an incentive to invest in civic skills for employees as these represent unrecoupable externalities of investment in vocational training. In other words, employers have little incentive to invest in skills used outside of work. Based on data from the international adult literacy survey (IALS) from 1994 to 1998, and using samples of 10-17 countries, Van de Werfhorst finds that individuals in vocational tracks display lower levels of active citizenship than those in academic tracks (a common finding in the political science literature). However, a more illuminating finding is the relationship between the systemic arrangements for vocational education and the political culture: 'Moreover, it is clear that countries vary in the way in which schooling affects active citizenship; the impact of education varies with levels of stratification of the educational system. One of the most persistent findings is that the strongest educational boundary in active citizenship varies between countries with different educational systems. In low-stratifying countries, the crucial boundary exists between tertiary levels of schooling on the one hand and non-tertiary education on the other. In strongly stratified systems, however, the main boundary lies between upper secondary general and tertiary education

on the one hand and lower levels on the other, implying that vocationally qualified people display less active citizenship than their counterparts educated in general schooling' (Van de Werfhorst, 2007, p. 27).

Van de Werfhorst considers that this finding has implications for social cohesion in that active citizenship is an important prerequisite of a civic culture and social cohesion.

Table 5. **Summary regression analysis of inequality and VET variables**

	Secondary VET		Higher VET	
	Income inequality b/se	Education inequality b/se	Income inequality b/se	Education inequality b/se
VET measure	-7.448 [4.307]	-0.014 [0.011]	-0.092 [0.184]	0.003 [0.002]
Log(GDP)	-10.309** [3.661]	-0.041 [0.025]	-8.188** [2.700]	-0.047** [0.016]
Higher	1.381* [0.619]	-0.003 [0.004]	0.910*** [0.250]	-0.006* [0.002]
Secondary	0.033 [0.133]	0.002 [0.001]	0.115 [0.064]	0.002*** [0.000]
N	55	92	81	140
Groups	16	18	18	20

* p<0.05, ** p<0.01, *** p<0.001; b = coefficient; se = standard error.

Turning to other forms of inequality, Rubery and Fagan (1993) find that VET programmes in Europe have a greater degree of gender bias than academic programmes; the greater the degree of participation in VET in a country, the greater the degree of gender inequality in the labour market. However, this statement overlooks the specifics of institutional arrangements. In particular, gender equality at macro level is dependent on the incentive structures for investment in VET/CVET and not simply on the level of VET. According to Estevez-Abe (2005), institutions that promote investment in specific VET skills promote gender bias. Estevez-Abe supposes that high rates of employment protection and strong trade union bargaining arrangements in some countries mean that specific skill investment is encouraged. These skills have limited portability between employers; as women are more likely to experience a more fragmented labour market experience than men, they will suffer both in terms of their ability to ascend career ladders and in moving between industrial sectors. Therefore, vertical segregation (the degree to which women are excluded from higher level, or managerial jobs) and horizontal segregation (the degree to which women are excluded from certain sectors of the economy) is exacerbated. This gendered analysis is also true of other groups that may experience disrupted

labour market careers such as migrants or displaced workers due to structural unemployment. It is also apparent that there may be affinities between gendered vocational routes and gendered competences: uncritical use of competences in vocational subjects may result in what Evans (2006) call a restriction of gender autonomy '[...] the extent to which people, regardless of gender, are able to develop their chosen career path (whether in paid or unpaid occupations or in a mixture of the two), without penalty or disadvantage accruing from that choice' (Evans, 2006, p. 403). Reporting on the results of a European Union fifth framework project on gender and qualifications, Evans found that gender autonomy (and hence gender equality) was found to be higher in vocational learning contexts where gender was 'recognised', people were given support in gender atypical career choices, tuition occurred in mixed gender classes and where there was awareness of the dangers of specifying 'gender typical' key competences (Evans, 2006, p. 405). Rather than being necessarily connected with system effects, gender and other types of equality may suffer as a result of policies that foster autonomy for excluded groups.

In areas other than gender the impacts of IVET and CVET on equality may also be pernicious. Modified forms of IVET and CVET are often used alongside standard routes to address inequalities in a 'compensatory' mode: this targeting of VET may have mixed effects in tackling inequality. First, targeting VET initiatives for social exclusion often means that populations just outside of the target group may not benefit from the initiative. Second, compensatory forms of IVET and CVET are often based on pathological assumptions about the groups concerned and not sufficiently orientated to work skills (Preston and Green, 2008). This report shows that there are conceptual and practical problems in 'mainstreaming' IVET and CVET so that different groups receive equal provision (Equality Authority, 2006), compensating for discrimination, as such strategies often reinforce the sorts of inequalities that they aim to target in the first place.

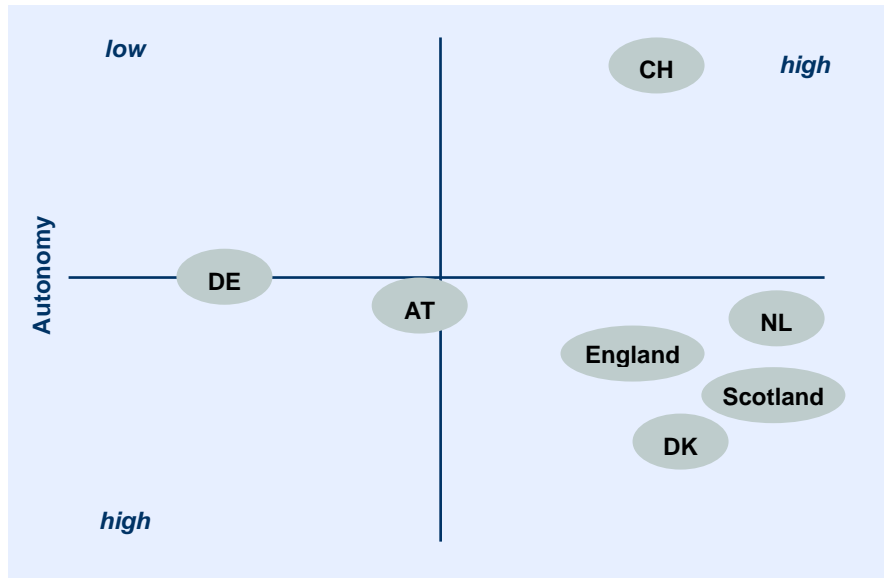
These studies seem to indicate that it is not necessarily the level of participation in vocational education which is important for macrosocial benefits through the equality mechanism, but the structural arrangements for VET. Where vocational tracking is early and divisive in the schooling system there is an effect on the civic culture, resulting in diminished benefits at macrosocial level. In terms of gender, migration status and displacement of labour, where vocational training is orientated towards specific skills, there is likely to be greater degrees of social inequality. However, we must not assume that structural arrangements completely determine the relationship between VET and the macrosocial. First, the measures used by these authors are not necessarily sensitive to traditions of VET in Europe. For example, although it may be the case that early selection in

terms of VET is not compatible with certain kinds of active citizenship, it may be compatible with alternative conceptions of citizenship particular to certain cultures. As Norris (1998) has shown, the US model which relates active citizenship with political outcomes such as trust is idiosyncratic to the US system and is not necessarily found in other political cultures. Countries which follow the 'Germanic' model of education tracking (Belgium, Germany, Luxembourg, Austria, Sweden and parts of German speaking Switzerland), for example, have particular ethno-German models of citizenship (Brubaker, 1992) where vocational tracks have their own particular status and social value; they also have a general education curriculum within the vocational tracks, including apprenticeship). Although employment measures of gender inequality in Scandinavia are associated with vocational schooling, when a wider index of gender equality is considered these countries perform much better. In the *Global gender gap report 2006* carried out by the World Economic Forum (Hausmann et al., 2006) in 2006, when a wider index of indicators including health, political empowerment and survival conditions, as well as employment, was used, the Nordic countries came out on top. Second, Green et al. (2006) argue that in later years (and Van de Werfhost, 2007 only takes the population in the international adult literacy survey up to age 44) the disparity in adult skills in these countries may be mitigated by the extended time in schooling spent by those on vocational tracks. They report that, for Germany: '[...] it is also likely that the further three to four years of education that lower-achieving young people from the Hauptschulen receive within the dual system, especially in compulsory mathematics and German lessons in the Berufsschule, substantially improves their basic skills so that the skill gaps between German adults are not as great as they would otherwise have been' (Green et al., 2006, p. 134).

In examining the relationship between VET and equity we also need to consider those between IVET and CVET and between VET and labour markets. In Figure 1 (from Leney, 2004) the mix between IVET and CVET in a selection of European countries is shown along two axes. The first of these is the degree to which IVET and CVET is integrated and the second is the degree of school autonomy in different systems. In those countries where there is high integration of IVET and CVET (through perhaps a national system of qualifications that spans both IVET and CVET) and greater degrees of school autonomy (England, the Netherlands, Scotland, Denmark) there is emphasis on employee flexibility with varying amounts of welfare support (from little active state support in England to Danish flexicurity). In systems where there is little integration of IVET and CVET and moderate levels of school autonomy there is more emphasis on contractual employment relations and little job mobility (Germany and Austria). In

this mapping, non-EU Switzerland is something of an outlier with high integration of IVET and CVET.

Figure 1. **Integration of IVET and CVET**



Source: Adapted from Kurz (2002).

Considering the findings of Green et al. (2006) on comprehensive and selective systems we might extrapolate from Leney's analysis that those systems where autonomy of VET providers is high (and hence selection is likely to be in operation) there may be negative implications for equity. There may also be implications of IVET/CVET integration for equity. Although lacking research on this area, we might consider that systems in which IVET/CVET are not integrated may produce intergenerational inequalities. Another aspect of integration which is also important is the integration of IVET/CVET and labour markets. According to Wößmann and Schütz (2006), in a recent review of education equity in the EU, the evidence that integration between IVET and labour markets is beneficial for equity is largely supportive. IVET can be used to integrate students who would otherwise have not participated in either work or education into the labour market. However, this must be tempered by an appreciation that narrow skill training may lead to skill obsolescence and potentially greater inequity. Wößmann and Schütz consider that, although CVET programmes are limited in their ability to deliver on economic equity aims (such as equalising incomes), as they are often taken by skilled workers, they may be more useful in targeting other types of inequity (such as linguistic or age related).

3.2. How can VET contribute to equity?

From this discussion we can conclude that increasing the incidence of VET does not erode the level of education and income inequality. Several ways in which VET may contribute towards equity are shown in Table 6. The case studies in the last column are considered in Section 3.3 in terms of how VET may be modified in EU education systems to support equity.

Table 6. Elements of VET that can produce more equitable education systems

More equitable systems	Less equitable systems	Supporting studies	Case study
Equality of status for vocational/academic qualifications	Vocational/academic divide	Green et al. (2006)	England, the new diploma: qualification reform
Gender/race equality part of IVET/CVET	Little regard for gender/race equality in IVET/CVET	Evans (2006) Rubery and Fagan (1993) Equality Authority (2006)	Denmark, Amuck (vocational mentoring for young men with an immigrant background)
VET for targeted groups separate from other tracks (strong tracking)	VET for targeted groups integrative with other tracks (weaker tracking)	Preston and Green (2008) Van de Werfhost (2007)	Estonia, Vana-Vigala school (residential pre-vocational training for young people)
CVET as compensatory in later life	CVET as necessary in mid-life	Leney (2004)	Germany, Jobmotion (support for older workers to reskill and access jobs)
Strong articulation between VET and changing demands of labour markets with VET aimed at broad skills	Weak articulation between VET and changing demands of labour markets with VET aimed at narrow skills	Wößmann and Schütz (2006)	Spain, Acceder (vocational training and jobs for marginalised Roma people).

3.3. Case studies

In selecting the case studies we aimed to show how, across very different EU education systems, VET can be modified in ways congruent with producing increased education equity. The case studies which we consider are:

- (a) Estonia, Vana-Vigala school: residential pre-vocational training for young people;
- (b) Denmark, Amuck: vocational mentoring for young men with an immigrant background;
- (c) Germany, Jobmotion: support for older workers to re-skill and access jobs;

- (d) Spain, Acceder: vocational training and jobs for marginalised Roma people;
- (e) England, the new diploma: qualification reform.

3.3.1. Estonia: tackling issues of reintegration through VET

3.3.1.1. Summary

From Preston and Green (2008) we consider that equity in VET is sometimes tackled by social inclusion measures that target groups of excluded citizens. However, in examining these initiatives for disabled people and minority ethnic groups we sometimes found that the 'tracking' of these groups became endemic and there was little reintegration with either the general or vocational education system following this tracking. Separation of students by 'tracks' has negative consequences for equity and, following this, for macrosocial benefits. The Vana-Vigala technical and service school aims to reintegrate disaffected pupils, who would otherwise leave the education system completely, into mainstream VET. The school is located in the Western part of Estonia, approximately halfway between the cities of Tallinn and Pärnu. It has developed a programme which offers alternative provision and mentoring/counselling for youth aged over 17 who have not completed lower secondary education.

3.3.1.2. Introduction and national context

Estonia acceded to the EU in 2004. It has a population of 1.34 million that is decreasing due to migration and a negative birth rate. Until the economic crisis, the Estonian economy was growing steadily; in 2007 unemployment was 4.7% but rose to 15.5% in the fourth quarter of 2009⁽³⁾. In 2007 the percentage of the population aged 18-24 with below upper-secondary level education was 14.3%. Between 2008 and 2009 youth unemployment tripled to 29% (Estonian Government, 2009, p. 19). In 2009, 46.3% of the registered unemployed had no vocational or professional education (ibid. p. 16). Given this demographic change, and an evolving economy, it is imperative that all young people enter the labour market with relevant skills and have the capacities to engage in further

⁽³⁾ According to Statistics Estonia, unemployment rose to 15.5% in the 4th quarter of 2009; annual average unemployment was 13.8%. Almost one third of the unemployed have been unemployed for a year or more. Available from Statistics Estonia website: <http://www.stat.ee/37918>.

learning⁽⁴⁾. Estonia has quickly moved to a situation where upskilling is very important in the move towards a marketised and export oriented economy. A policy goal is to raise the skills of 50 000 people by at least one level by 2011 (Estonian Government, 2009). Academic upper second-level and higher education is highly valued but the skills of graduates from these sub-systems do not fully match employment needs. The growing divide between the qualifications attained and labour market needs is being addressed in VET system development. In a sense, the VET system is serving a welfare need in the economy in terms of absorbing high rates of unemployment and could potentially contribute to a decline in equity. The legal basis for the present-day VET system was created in the late 1990s. The 2009 ReferNet Estonia report informs us that 'the EU has had a monumental impact in guiding the planning and administration, as well as the funding, of IVET. Policy priorities of the Copenhagen Declaration are the guiding principles in planning VET' (ReferNet Estonia, 2009, p. 23). In recent years additional initial VET pathways were introduced to improve access, particularly for less advantaged groups. Despite the efforts to attract young people to VET, participation rates are decreasing. In 2008, 5 153 young people dropped-out of VET⁽⁵⁾. To counteract this, the *Estonian strategy for competitiveness 2009-2011* (Estonian Government, 2009) announced that more flexible opportunities would be created for school drop-outs; there would also be improved career counselling and study grants for them.

Dropout from VET is a serious concern, comprising 17.8% of the total number of learners in school year 2008/09. Both labour force surveys and census results reveal that people who have not completed basic education have poor prospects of finding a job; they also have more serious subsistence problems and more frequent contact with law infringement (Estonian Ministry of Education and Research, 2005a). One way of aiding integration into the labour market and society is offering vocational training that does not require basic education completion. Against a background of socioeconomic stratification, the growing number of pupils with special educational needs requires a more flexible and individual approach to teaching. From students of ordinary classes, 8% participated in individual study in one or more subjects in 2006/07. One and half

(⁴) As of 2007, there were 227 800 people in Estonia aged 15-74 who had only completed basic or lower second-level education (75 800 are continuing their studies so the critical number is 152 000). The proportion is larger in younger age groups; in 2007, 32 900 people aged 15-24 were classified as such and were not continuing studies in any educational institution.

percent of pupils had to repeat the same year of study for the second time. Counselling for pupils with special needs only takes place in some schools. A recent Ministry of Education and Research conference identified the following changes in the needs of learners and employers:

- (a) an increased demand for initial VET provision by adult learners;
- (b) increasing need for continuing education;
- (c) more learning opportunities for those with special needs and learning difficulties;
- (d) increasing need for specialists and employees with management skills;
- (e) increasing need for simultaneous work and study;
- (f) pressure for increased mobility of learners and employees;
- (g) pressure to increase cooperation between schools, companies and society (Toom, 2008).

The aims of the *Development plan for the Estonian vocational education and training system 2005-2008* (Estonian Ministry of Education and Research, 2005b) to make VET more flexible were:

- (a) extension of pre-vocational training and VET in basic and upper secondary schools;
- (b) special VET programmes for students over 17 years of age who have not completed basic education;
- (c) involvement of students under 17 years of age in VET-related activities in general education schools;
- (d) VET programmes based on basic education but without the general education element in areas where vocational specialisation is available;
- (e) apprenticeship training;
- (f) the possibility to acquire vocational training in a VET institution, complemented by general education acquired at a upper secondary school.

All these aims have been achieved and mark a distinct change, clearly visible in Table 7, from the pathways available until 2006 which only offered two options: vocational education after basic (lower secondary) education (year 9 – 16 year olds); or, vocational education after upper secondary education (year 12).

There are no educational requirements for vocational courses for those without basic education completion. The study consists of 20-100 study weeks, ranging from half a year to two and a half years. The graduates get a certificate for acquiring vocational education without the requirement of basic education. The graduates can continue their education by finishing lower secondary education and then continuing in vocational or general upper secondary

education and in non-formal lifelong learning. The number of people in this form of study has increased every year. In 2004/05 this form of study was only offered to people with special needs and those in prison (Estonia Ministry of Education and Research, 2005b).

Table 7. **Vocational education attendance in Estonia**

	2004/05	2005/06	2006/07	2007/08	2008/09
People attending vocational education without lower secondary education requirement	267	28	132	255	352
People graduating from vocational education without lower secondary education requirement	9	11	82	102	134

Source: Estonian education database (EHIS).

3.3.1.3. *Situation and issue*

Evening and distance-learning classes at general vocational education institutions are often provided by the same teachers who teach general education. Pupils who have dropped out of general education may feel that these teachers have already formed negative opinions of them. These concerns then form barriers that prevent these pupils from re-engaging in this form of provision which makes the reintegration of these pupils into general academic or vocational tracks more difficult. Distance-learning schools are usually designed for working adults and study only takes place a couple of days a week. Young people who have 'dropped out' do not usually work and such a form of study is too discontinuous for them. Studying only general education subjects is not motivating enough for many of these young people. However, many of them are talented in manual activities and offering a combination of general education with vocational preparation gives them an opportunity to find motivation and gain recognition for their learning. This form of IVET provision is at the centre of the Estonian initiative.

3.3.1.4. *Response: the Vana-Vigala technical and service school initiative*

The Vana-Vigala school started a special programme offering pre-vocational training for people over 17 without basic education completion, financed by the European Social Fund. The main problem for these students was their lack of study habits and discipline. To tackle this issue, Vana-Vigala school followed an American model of schools with strict, semi-militarised order: this meant combining VET with active sporting, cultural and other leisure activities. Cooperation takes place with the local Defence League, a voluntary military

national defence institution that organises military-sport camps for the pupils. There is also a renovated dormitory for the students. This was one of the conditions for this model school as many of these students have not continued their studies because of poor economic backgrounds and lack of support from home. Although this system may seem very Americanised, one of the reasons for its success may be the way it works with existing institutional traditions in Estonia. In particular, the types of activity organised by Communist organisations such as the Young communist league of Estonia were similarly organised around such programmes. Although such vocational schooling may appear to be very different from 'liberal' VET systems, the success of Vana-Vigala is partly due to the embedding of this type of school in the institutional and historical infrastructures.

There are three-party contracts between the pupil, the parent and the Vana-Vigala school. There is also another contract between the Vana-Vigala school and the pupil's general education school covering the arrangements of the general education component. The students go to the general education school for three days a week and study different vocational subjects in the Vana-Vigala school for two days. The group is coordinated by an instructor who is responsible for the studies, the dormitory and free time activities; a good deal of time is spent counselling the students. Another person is responsible for the pupils in the general education school and much effort goes into cooperation between the two schools and staffs.

In the Vana-Vigala school pupils are introduced to several VET specialisations rather than just one subject, as most of the students do not know what they want to specialise in when they return to their studies. Students are introduced to different subjects to help them make choices later on for their further studies but they receive a certificate listing the subjects done in pre-vocational education along with their general lower secondary education certificate.

3.3.1.5. *Results*

The first 13 pupils started in 2003, continued their 8th or 9th grade and learned about different vocational specialisations. Up to now, 140 young people aged 17-24 have used this alternative learning opportunity, 20% of them girls. Forty-five have discontinued their studies, 45 have finished lower secondary education (9th grade) and 36 have completed 8th grade. Of those who graduated, 18 continued their studies in Vana-Vigala VET school and some have moved back to general education or adult secondary school (Kesküla, 2009). This initiative also has positive effects on the students' motivation for work and provides them with

positive social attitudes. The results show that this type of IVET intervention can, potentially, reintegrate students into the general IVET track. It is very different from some of the social inclusion interventions critiqued in Preston and Green (2008) which are orientated towards separating students with alternative needs through VET. The Ministry of education and research recognises the positive outcomes of this approach. Now there is a network of three VET schools (Põltsamaa vocational school, Vana-Vigala technical and service school, Vana-Antsla secondary VET school) with VET for learners who are younger than 17 and 12 schools with programmes for those over 17, without basic education completion.

3.3.1.6. *Commentary*

The project demonstrates that special measures are needed to counteract a growing disaffection with schooling by certain groups of young people. Their reinsertion requires a holistic approach combining personal and professional guidance with high quality and relevant learner-centred and vocationally oriented programmes, as well as material support to counteract socioeconomic disadvantage. These preparatory VET programmes motivate 'at risk' youth to participate longer in education and training and aim to gain qualifications, with the confidence that they will be beneficial for them. The ultimate goal is reintegration, rather than separation, which has positive benefits for education equity and, therefore, macrosocial benefits.

The Vana-Vigala VET school project is one example among hundreds of initiatives taking place throughout the EU that aim to prevent early school leaving. The advantages of vocationally orienting these programmes is that they offer alternative contents, methodologies and activities to those who may have felt alienated from general schooling, which may not have made adequate provision for their interests, styles and pace of learning. Further, the focus of learning directed towards occupations makes future options more visible for these young people and with extra support and direction, more attainable. It is also related to existing institutional traditions in Estonia.

3.3.2. Denmark: increasing minority ethnic integration for education equity

3.3.2.1. *Summary*

The Equality Authority (2006) report says that issues of ethnicity, language and culture must be considered if VET is to provide integration for citizens and impact positively on education equity. A prime example of this integration, which also has implications for community cohesion, can be found in *Mjølnerparken* a part of the *Nørrebro* area in Copenhagen. This is an economically deprived and socially

isolated area inhabited mainly by Muslim immigrants. Of particular concern are the teenage boys who are at risk of, or are already experiencing, social exclusion. A mentoring scheme was set up with mentors who have a similar ethnic background but have progressed further with their education and/or are employed.

3.3.2.2. *Introduction and national context*

Denmark is a prosperous country with a highly developed welfare state and a high degree of social security, which helps to alleviate poverty in the population. Between 2000 and 2008 the employment rate for 15-64 year olds exceeded the Lisbon Strategy targets; in 2008 only 1.7% of the labour force was unemployed and 3.5% in 2009. The number of immigrants, for the most part humanitarian and family reunification migrants, has doubled in 20 years; now these groups comprise approximately 8.8% of the population⁽⁶⁾. Unemployment among immigrants is more than twice as high as that among the Danes⁽⁷⁾; the consequent social security budget impact is of public concern. According to the OECD report, the second generation immigrants, of whom 75% are aged 15 or less, are of particular policy concern as 'their educational attainment is well below that of comparable Danes' and 'drop-out rates from vocational training is twice as high' (Liebig, 2007). Integration policies are high on the political agenda and consolidating national identity, as an answer to migration and multicultural challenges and a means to improve social cohesion, is vitally important in national debates⁽⁸⁾. *A new chance for everyone: the Danish Government's integration plan* (Danish Ministry of Refugee, immigration and integration affairs, 2005) presents disturbing statistics: one in two bilingual pupils lacks the basic skills to complete upper-secondary education or VET; only one in 10 immigrants from non-Western countries gain professional qualifications and 50% of immigrants and their descendents are not part of the workforce. There are, therefore, serious equity issues (as well as issues for social cohesion): 'It is unacceptable that so many immigrants and descendents of immigrants still live on the edges of society with only slight ties with the labour market and a

⁽⁶⁾ At 1 January 2007, immigrants and descendants totalled 8.8% of the entire population, corresponding to an increase of 45% from 1 January 1997 until 1 January 2007 (Danish Ministry of Refugee, Immigration and Integration Affairs, 2007).

⁽⁷⁾ In no other OECD country are the differences as large (Liebig, 2007).

⁽⁸⁾ In 2006 a Danish newspaper published cartoons of Mohammed the Prophet, which caused violent reactions.

significantly lower education rate than Danes. It is an entirely untenable situation that a large group of citizens are isolated, often in segregated residential areas, from the remainder of society' (Ibid., p. 1) ⁽⁹⁾

The integration plan, with its strong focus on employment, acts as an incentive for local authorities to ensure that immigrants and their descendents are offered opportunities tailored to needs, including homework coaching, career counselling, mentoring, practical vocational training and information on available jobs for which no specific skills are required. To ensure 'take-up' of these opportunities family allowances are adjusted so only young people aged 15-17 on job-qualifying courses receive allowances and job-qualifying courses are obligatory for the 18-25, otherwise their social assistance payments are stopped.

Plans to improve the education attainment levels of migrants are consistent with more global government objectives to improve human resources, including the goal that 95% of a youth cohort will complete a youth education and training programme in 2015. These plans include a wide-range of initiatives: early intervention for all young people at risk; strengthening the vocational orientation of youth education programmes; 'reach-out' and mentoring schemes; more effective guidance and greater efforts to make more training places available. Denmark channelled ESF funds into initiatives to support the integration of exposed groups in the labour market and the EQUAL programme offered funding opportunities to improve the integration and labour market opportunities of immigrants and their descendents ⁽¹⁰⁾.

The Danish lifelong learning strategy notes that Danish society is experiencing significant change. It is therefore critical that 'everyone can keep up with developments in the society and can take an active part in democracy and the community in order to ensure cohesion in society' (Danish Ministry of Education, 2007, p. 30). Acquiring new knowledge and skills are described as important for individuals to participate not only in the labour market but also in 'society at large' (ibid.). The critical role of education and training to ensure competitiveness and social cohesion is also acknowledged in this report. Another indication of the emphasis placed on social cohesion is the existence of the Ministry of Refugee, Immigration and Integration Affairs. The lifelong learning strategy lists the following aims:

⁽⁹⁾ The plan was replaced by new rules in 2008.

⁽¹⁰⁾ In 2007-13 Denmark will invest EUR 53 million of its structural funds investment to help get people into the workforce with immigrants as a key target group (European Commission, 2006).

- (a) 'all children shall have a good start in school;
- (b) all children shall achieve good academic knowledge and personal skills;
- (c) 95% of all young people shall complete a general or vocational upper secondary education by 2015;
- (d) 50% of all young people shall complete a higher education programme by 2015;
- (e) everyone shall engage in lifelong learning' (Danish Ministry of Education, 2007, p. 7).

The report states that:

- (a) a coherent education system from preschool to higher education must provide equal opportunities for everyone to acquire excellent basic skills, an education with qualifications and a solid foundation for lifelong learning;
- (b) education must be world-class. The education system shall foster talent and be more accommodating to weak learners. Quality is given pride of place, and education must match the needs of the labour market and society (ibid. p.8);
- (c) in general and vocational upper secondary education, vocational education and training programmes shall challenge the most talented pupils and provide them with increased opportunities for further education. At the same time these programmes shall provide realistic training opportunities for weak academic learners. (ibid. p. 15);
- (d) in adult education and continuing training, greater emphasis must be placed on those with the greatest need – the low-skilled and those with literacy and numeracy problems. The aim is that more people, especially those with the lowest level of formal education and marginalised groups, including bilinguals, shall participate in general qualifying education and in vocational adult education and continuing training (ibid. p. 22).

Despite positive developments, the rates for attending youth education are only 73% on a national basis and 79% in the municipality of Copenhagen. A large proportion of the young people who do not complete youth education are either immigrants or descendants of immigrants. The Centre of Guidance, the Youth Guidance of Copenhagen (CV/UU) is responsible for the educational and occupational guidance of young people. The guidance forms part of the effort needed to increase the number of young people who attend and complete youth education. Guidance is delivered by youth counsellors, often trained teachers with close links to schools and local communities. However, in recognition that some young people need even more support, the CV/UU has been testing different mentoring pilots, one of which is the Amuck project. This project is

typical of the Danish desire in VET projects to merge schemes for integration with existing good practice in terms of VET in a 'flexicurity' model.

3.3.2.3. *Situation and issue*

In *Mjølnerparken* less than 10% of the housing is occupied by ethnic Danes while about 60% of the dwellers are from Arabic speaking countries (such as Iraq, Lebanon, or the Palestinian Territories). There is high unemployment: about 1 100 people of working age live there and 925 claim welfare payments. The area is also characterised by vandalism and, for the thousand children between the ages of eight and 14 who live there, there are few role models when it comes to education and employment. Although there are well-educated families also living in *Mjølnerparken*, they tend to have little interaction with the more socially, educationally and economically deprived families. Bilingual boys, in particular, in *Mjølnerparken* experience discrimination on the street and in the labour market. This serves to further their isolation as they decide to avoid discrimination and therefore interaction with the world outside of the area. Their parents demonstrate little involvement in their children's schooling and education is not seen by their children as a pathway to success in the same way that ethnic Danes would consider it to be.

3.3.2.4. *Response: the Amuck mentoring initiative* ⁽¹⁾

A pilot project led by the Centre of Guidance (CV/UU) provided a mentoring scheme for bilingual teenage boys in *Mjølnerparken*. In the initial project, 13 males, between the ages 15-18 who were at risk of being marginalised from formal educational, participated in the project. These risks of marginalisation came from having poor linguistic (Danish) skills, or low motivation and/or involvement in criminal activities. Their backgrounds varied, some still attended school or engaged in basic occupational training. Like their parents, some had jobs while others did not. Most had a Palestinian or Somalian background. Some were born in Denmark of immigrant parents, while others arrived as children. In general, they had parents with only a short period of schooling compared to Danish standards.

The overall aim of the project was to support these young bilingual men in their choice of education and educational setting and to help them to return to education. The objectives were to:

⁽¹⁾ Clarifying mentor-course aimed at increased educational knowledge focused on competence development

- (a) clarify the young men's interests, wishes and capabilities to support them in their choice of education. Then, develop their competences and improve their knowledge of educational opportunities and what is required to participate in the labour market as well as strengthening their self-belief and confidence in the education system and promoting understanding that education can be compatible with community life (friends, jobs, etc.);
- (b) use the mentors as positive role models to build a bridge between the target group and the education system and labour market;
- (c) contribute to positive self-development.

To help gain support for the project within *Mjølnerparken* the head of the resident association was approached and help was sought from the local Youth Counselling Centre, in *Outer Nørrebro*. It was critical to find mentors who could act as role models for the target group. Therefore, the mentors had to be young, but older than the target group, and also have an ethnic minority background, along with the necessary aptitude and experience. They also had to be either graduates and currently employed or still be in education. The selected mentors had various educational backgrounds: social workers, student teachers; gymnasium students and social educators. Originally, only men were to be mentors, on the presumption that men would understand the boys better and vice versa. Since this assumption had not been empirically tested, two women were also employed as mentors. The mentors' ages varied from 19-28, with an average of 25. A third was born in Denmark to immigrant parents while the rest had moved to Denmark while still very young. The majority had also experienced problems during their schooling, such as language difficulties or being subjected to discrimination. Once selected, the mentors were inducted via a three day skill development programme, which included orientation to *Mjølnerparken* and the education and training system.

The young men at risk were selected by youth and educational counsellors; most were current or previous students at the local municipal school. In the selection, care was taken to avoid those who could function well enough without mentors while also avoiding those who had so many problems that they would not be able to make proper use of a mentor. Each of the target males was paired with a mentor who initiated the first contact; in some cases there was contact with parents to seek their support for the project.

The mentor began with competence clarification, focusing on the young man's perceptions of his capacities, interests and wishes for the future. Together they produced action plans, including goals for the rest of the project. The mentors sometimes carried out tasks that might have been done by parents in other situations, such as accompanying the young men on visits to education and

training institutions, to meetings with guidance counsellors, or helping to complete applications for youth education. They also engaged in more social activities such as sport or meeting for a coffee and chat in a café.

3.3.2.5. *Results*

Generally the interaction between the young men and their mentors was very positive and the two female mentors engaged equally well. Those mentors who were currently students themselves had more energy to mentor than those at work. The allocation of time proved too little and some mentors ended up working additional, unpaid, hours. Only one of the young men broke contact with his mentor, another maintained contact while jailed but all 12 made applications to education and training institutions. In general, they applied for educational options that differed from those they intended to make at the beginning of the project.

The experience of the project has shown that, although parental involvement is limited compared to that of ethnic Danish parents, they still play an important role. Parents want their children to have a good education and go on to do well in Danish society but their lack of knowledge of available opportunities seems to play a part; sometimes they pressure their children to go to gymnasium, rather than taking the vocational route, which the parents perceive as less prestigious but may be of greater relevance and benefit. Indications show that mentoring such as this can have a positive effect in actively reducing levels of social exclusion⁽¹²⁾. Since this project, mentoring on a much wider scale has been adopted as an approach to counteract dropout. It contributes to wider educational equity, and potentially macrosocial benefits.

3.3.2.6. *Commentary*

The 2009 progress report of the Danish national reform programme (Danish Government, 2009) indicated a positive trend in the labour market participation of immigrants and their descendents, up by 2 percentage points (2007-08)⁽¹³⁾. It reported that more than 90% of colleges surveyed considered the national 'mentor scheme' was having a positive effect in reducing dropout and the ability

⁽¹²⁾ *Denmark 2007 national report*. Denmark's Contribution to the 2008 Joint council/Commission Report on the Implementation of the Work Programme 'Education and Training 2010'. Copenhagen, May 2007.

⁽¹³⁾ The report indicated that greater numbers of young people with a migrant background were completing education and training with a decline of 5% in drop-outs and their unemployment rate had decreased.

of colleges to accommodate individuals with different backgrounds; 40% observed a positive effect on the individuals' well-being and social adjustment.

A key benefit of initiatives such as Amuck for individuals is the strengthening and development of their personal networks. First, it is important for the target group to know that being an active member of one's own community brings social and occupational benefits and that such participation need not be at the expense of active citizenship in society, at macro level. This understanding also applies to their participation in education, training and the labour market. The vocational orientation of the initiatives offers at risk individuals a future perspective and understanding of the opportunities to acquire a desired job. Second, such initiatives can complement the crucial role of parents in career planning by filling knowledge gaps that first generation immigrants are bound to have, regarding education, training opportunities and the labour market. Third, through advocacy and bridge building, these initiatives help to break down the covert but often deeply embedded discriminatory practices of institutions.

While much effort is focused on supporting young people at risk to integrate, less attention is often given to the accessibility of the institutions, the other side of the coin of their social integration. In the national reform programme, data from a survey related to the follow-up on the PISA study showed a relatively large degree of ethnic segregation in Copenhagen schools; the average student with an immigrant background attends a school with the majority having the same background. Citing research by Colding (2006) the target group enters upper-secondary level schools at the same rate as their counterparts with a Danish background but twice as many of the former drop out and, according to empirical research undertaken by Nielsen et al. (2003), the target group has 20% less chance of gaining a qualification. Of particular significance is the difficulties experienced by the target group in gaining the sponsorship of a company for the work-based element of their training, which is one cause for dropping out.

In recognition of this, the Danish education and training system has undergone recent change to reduce such obstacles and enhance the attractiveness of VET opportunities. For example, the national action plan *We need all youngsters*, in part funded by the European Social Funds since 2006, takes measures, *inter alia*, to support the participation of the target group in VET, in particular the craft trades, and their transition into the labour market. The measures include special campaigns and fairs and the creation of teams of 'role models' comprising young people or parents or 'heroes' and mentor teams, for example of retired craftsmen with the same backgrounds. In 2005, an apprenticeship placement search grants-scheme was introduced for schools that have a large share of students with an immigrant background. Through this, the

new groups of immigrants are incorporated within traditional VET schemes. Again, this scheme contributes to equity by integrating students within the standard IVET routes rather than relegating them to separate VET tracks which are negative for equity.

3.3.3. Germany: integrating IVET/CVET to tackle inter-generational inequity

3.3.3.1. Summary

Leney (2004) considers that the degree of integration of IVET and CVET is very important and has implications for education equity. Within the Berlin State, a consultancy service supports SMEs in employing older workers (50+) and in organising their environment and vocational training to improve SME productivity.

3.3.3.2. Introduction and national context

The German population is ageing rapidly, about 20 million Germans are in retirement, only 45% of the over 55s are still in salaried employment with one in three working until official retirement age (Allroggen, 2009). This has implications for equity in terms of inter-generational inequity and, possibly, social conflict, an increasing problem across many European societies. The consequential reduced revenue has negative implications for the State social security fund, including the pension scheme, as well as the well-being of individuals as they get older. According to government statistics, by 2019 the current pension scheme will not be sufficient to cover living costs. Keeping Germans employed for longer is a government goal; to this end the retirement age was raised from 65 to 67, in a staggered process up to 2029.

The German government is addressing the consequences of an ageing workforce by taking measures to keep skills up to date and to ensure age-friendly work contexts to keep people in work longer and maintain their productivity levels. A 2008 Eurofund report (Villosio et al. 2008) indicates that older workers have fewer opportunities for learning on the job or being involved in training than their younger counterparts; they also have difficulties in acquiring competences in information technology. Recent research (Van Ours, 2009) indicates that, while the productivity of older workers decreases with age, the decline is limited and there was no evidence of pay-productivity gaps for older workers. However, the author, Van Ours (a Dutch labour economist), found that older workers are not likely to return to a job after becoming unemployed, making it all the more important to maintain their inclusion in work.

Since the adoption of the EU 2000 Directive on equal treatment in employment (Council of the EU, 2000), Germany has introduced policies to improve the employment integration of older workers and achieve a longer-term

objective of preventing their social exclusion in later life because of inadequate pensions. According to the 2008 German strategy report for social protection and social inclusion 2008-2010 (BMAS, 2008), the employment rate of workers aged 55+, increased from 37.4% in 2000 to 51.5% in 2007, with a target of 55% to be achieved by 2010.

The national reform programme (German Federal Government, 2009) makes reference to a framework of initiatives with relevance for older workers, including 'skills development in short-time employment'. There is an increased budget for upgrading qualifications and a doubling of funds for the special programme for low-skilled and older workers (WeGebAU) to improve the skills of those without vocational qualifications.

On 23 April 2008, the Federal Government adopted the concept for lifelong learning (BIBB, 2008). The concept sees lifelong learning as crucial to individual prospects and for the success of industry and society⁽¹⁴⁾. Of concern are the low rates of participation in continuing education by those with low qualification levels. The Federal Ministry of Education and Research has set targets to increase participation in education and training, both formal and non-formal, for 25-64 year olds (including those with low skills). These targets include recognising the importance of improving social integration through education and the promotion of learning in civil society.

In 2006, the Federal government announced the 50Plus Package aimed at helping older people to stay longer in salaried employment, including financial incentives for employers willing to hire people over 50 and bonuses to support older workers in low paid jobs. The government made available EUR 275 million for the second phase of the initiative (2008-10) Perspective 50plus⁽¹⁵⁾. Perspective 50plus comprises multi-institutional, regional employment pacts (62) for the employment integration of older workers. The JobMotion programme in Berlin is an example of a Perspective 50plus initiative.

Responsibility for education and training policy and lifelong learning strategy falls to both the Federal level and to the individual *Länder*. At Federal level some of the measures introduced involve funding, guidance, quality assurance and coordination between employment, training actors. A grant has been introduced

⁽¹⁴⁾ See the web pages on lifelong learning of the Federal Ministry of education and research
http://www.bmbf.de/_search/searchresult.php?URL=http%3A%2F%2Fwww.bmbf.de%2Fen%2F411.php&QUERY=lifelong+and+learning

⁽¹⁵⁾ <http://www.perspektive50plus.de/>.

to motivate individuals to invest in continuing education and training. Guidance is being improved by making the counselling schemes more transparent and by increasing the professional development of the counselling staff. Following a successful trial, Stiftung Warentest's continuing education tests will be continued. These are intended to make quality assurance of continuing education transparent for consumers. The Local Learning initiative and educational monitoring are intended to strengthen educational cooperation between actors at regional level. This means that local systems of IVET are increasingly integrated with CVET systems.

In the 20 years since the reunification of Germany, the economy of the Berlin State has changed from a focus on manufacturing and more traditional industry to more service-orientated businesses. This has changed the nature of apprenticeships and introduced potential discrepancies between generations in terms of skills in manufacturing (for the older generation) as opposed to services (for the predominantly younger generation). As elsewhere in Germany, the Berlin population is stable in terms of numbers but is generally ageing. The average employee age is increasing and many people will have to work until they are 67 to cover the growing deficit in qualified young workers. This shortage of skilled workers is already being realised in some sectors and will become more profound as the 'population bulge' of the baby boomer generation retires. It is forecast that by 2014 one in four employees will be over 50 years old; this trend is increasing. This demographic is similar to other EU Member States which face a 'demographic time bomb'. Unlike inequalities based on socioeconomic status, inequalities based on age are frequently overlooked but have the potential to lead to massive inequalities of income.

3.3.3.3. *Situation and issue*

There is particular concern over older workers in more physically demanding occupations, such as removal men or roofers. These are people who may be reaching the end of their working lives within their occupations yet are really too young to retire and who are at some risk of social marginalisation, if not social exclusion. Workplaces have to adapt, and corporate cultures change. This means moving from a situation where older people (known as Generation 50 plus) are in danger of being segregated from the labour market, because of their IVET or even lack of qualifications, to harnessing their experience in companies to increase their success. Personnel management must be age sensitive, which includes changes to age equality policies, the demands on employees and payment structures. It also means changing working conditions and environments; promoting new ways of working and using new ways for matching

skills availability to production needs. Such change for companies is a significant challenge and so educational resources must be directed more effectively to older workers. Small and medium size enterprises may have particular difficulties, as they often lack the necessary resources and strategic planning capability or capacity.

3.3.3.4. *Response: the JobMotion project, Berlin State* ⁽¹⁶⁾

The Berlin JobMotion project was launched to provide SMEs with guidance and support in integrating older workers. The aim of the project is to prevent the loss of skilled technicians and their expertise and to promote the development of an age-equal corporate culture. The approach is to emphasise the benefits to SMEs in improving performance through the input of older workers. Promoting the employment of older workers demands a 'can do' approach, tailoring the job to an individual's abilities to perform at a high level.

The project seeks to engage with individual SMEs through a dedicated consultant and to help them solve what they see as their problems, rather than trying to impose solutions. The support offered includes information and advice, for example using seminars of one or two days for managers. It also helps SMEs to choose qualifications modules for older workers that count towards specific industrial and occupational qualifications to improve their working effectiveness. More widely, consultants from the project use association and industry events to raise awareness of the project. The benefit of a programme such as JobMotion is that it works to improve the qualifications and skills of workers by building on their initial qualifications (IVET) rather than by introducing a new set of CVET qualifications which many older workers would not find compatible with their existing skills.

JobMotion has several organisational principles which it promotes. It recommends that, as far as possible, employees should have the freedom to decide how to do things. Job descriptions which are less prescriptive, in terms of carrying out activities, can engender greater employee commitment and responsibility. For example, allowing flexibility of working hours means that a better work-life balance can be achieved that takes account of physical health, family commitments, leisure etc. A better balance can lead to greater employee satisfaction and performance. It also promotes the concept of 'horizontal

⁽¹⁶⁾ <http://www.50plus-in-berlin.de>

careers' ⁽¹⁷⁾. This can be used to reduce the effect of physical decline in older employees in more physically demanding roles.

Older workers may be predominantly involved in work whose activities are repetitive in nature: offering roles with more diverse activities and new challenges can increase employee commitment. Job enlargement/enrichment can also lead to greater responsibility for supervision of other employees or for controlling tasks. Employees can be encouraged to carry out more activities, to the standards required, by varying workloads and activities, the negative impacts of monotonous and/or physically demanding work. This can lead to a reduction in employee stress and make for more attractive jobs.

Rotating between jobs/tasks to mitigate the impact of monotonous activities requires employees to be appropriately qualified. Once this prerequisite is met, the rotation improves employee versatility by prompting employees to learn as they exchange experiences and knowledge. The increased flexibility is promoted to employers as a means of reducing the disruption caused by sickness and holidays. Like job rotation, secondment can be used not only to increase capacity in a certain business area, it can also increase a company's stock of skills and knowledge through informal and non-formal learning. Various measures can be used to make returning to work easier for employees and the resumption of work more effective for employees; a phased return and returning to work interviews are examples.

3.3.3.5. *Results*

A key outcome of the JobMotion initiative is its support framework. This can be used to: motivate older people to return to work and/or refresh skills and gain new qualifications, while integrating IVET and CVET, to improve their employment prospects. It can also motivate enterprises to change recruitment practices to avoid discriminating against older applicants and to engage them in training younger colleagues. JobMotion works on an enterprise by enterprise case, so the results differ according to the intervention needed. Examples include:

- (a) Müller-Zeiner Paletten GmbH; a high quality packaging manufacturing company that employs 120 workers. Active ageing policies are in practice, which include maintaining the skills of older workers and involving them in

⁽¹⁷⁾ The notion that progression in terms of salary and responsibility may be lateral (horizontal) rather than increasing (vertical); instead each move requires the development of new competencies or specialisation within current ones (see e.g. Arthur et al. 1989).

- succession planning by mentoring new entrants. The worker average age is now almost 56 and several workers are in their 70s;
- (b) Mato Cujic Gebäudereinigung GmbH; a building power cleaning company that employs 105 workers. The company changed its recruitment practice to attract older workers. These older workers are highly motivated, productive and are good role models for younger staff;
 - (c) mSolar – Solar systems GmbH; a small enterprise working in photovoltaic and solar systems. Workers must not only be highly skilled in rapidly changing technology but also be extremely reliable, autonomous and have the social skills necessary to deal with a wide-range of clients and contexts. Older workers with this range of capacities are increasingly targeted and are generally very generous with their time and share their expertise with younger employees.

3.3.3.6. *Commentary*

The German 2009 national reform programme (German Federal Government, 2009) states that in 2008, immediately prior to the economic crisis, a record employment level, exceeding 40 million, was achieved and within the immediate three-year period unemployment fell from 4.9 to 3.3 million. Increased labour market flexibility and investment in the training of workers were key contributors. The average age when first drawing down a pension showed an increase of 0.2 years in 2006 and those drawing down a pension prior to retirement age decreased to 54% compared with 60% in 2004, with 10 000 recipients compared with a high of 74 000 in 1996.

Perspective 50Plus has contributed to this success. By 2008, 80 000 older long-term unemployed people were mobilised and/or engaged in training; of these 22 500 were placed in employment. In 2008, 420 000 people accessed vocational training through the Skills development in short-time employment scheme, treble the 2005 figure. Germany topped a recent survey, jointly with the UK, which measured the preparedness of enterprises to cope with aging work forces⁽¹⁸⁾. These advancements are of significance in combating the employment and social exclusion of older people and tackling old-age poverty that can have consequences for social inclusion and contributing to inter-

(18) Adecco's second demographic survey (Adecco Institute, 2008).

generational harmony⁽¹⁹⁾. This has important consequences for equity and potentially for social cohesion.

3.3.4. Spain: improving the articulation between CVET and labour markets for Roma people

3.3.4.1. Summary

Started in 2000, and due to run until 2013, the *Acceder* programme aims to improve social inclusion for the Roma population in Spain through employment. The programme is run by the *Fundación Secretariado Gitano*, a non-profit body operational since the 1960s that describes itself as an inter-cultural social organisation and which provides services to support the development of Roma communities. This scheme is designed to improve the labour market prospects for Roma people and thereby increase equity, which has been negatively affected by the difference between immigrant and national labour market prospects. It is unique because of its scale and the orientation of CVET to a range of service and manufacturing industries.

3.3.4.2. Introduction and national context

Between 1995 and 2008, Spain experienced a period of continuous economic growth. Increased wealth has brought new social challenges, including an increasing divide between rich and poor, immigration replacing emigration, with many immigrants coming from poor countries, and a growth of individualism. However, despite an increase in prosperity, the unemployment rate remained above the EU average at 10.6% in 2004, 11.3% in 2008, and 19.3%, including 42.9% for the under 25 age group, in 2009 (Eurostat, 2009), which also has negative consequences for social cohesion. Spain's 2009 reform plan cites early school leaving (at 31% in 2007) as a matter of great concern with regard to social cohesion. Other indicators related to social cohesion include jobless households and long-term unemployment. Increasing human capital is a key policy issue and new legislation⁽²⁰⁾ and initiatives are in place to reduce early school leaving, improve access to more attractive CVET, and support adults to gain or update qualifications.

⁽¹⁹⁾ 'We have to make sure that ageing will not undermine solidarity between generations', Vladimír Špidla, Commissioner for Employment, Social Affairs and Equal Opportunities (cited in European Commission, 2009)

⁽²⁰⁾ For example: the Education Organic Act, put into action in 2006.

The large Roma population in Spain experience many disadvantages due to poverty, further exacerbated by segregation and discrimination. The Roma in Spain are not legally defined as an ethnic minority; they have the same legal status as other residents⁽²¹⁾. Ethnic based data collection is not permitted in Spain so official statistics are unavailable. Further, Roma communities are heterogeneous making it difficult to generalise needs. While the social situation of many Roma mirrors that of other Spanish people, they can experience social segregation and discrimination and it is this that is the focus of in this study.

Despite full equality of rights and duties for all legal residents in Spain, a recent report (FSG, 2007) demonstrates that the criminal code prohibiting ethnic discrimination is inefficiently enforced and that instances of covert discrimination tend to be ignored by the Courts. Roma experience multiple forms of disadvantage that negatively affect their inclusion in mainstream society, including poor housing conditions, living in shanty towns and Roma-dedicated housing estates isolated from cities with poor infrastructure including transport, and limited access to ordinary health services. These factors militate against Roma people gaining qualifications and access to the labour market. This case study focuses on the role of CVET in opening up opportunities for salaried work and helping to break the cycle of social exclusion.

According to Spain's plan on social inclusion in the European framework (Spanish Government, n.d.) there are three priority objectives for active social inclusion: achieving an equitable and quality education system; promoting access to employment and active inclusion policies; and guaranteeing minimum financial resources. Actions in these fields, supporting the social integration of immigrants and guaranteeing equitable care for people, are considered crucial to building social cohesion. The Spanish government promotes comprehensive active social inclusion policies and active employment policies are considered fundamental. Initiatives directed specifically at the Roma population include plans to improve their living conditions, develop social intervention projects to prevent marginalisation and discrimination, and create training, employment and social integration programmes. New institutions engaging in partnership with the government include: the National Council for the Roma people and the Institute of Roma Culture. As well as improving social inclusion, these measures should also lead to improvement in equity. Annual funding supports implementation of policies related to the Roma population in the

⁽²¹⁾ The Spanish Constitution (1978) prohibits discrimination on the basis of race, sex, beliefs/opinions or religion.

context of the national plan for Roma development, operational for 25 years (*Primer plan de desarrollo gitano 1985*) and managed by the autonomous communities and town councils. EU level policies, funds and initiatives related to social cohesion play an important role in supporting active inclusion policies centred on Roma communities, including highlighting legal rights and duties, promoting cultural diversity, challenging negative stereotyping and spreading good examples of practice in these matters.

There are estimated to be in the region of 700 000 Spanish Roma out of a total Spanish population of approximately 45 million. In terms of demographic profile the average age of the Roma population is 27.6, compared to 39.5 for the overall Spanish population. Also, just over half of the Roma population (51.4%) is under 25 years old compared to only 28.4% for the Spanish population as a whole. Educational attainment is another significant differentiator. At 16 years, 71.2% have not completed compulsory primary education. Within this, the gender difference can be acute: 16% of women versus 9% of men among the older Roma and those living in small towns. While half of active Spaniards complete at least secondary education, the Roma equivalent is less than 10%.

3.3.4.3. *Situation and issue*

Roma people tend to have a negative social image and suffer both direct and indirect discrimination. Difficulty in accessing employment or vocational education and training combined with the decline in traditional professions has increased this exclusion effect (FSG, n.d.). Because the Roma population has a younger age profile than the overall Spanish population, and because many tend to leave school early, they potentially have a longer working life. Fewer working Roma have salaried employment (51.5% compared to 81.6% for the overall Spanish population). Conversely, 48.5% are self-employed, compared to 18.3% for the overall population. Of the employed Roma population, 70.9% are on temporary contracts (compared to 30.9% overall) and 15% are casual labourers, with only verbal agreements (FSG, n.d.).

3.3.4.4. *Response: Acceder programme*

The objectives for the Acceder programme (FSG, n.d., pp. 14-17) are to:

- (a) find employment for members of Roma communities;
- (b) adapt vocational training to the demands of the labour market;
- (c) establish direct links between Roma and enterprises;
- (d) raise awareness of prejudice and discriminatory practices;
- (e) standardise pro-active policies targeting the Roma population.

Although targeted at the Roma community, participation within the programme is not restricted to them; Roma account for 69% of the participants, the remaining 31% being non-Roma.

The programme budget for *Acceder* from 2000 to mid-2008 was over EUR 64 million. Nearly 68% was provided by the European Social Fund and from the European Regional Development Fund. Most of the rest was provided by national (central government), regional (provincial government, autonomous communities) and local administrations (city councils). Over a million Euros was provided by private sources. Across Spain 48 integrated employment centres were established in places accessible to the Roma population. They were staffed by multi-disciplinary teams of four to seven people with a cultural mix of Roma and non-Roma. These teams, and the people they were working with, had access to materials and tools whose success were proven. There was also access to the online *Acceder* database for linking employers to job seekers.

3.3.4.5. *Results*

The original target number of participants for the programme was set at 20 000; by the end of 2009 the figure had reached 51 040 of which 73% were Roma⁽²²⁾. In terms of gender split, slightly more than half were women (54%), although among the Roma participants the split was almost equal. For participation by age group, the biggest single group was aged under 30 (52%). The group aged over 45, had the fewest participants, accounting for just 11% of the total. Data from 2000 to 2008 showed that most had low levels of educational attainment; just over a quarter had not even completed primary school, while nearly 53% had only a primary school certificate. Although 16% had attained an 8th grade certificate, only 3% had completed secondary school and less than 1% had a higher education degree.

Of these participants, 13 902 people received some form of training. Of these, 7 204 had taken part in one of the 846 vocational training courses. Roma participation in training was high at nearly 82%, there was also a marked gender split with women accounting for 61%. In terms of age group the numbers participating also decreased with increasing age. Many of the courses are run in-

⁽²²⁾ In June 2009, the initiative recorded the following results: over nine years 47 778 people used the programme (the original target was 20 000) and 72% were Roma; 54% were female, demonstrating their growing interest in accessing the labour market, 52% were under 30 years of age and 33 827 employment contracts were concluded, of which 70% were with Roma (51.4% females). Translated from Spanish <http://www.gitanos.org/acceder/resultados.html>

house, although outside training providers are also used. There appears to be a slight preference (although more pronounced among the female and the older participants) for in-house training, perhaps because receiving training in what becomes a more familiar environment is less daunting. In-house training accounted for just 52% with the rest being delivered externally.

Many of these courses (nearly 40%) were short courses of less than 40 hours duration, 30% were of between 40 and 99 hours, nearly 23% were between 100 and 349 hours and a few (nearly 7%) were more than 350 hours. The main type of training offered other than vocational training was to teach basic skills for those not yet ready for the vocational training courses offered. The courses cover several sectors (Table 8).

Table 8. **Training courses by sector**

Training courses by sector	Number
Community and personal services	181
Tourism and catering	119
Company services	119
Commerce	98
Administration and offices	91
Transport and communications	50
Construction and public works	27
Maintenance and repair	25
Auto mechanics	21
Teaching and research	20
Food industries	19
Diverse manufacturing industries	17
Textile industries, fur and leather	16
Assembly and installation	12
Information and artistic endeavours	10
Agriculture	7
Heavy industry and metal construction	6
Graphics industry	4
Wood and cork industries	4
Total	846

Over 36 000 people gained employment contracts between the start of the programme and the end of 2009. Of these 70% were Roma, with slightly more women (51.6%) than men gaining contracts. Overall from the programme, Roma women have gradually been increasing their presence, interest and participation in the labour market.

3.3.4.6. *Commentary*

The prolonged and deeply embedded exclusion of Roma communities from mainstream society can only be addressed in small measure by the participation

of Roma in formal IVET and targeted CVET initiatives. However, the results indicate that engagement in VET is contributing to the slow process of change with the aim of breaking the cycle of exclusion. Individual empowerment, as nurtured in these programmes, is having personal and community-wide effects, with Roma activists and new institutions established, such as the State Council of the Roma people voicing Roma needs. New skills, new networks and accessible work-related information are improving capacities for Roma self-employment, which will help to combat poverty, a key consequence of social exclusion and a key reason for crime that threatens social cohesion. The empowerment of women through CVET participation is additionally important with regard to their guiding roles as mothers, particularly for younger female generations. The situation of the Roma in Spain as an 'existing but invisible minority' is very different to the situation of recent migrants in Denmark. This means that mainstreaming of VET is important for this group.

3.3.5. England: the diploma to reduce the academic/vocational divide

3.3.5.1. Summary

The Diploma, introduced in 2008 as a new qualification principally for 14-19 year olds, occupies a major role in a suite of educational reforms at a time when there is a strong emphasis on 'joined up' thinking/planning and delivery at national, local and institutional levels. Its development coincides with a period of economic turbulence and perceived social and cultural crisis following the 9/11 US attacks and the London bombings of 7 July 2005, events which themselves took place against a backdrop of economic globalisation and restructuring, increasing income inequality and concerns about health and wellbeing. Although the new coalition government (elected 2010) have not scrapped the Diploma initiative, they have halted the expansion of the diploma to further academic areas.

3.3.5.2. Introduction and national context

Historically in England, particularly within secondary education there has been a vocational/academic divide, with academic or general education enjoying higher levels of esteem. There was also criticism that there was a patchwork of vocational qualifications of varying quality. This may partly be due to the historical development of education and training within England which took a voluntarist approach with minimal involvement from the State. While the level of state control has grown to what it is now, reforms have often been made as additions rather than complete replacements of what has gone before. Signs of this pattern of voluntarism and incremental reform can be seen in the number of different types of schools (for example, selective, or run by a particular religious faith). Another

indication is from the number of different awarding bodies and the qualifications (accredited by the State) that they offer ⁽²³⁾.

Over a similar period, the failure of secondary education to engage those who drop out of education, or are at risk of doing so, and hence have low socioeconomic prospects (and are likely to have a higher burden on the State) has also been a major concern. Despite various reviews and education reforms, the perception of secondary education that was either too narrowly academic or occupationalist remained.

Over the past 10 years, social cohesion has been seen as important but it is difficult to view it in isolation from the competitiveness or skills agenda. This is because the way to promote social cohesion has been seen as preventing social exclusion, of which the best means is ensuring employment. Improving skills is seen not only as critical for employability but also as a necessary condition for social cohesion. This is illustrated by the Leitch Review of Skills, whose author was commissioned in 2004 by the Government to 'consider what the UK's long-term ambition should be for developing skills in order to maximise economic prosperity, productivity and to improve social justice' (Leitch Review of Skills, 2006, p. 1).

3.3.5.3. *Situation and issue*

In October 2004, the final report on curriculum and qualifications reform was published. It followed on from the final report of the 14-19 working party in February of that year (Tomlinson et al., 2004) and laid out clearly the imperatives for reform. In its vision statement it stated:

- (a) we believe that by 19 all young people should have the skills, knowledge and attributes necessary to participate fully and effectively in adult life. They should have had the opportunity to develop their individual potential to the full, whether intellectual, creative, practical, or a combination of these. They should be active citizens, equipped to contribute to the economic, social, political and cultural life of the country as well as developing an understanding of the wider international community. They should share in the cultural heritage of the country and of its many communities. They should have a passion for learning and should see it as a natural, necessary and enjoyable part of adult life;

⁽²³⁾ These can be found in the National database of accredited qualifications which is available at: <http://www.accreditedqualifications.org.uk/>

- (b) to achieve this goal, 14-19 learning should be inclusive and challenging. It should cater for and excite all young people, whatever their aspirations, abilities, interests and circumstances. It should build upon learning up to 14 and provide pathways beyond 19 to further learning or employment. It should value and encourage a variety of content, styles and contexts of learning, including 'academic' and 'vocational', school-, college- and work-based. It should recognise and reward all successful learning, differentiating between individuals and celebrating outstanding achievements. (Tomlinson et al., 2004, p. 16, paragraphs 30, 31).

Designed principally for 14- to 19-year-olds, the Diploma that emerged drew significantly on features of the model proposed by Tomlinson but stopped short of creating a universal curriculum framework or overarching qualification. It aimed to promote diversity, opportunity and inclusion by offering high-quality, credible, industry-relevant learning opportunities. It sought to broaden the education experience with more flexible qualifications and has at its heart, 'applied' learning; acquiring knowledge and skills through tasks or contexts that have many of the characteristics of real work. Within a context of 'personalisation', the Diploma was to mix academic and vocational study together with generic learning and focus on literacy, numeracy and ICT skills. Further, its spanning of the 14-19 phase addressed the issue of progression through the secondary phase and its development in tandem with a review of the 11-14 (lower secondary) curriculum has meant that schools and colleges have been encouraged simultaneously to review their practice across the 11-19 curriculum.

The Diploma's stated aims are to:

- (a) support equality and diversity by considering the needs of all potential learners;
- (b) encourage learners to develop a broad understanding and knowledge about a sector and/or related sectors (called lines of learning);
- (c) encourage learners to develop skills and attributes related to the chosen sector(s);
- (d) encourage learners to develop additional knowledge and skills to complement and broaden sector-relevant learning;
- (e) encourage learners to develop specialist knowledge and skills to deepen or extend sector-relevant learning;
- (f) develop and apply generic learning skills.

Development of the Diploma has been phased through a set of 14 (sector specific) lines of learning (Table 9) and subsequently extended to a suite of 17 with the addition of languages and international communication, humanities and

social sciences and science. Teaching of the first five lines of learning started in September 2008.

Table 9. **The activation of the lines of learning**

From September 2008	Construction and the built environment
	Creative and media
	Engineering
	Information technology
	Society, health and development
From September 2009	Business, administration and finance
	Environment and land-based studies
	Hair and beauty
	Hospitality and catering
	Manufacturing and product design
From September 2010	Public services
	Retail business
	Sport and active leisure
	Travel and tourism
From September 2011	Humanities and social sciences
	Languages and international communication
	Science (levels 1 and 2)
From September 2012	Science – level 3

Diplomas are designed principally for 14 to 19 year-olds; they recognise achievement at levels 1 (foundation), 2 (higher) and 3 (advanced). They include generic learning (functional skills in English, mathematics and ICT), a project, and development of personal, learning and thinking skills) and principal learning (i.e. sector related knowledge and underpinning skills and knowledge needed to progress in relevant sectors). There is also additional and specialist learning: a selection of options can be chosen from national curriculum entitlement subjects or specialised options from the line of learning, as specified in the additional and specialist learning catalogue. A significant and innovative feature of the diploma (and distinct from previous reforms) is the aim to reflect the needs of employers and higher education. In particular, the need for employers to own the qualification was deemed a prerequisite; diploma development partnerships were established for each line of learning to bring together employers and their representatives (through the sector skills councils and standard setting bodies) with higher education representatives and other stakeholders. The partnership role in determining the line of learning content sought to involve the relevant sector from the outset and to establish the principle of collaboration and mutuality in course development on the ground.

The diploma addresses issues of inclusion and equality of opportunity; in 2013, at the point at which the participation age will rise and all young people will continue to participate in education or training to the age of 17, there will be a new entitlement to diplomas. All learners will have access to any line of learning at any of the levels. Diplomas and apprenticeships are distinct from one another but there will be clear routes to progress from diplomas into apprenticeships and vice versa. Units within these two routes will be designed so that, where appropriate, they meet the needs of both apprenticeship frameworks and the diplomas. Personalised learning in smaller units through Foundation Learning is also currently in development so that those learners who, for whatever reason, are not yet in a position to access diplomas or other qualifications, may build a portfolio of components through which to join the 'ladder of progression' and subsequently follow diploma or other courses. A guaranteed core curriculum provides all young people with the opportunity to develop the skills and understanding required to continue learning regardless of sex, social background, race, religion or disability. It includes the national curriculum, religious education, collective worship, sex education and careers education as well as other wider opportunities.

The Diploma has a common structure across the lines of learning to give learners similar experiences and opportunities whatever and wherever they are studying. The breadth of content and range of skill development mean that diplomas need to be delivered within a partnership or consortium of schools and colleges which, in turn, require links with local employers and higher education institutes. While this is pragmatically sensible in maximising the use of, and access to, resources, it also chimes with the strand of community cohesion policy that requires schools to link with schools in other regions and/or countries or with other schools locally to both broaden learners' horizons and appreciate diversity. Second, the content, assessment and pedagogy have been informed by a range of criteria so that learners will engage with broad learning experiences and skill sets that will prepare them to play a full part in adult life and to integrate.

Personal, learning and thinking skills are part of the national curriculum and these have been embedded into the diploma. Their identification and articulation involved a wide range of stakeholders including employers and higher education. Six skill sets were developed; those of independent enquirers, creative thinkers, reflective learners, team workers, self-managers, effective participators. These, in turn, contribute to the three broad aims of the national curriculum (successful learners who enjoy learning, make progress and achieve; confident individuals who are able to live safe, healthy and fulfilling lives; responsible citizens who make a positive contribution to society) (QCDA, 2010).

All lines of learning make use of enquiry-based learning and frequently require learners to work in teams assuming a range of roles. They interact with employers and community organisations and individuals, with teachers and students from other institutions, and frequently interrogate issues with ethical or moral dimensions.

3.3.5.4. *Commentary*

It is too early to say either how successful diplomas are in their take-up or, more specifically, in their contribution to equity. As part of an overarching programme of reform, learners should experience a more relevant and personalised curriculum with greater choice and flexibility at lower secondary. Combined with improved information, advice and guidance and a solid core curriculum (including personal, learning and thinking skills and functional skills), it is hoped that they will progress into post 16 education and training better equipped and more engaged, both educationally and socially.

Early statistical data and feedback from a sample of consortia show that diplomas are recruiting from the many communities and ethnicities in England, though there remains considerable work to do in challenging gendered stereotypes. Anecdotal evidence from both students and their teachers suggests positive experiences both in the style and content of their studies and in terms of their personal and social development.

Stakeholder buy-in is the key aspect and will determine the diploma's success. One concern relates to the local consortia of schools, colleges, employers and higher education intuitions delivering the diploma. Schools are encouraged to collaborate within a consortium, yet are still subject to national school performance tables which engender a sense of local competition. Monitoring shows that some consortia function better than others and this may be an implementation issue. Although the diploma has applied learning, its use to progress into higher education is seen as vital. The higher education sector in England does not have a uniform admissions policy and so much work has been put into 'selling' diplomas to universities, particularly the more academically elite ones.

Parents and employers (and learners themselves) need to be persuaded of the diploma's currency, as do small and medium size employers who were not easily engaged in the development process but who comprise a significant proportion of the country's employers.

The breadth of the diploma has been identified by some as a weakness, in that the Diploma is only sector- rather than occupation-specific. However, it can be argued that it's strength is in establishing a broad base of transferable skills,

understanding and appreciating the workplace and communities, and developing excellent communication and inter-personal skills. Also, appreciation of the economy and its ethical and social implications provides a sound basis for a healthy society. However, perhaps when compared to the other cases, the diploma provides an example of where a policy attempts to cut across existing institutional and historical frameworks for VET in a country. It remains to be seen whether the diploma will thrive given the recent (2010) change in government which looks to reconsider some of the more radical changes brought in by the preceding administration. Evidence suggests that the diploma will be retained but, due to budget considerations, will not be immediately extended to academic areas.

3.4. Conclusions

For some commentators it is difficult to change the existing equity arrangements of VET systems. According to Thelen (2004), the institutional arrangements created by VET systems '[...] turn out to be incredibly resilient in the face of huge exogenous shocks of the sort we might well expect to disrupt previous patterns and prompt institutional innovation' (Thelen, 2004, p.xiii; see also Swenson, 2002). However, equity has been a focus in EU education policy across several systems despite their differences (Stormquist, 2005) and, rather than examining system characteristics as deterministic, the above case studies show that within very different education systems it is possible to improve education equity. There is a caveat to this. The case studies illustrate how goals of equity and inclusion are part of a wider, macrosocial, policy framework in terms of equality and social cohesion. Each of these studies considers not only issues of equity but problems particularly pertinent to its national context, whether this is intergenerational conflict, concerns about extremism or ethnic integration, or deep historical divides between the vocational and academic. It is also apparent that the VET initiatives described in these case studies have considered the existing policy framework. Taking the Estonia example, such a system of close supervision and regulation for VET students would be unpalatable in a liberal country such as England. Similarly, the particular problems with integration of older workers in Germany in SMEs with CVET is a particular concern for this country where IVET is expected to deliver appropriate, lifelong skills, and it is mainly larger employers that are part of apprenticeship and retraining schemes. Policy borrowing may be difficult if the political will, or political coalitions, that might support equality and macrosocial benefits are not necessarily present. For the diploma in England, for example, the

conclusions are very tentative in terms of the degree to which such an initiative could deliver what previous attempts to resolve the vocational/academic divide have failed to do. As the study shows, this is partly about the capacity to realise these objectives but also due to the ways in which the diploma's initiative is not sufficiently sensitive to the existing (predominantly academic) qualification structure. The case studies also show how different types of equity, not just economic, may be challenged through VET initiatives. Inter-generational equity, due to the ageing population in Europe, is one particular equity issue that can be challenged through CVET initiatives. Issues of dropout and disaffection, as well integration, can also be challenged through IVET initiatives. In macrosocial terms, these social and economic challenges are likely to be best addressed through not only academic, but also vocational initiatives. In particular, as suggested by Wößmann and Schütz (2006), CVET may be limited in challenging persistent economic inequity but be useful in terms of its ability to challenge other types of inequity.

CHAPTER 4.

Conclusion: research findings and policy implications

Two major findings emerge from the research, with implications for policy:

- (a) Research into the human capital implications of increasing the level of VET requires much better data than currently available;
- (b) VET can make a positive contribution to equity, and thereby macrosocial benefits.

4.1. Further research on human capital and increasing VET incidence

The results of the macrosocial quantitative analysis are not unequivocal about the benefits of VET over long periods of time. In most cases in this exploratory analysis our measures of VET have a non-significant impact on the macrosocial benefits involved (Section 2). The effects of VET on the outcomes variables is equal to that of general education and, in some cases, the effect can be negative. However, we must remain cautious when considering the outcomes of the analysis because of the limitations imposed by the small sample size and a non-exhaustive list of controls.

An important advance made by this project was the combination of a range of macro datasets into a single working dataset, with both time series and cross-section elements enabling analysis of VET impact on a range of macrosocial outcomes. Further research might build on this work by exploring whether additional sources of data, for instance non-demographic health outcomes, may be available. Much work would be necessary in locating suitable data and ensuring that it was comparable, both over time and between countries.

Future research is conditional on acquiring more up-to-date and comprehensive data. Micro level sources such as the European social survey could, conceivably, be aggregated to deliver macro variables. Sample size is a key limitation in macrosocial quantitative modelling, so it is desirable to have data for as many countries as possible and over as long a time frame as possible. Some of the educational data upon which we relied was only available for about 20 countries. While these included the main European countries analysis on a

larger dataset would be preferable to generate more precise estimates. Investigating other sources of educational data would expand the sample size on this topic.

4.2. VET importance in societal equity

Our analysis shows that increasing the level of academic qualifications has been negative for equity. The level of IVET is, however, equity neutral in that increasing the incidence of VET at secondary and higher level does not have detrimental effects on equity (Section 3.1) We know that (following Green et al., 2006) educational equality has a significant impact on macrosocial benefits. So, rather than simply increasing the number of individuals with IVET or CVET qualifications we might need to consider how VET might improve equity. Sections 3.1 and 3.2 discuss various institutional arrangements in VET that can influence equity: reducing the academic/vocational divide; reducing tracking (or using IVET to reintegrate onto mainstream tracks); mitigating against gender or ethnic inequality in IVET and CVET; integrating IVET and CVET (to aid transition from IVET to CVET, so that CVET can effectively build on previous IVET, e.g. by developing a national qualification framework that covers both forms of VET); and aiding the transition between VET and labour markets help increasing equity through VET. The case studies in Section 3.3 show the possibilities of changing the institutional arrangements to improve equity across various education systems in the EU. This allows CVET greater impact on social inequity, even though it might not impact as much on economic inequity. As seen in the German and Spanish case studies, inequalities such as those of age or of ethnicity can be challenged by those types of CVET aimed at reintegrating marginalised groups. The forms of IVET/CVET discussed allow reintegration to mainstream VET and employment which (according to Preston and Green, 2008) is conducive to wider forms of equity.

The conclusion that VET is important for equity, and brings macrosocial benefits, has particular relevance at a time when Europe is facing economic crisis. The case studies provide lessons across a range of different countries for how it is possible to use VET to promote wider societal equity. Economic crisis will often widen inequality due to increases in unemployment and a disproportionate effect on the poor. The correct application of VET may mitigate against increases in inequality and, in effect, lead to more cohesive nation states in challenging times.

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Links

Acceder

<http://www.gitanos.org/acceder/resultados.html>

Amuck

Mentoring project in Nørrebro, Copenhagen

http://urbact.eu/fileadmin/subsites/Young_people/doc/Copenhagen_-_Norrebro.doc

BMBF

Federal Ministry of Education and Research – Bundesministerium für Bildung und Forschung. Web pages on lifelong learning:

[http://www.bmbf.de/_search/searchresult.php?URL=http%3A%2F%2Fwww.bmbf.de%2Fen%2F411.php&QUERY=lifelong+and+learning.](http://www.bmbf.de/_search/searchresult.php?URL=http%3A%2F%2Fwww.bmbf.de%2Fen%2F411.php&QUERY=lifelong+and+learning)

Europa

<http://europa.eu/rapid/pressReleasesAction.do?reference=STAT/09/170&format=HTML&aged=0&language=EN&guiLanguage=en>

JobMotion

<http://www.50plus-in-berlin.de>

National database of accredited qualifications

<http://www.accreditedqualifications.org.uk/>

Statistics Estonia

<http://www.stat.ee/>

ANNEX

The combined dataset

The combined dataset was constructed using several sources of data: the *Freedom in the world survey 2008* (Freedom House, 2008); a dataset on education in 21 OECD countries for the period 1960 to 1990 (de la Fuente and Doménech, 2001); Thomas et al. (2003) and Przeworski et al. (2000); and data on secondary vocational education derived ultimately from the Unesco statistical yearbook. These sources contain different numbers of countries. The datasets were merged into one, containing 210 countries in total, although some variables are available for a much smaller sample of approximately 20 countries. The names and labels for the variables are shown in Table A1.

Political rights, civil liberties and freedom status (in our dataset pr, cl and status respectively) for each country was taken from the Freedom in the world survey dataset which consisted of country scores since 1972. This survey quantifies freedom – ‘the opportunity to act spontaneously in a variety of fields outside the control of the government and other centers of potential domination’ (Freedom House, 2008) by incorporating two measures: political rights and civil liberties. The data consists of information on 193 countries and 15 select territories. Each country and territory is allocated a numerical rating whereby political rights and civil liberties are measured on a one-to-seven scale, with one representing the highest degree of freedom and seven the lowest. These ratings are then used to determine whether a country is classified as free, partly free, or not free (status variable). Until 2003, countries whose combined average ratings for political rights and for civil liberties fell between 1.0 and 2.5 were designated ‘free’; between 3.0 and 5.5 ‘partly free’ and between 5.5 and 7.0 ‘not free’. Beginning with the ratings for 2003, countries whose combined average ratings fall between 3.0 and 5.0 are ‘partly free’ and those between 5.5 and 7.0 are ‘not free’. Ratings for territories are not included.

To measure levels of educational attainment (variables l21_lowsec, l2_sec, l31_voc and l32_higher), we used a dataset of 21 OECD countries for the period 1960 to 1990 at five-years intervals described by de la Fuente and Doménech (2001). These variables refer to the proportions holding these qualifications among the population aged 25 and over. As this dataset only included higher-level VET, we also required a measure of VET at secondary level. For this we drew on, and updated, work by Bertocchi and Spagat (2004), who supplied us with their data. This measure is the ratio of enrolments in secondary vocational

education to enrolments in secondary general education for a range of countries⁽²⁴⁾. Bertocchi and Spagat obtained their data from the Unesco statistical yearbook and we used this source to update the variable through to 1995.

For our measures of educational inequality, standard deviation of years of schooling and average years of schooling (Barro-Lee data) we used the dataset developed in 2000 and then updated by Thomas et al. (2003) for the World Bank (variables: *egini15t*, *sds15t*, *aysbl15* and *aysbl15t* respectively). Their dataset consists of 144 countries with data over the period 1960-2000 reported at five-year periods (e.g. 1960, 1965, ..., 2000) and their measure of educational inequality is 'based upon the proportions of the population achieving seven levels of education (partial-primary, complete primary, partial secondary, complete secondary, partial tertiary, complete tertiary)'. The minimum possible level of educational inequality is 0 (perfect educational equality) and the maximum is 1 (perfect educational inequality).

⁽²⁴⁾ Secondary vocational appears to include various forms of education including teacher training. To maintain comparability with the Bertocchi and Spagat series we also included teacher training when updating the data. However, teacher training, while not obviously secondary in nature, was a tiny proportion of the total in all countries and zero in many countries so its inclusion should not influence results.

Table A1. **Variables in the dataset**

Variable name	Variable description
Code	country code
Year	year
country_educat	country educational attainment
Pr	political rights
Cl	civil liberties
Status	freedom status
Secvet/Gen	ratio of vocational to general enrolments at secondary level
l21_lowsec	% with lower secondary schooling
l22_upsec	% with upper secondary schooling
l2_sec	% with total secondary schooling, lower + upper secondary
l31_voc	% with higher education, first cycle or shorter courses which are vocational in nature
l32_higher	% with higher education, second cycle or full-length courses
egini15t	education Gini Index, for age 15 and over, total population
Sds15t	standard deviation of years of schooling, for age 15 and over, total population
Ays15t	average years of schooling, for age 15 and over, total population
aysbl15t	average years of schooling, Barro-Lee data, for age 15 and over, total population
Gini	Gini index of income distribution
Level	real GDP per capita, 1985 prices, chain index
Ineq	ratio of income shares of the top to the bottom quintiles of income recipients
Gdpw	real GDP per worker, 1985 international prices
Riots	number of violent demonstrations or clashes >100 citizens involving physical force
Strikes	number of strikes of 1000+ industrial/service workers
agdemons	peaceful public gathering of 100+ people
Death	crude rate per 1000 people
Elf60	index of ethnolinguistic fractionalisation, 1960
Ethnic	percentage of population of the largest ethnic group
infmort	infant mortality rate per 1000 live births

Finally, we used a dataset created by Przeworski et al. (2000) for the project 'Democracy and development: political institutions and material well-being in the world, 1950-1990' (ACLP). In the dataset, Gini refers to index of income distribution/income inequality; level, to real GDP per capita, 1985 international prices, chain index; ineq, to the ratio of income shares of the top to the bottom quintiles of income recipients; gdpw, to real GDP per worker, 1985 international prices; riots refers to number of violent demonstrations or clashes of more than 100 citizens involving the use of physical force; strikes, to number of strikes of 1000 or more industrial or service workers that involves more than one employer and that is aimed at national government policies or authority; agdemons refers to any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority,

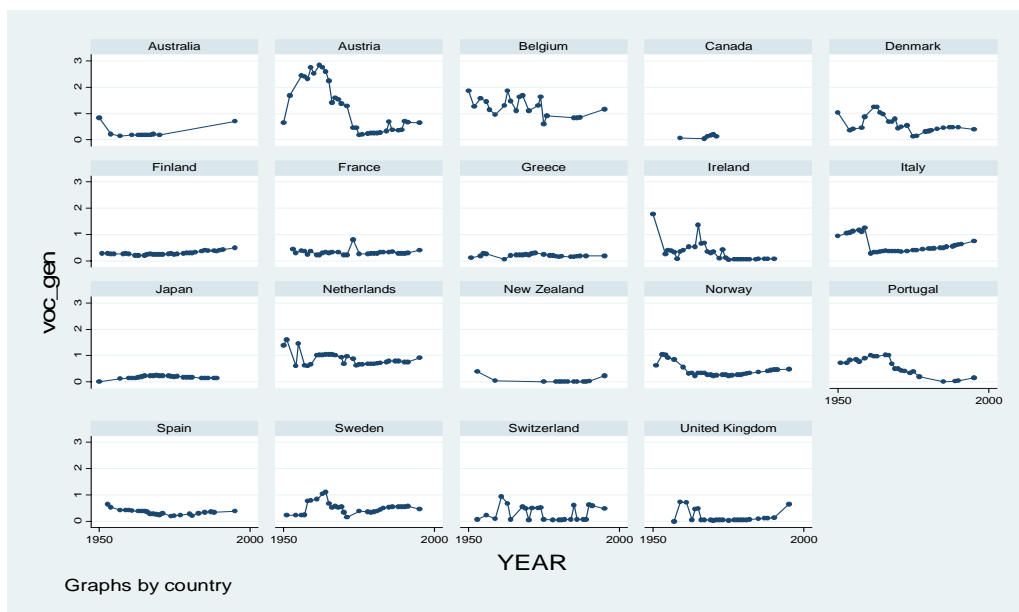
excluding demonstrations of a distinctly anti-foreign nature; death, to crude death rate per 1 000 people; infmort, to infant mortality rate per 1 000 live births.

We have, therefore, constructed a dataset of panel data where there is data on vocational education, controls and macrosocial outcomes for the following OECD countries (EU Member States are marked *): Australia, Austria*, Belgium*, Canada, Denmark*, Finland*, France*, Germany*, West Germany*, Greece*, Ireland*, Italy*, Japan, Netherlands*, New Zealand, Norway*, Portugal*, Spain*, Sweden*, Switzerland, the UK* and the US.

Data description

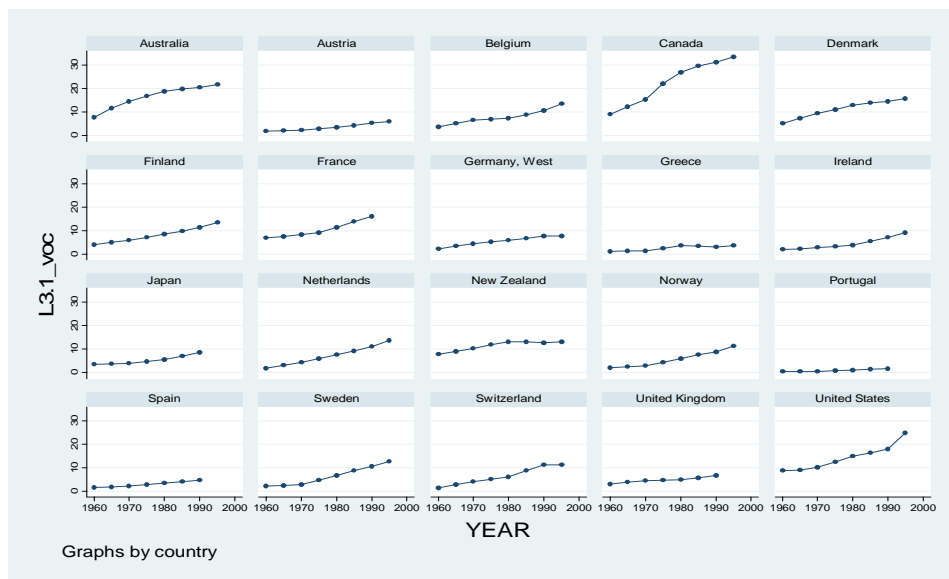
The variables in which we are mainly interested, measures of vocational education and training, are summarised in Figures A1 and A2. Figure A1 shows the ratio of VET to general education at secondary level, while Figure A2 summarises higher-level VET. The higher VET measure (Figure A2) showed a tendency to increase over time in most countries and there was also greater dispersion in later years. Countries with notably large proportions of their populations with higher level vocational qualifications included Canada and the US, while the proportion was very low in Greece, Portugal and Spain, and also low in Austria and the UK.

Figure A1. **Ratio of secondary vocational to secondary general education, by country and year**



The data at secondary level in Figure A1 is a ratio calculated from annual information on enrolments; as enrolments fluctuate considerably from year to year, the series for each country shows much variability. More specifically, it is the ratio of vocational enrolments to general enrolments at secondary level. It is hard to discern general patterns in this data; rather, there are marked differences between the countries. For instance, in Finland, vocational enrolments at secondary level tended to grow more rapidly than enrolments in general secondary education and so the vocational/general ratio showed an increasing trend; in Denmark the opposite pattern applied and there was a reduction in the ratio over time. Other countries show more complex patterns: in Japan the ratio of vocational to general enrolments at secondary level was increasing until about 1970 but fell thereafter, and there was a similar pattern in Portugal but with steeper decline from 1970 onwards. In still other countries, such as France, there was some yearly fluctuation but no clear trend as both vocational and general enrolments at secondary level tended to grow at about the same rate.

Figure A2. **Proportions with higher level vocational qualifications, by country and year**



Figures A3 and A4 show the behaviour over time of two important macrosocial benefit variables: political rights and civil liberties. Since the analysis is carried out on developed countries these variables tend to show very little variation.

Figure A3. Political rights variable by country

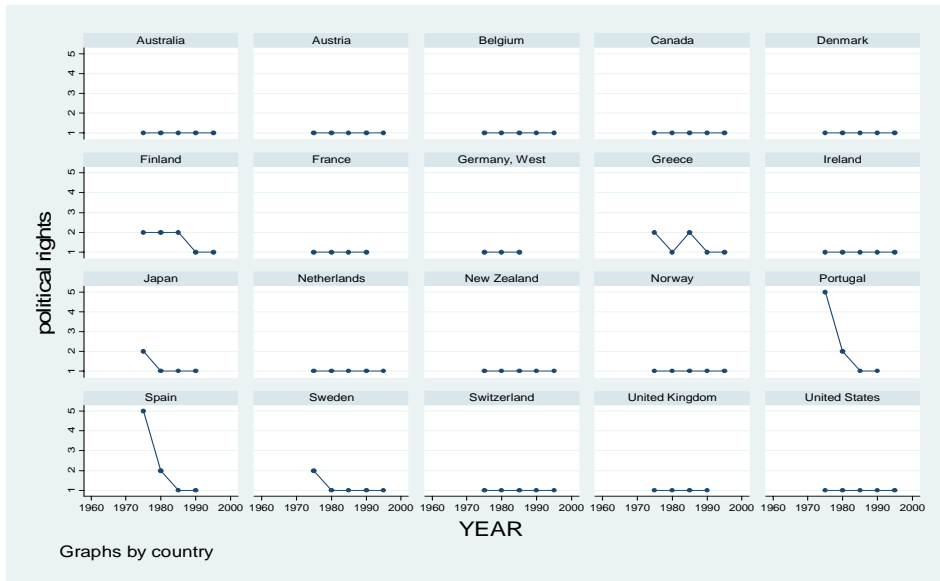
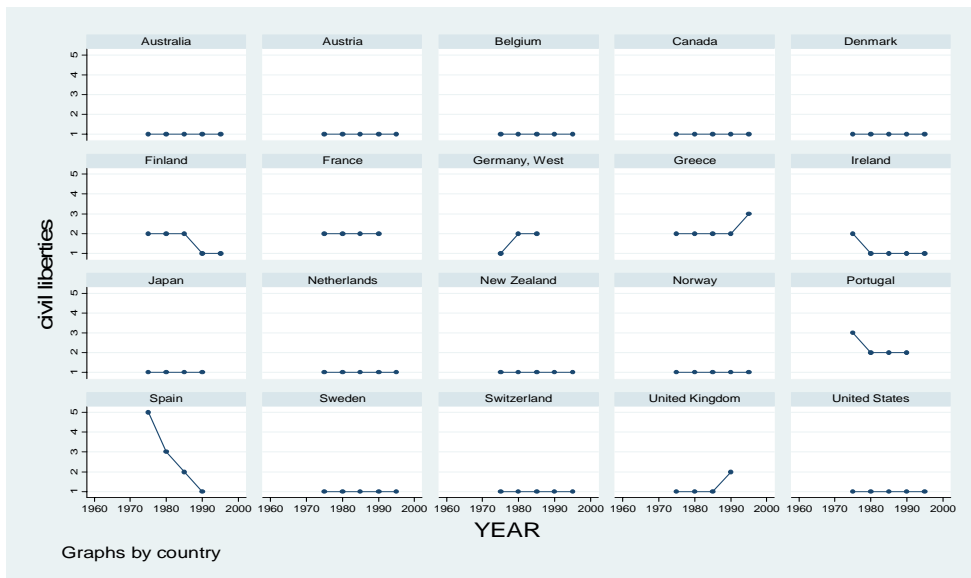


Figure A4. Civil liberties variable by country





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VET for the common good

The macrosocial benefits of VET

VET might be expected to offer macrosocial benefits through two mechanisms: the aggregate human capital stock and education equity.

The VET impact on macrosocial benefits was tested using a new VET dataset (1960-90, at higher and secondary level) for 21 OECD countries, building on Green et al. (2006). Using regression analysis, we explore whether aggregate levels of VET influence a range of macrosocial benefits: health, rights and social order. The analysis is not conclusive but future research directions are highlighted.

Although increasing the share of VET in education does not lead directly to macrosocial benefits, it could still affect them through its impacts on equity. Increasing the level of secondary academic qualifications could be harmful for educational equity, while investing in VET at secondary and higher level is equity neutral.

We investigated, through literature review, ways to change institutional VET arrangements for educational equity. General lessons drawn from five case studies illustrate how policy interventions in VET may benefit educational equity.

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