



Department
for Education

Assessing the Vocational Qualifications Market in England

Research report

July 2017, Frontier Economics



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1. Executive Summary

Objectives of this study

Vocational qualifications provide practical skills that are directly aligned to employment in one or more occupations, and can also prepare learners to re-enter academic education. They play a critical role in building a skilled and productive workforce. They are currently developed and supplied by Awarding Organisations (AOs); AOs must in turn meet the regulatory requirements of the Office of Qualifications and Examinations Regulation (Ofqual). Training providers, such as Further Education (FE) Colleges, Higher Education Institutions (HEIs) and independent training providers, buy the right to deliver vocational qualifications from AOs.

The vocational qualifications market is of central importance to the FE sector and absorbs significant levels of public funding through training provider spending. The government is keen to ensure that the market for publicly funded vocational qualifications operates effectively and efficiently. The outcomes such a market should aim for were articulated in the recent “Report of the Independent Panel on Technical Education” (Sainsbury et al, 2016):

“The main purpose of our technical education qualifications and certification system should be to signal to employers what an individual can do. To be effective, certification must have genuine labour market currency – evidenced by employers choosing to employ someone who has the technical education certificate over someone who has not – in turn leading to individuals and parents understanding the value of technical education. Equally, individuals must be confident the [16-19] certificate they work hard to achieve, and which either they or the public purse pays for, will be recognised wherever they seek work in the future” (Sainsbury et al, 2016).

With these objectives in mind, four key characteristics of qualifications that would demonstrate that the vocational qualifications market is operating effectively are that qualifications are:

- **Recognisable.** A qualification is recognisable if all relevant stakeholders can quickly and easily identify learners’ skill levels;
- **Rigorous.** A qualification is rigorous if all learners holding a particular qualification meet the required standard;
- **Responsive.** A qualification is responsive if its content remains relevant and responds positively to changing employer and learner demands; and
- **Innovative.** A qualification is innovative if AOs are able to find new and better ways of meeting current or anticipated demand.

In the rest of the report, we refer interchangeably to these four characteristics as the RRRI features, characteristics or outcomes.

There have been concerns that the publicly funded vocational qualifications market, or at least some parts of it, is not currently delivering qualifications that demonstrate RRRI characteristics. This report goes on to explore the evidence for this in more detail. However, it should be noted that there are clear tensions between these four characteristics such that it may not be possible to achieve all aims at once¹. Given the potential for trade-offs, we consider which characteristics are important for different parts of the market.

Focusing on publicly funded vocational qualifications in England² for learners aged 16 and older, the objectives of this study were therefore to:

- Define the vocational qualifications market and sub-markets, so that we can understand how various parts of the market differ and then use this as an appropriate basis for focusing our analysis;
- Assess the extent to which the market(s) is currently delivering qualifications that demonstrate RRRI characteristics, and if not, identify the parts of the market in which this is more and less likely to be the case;
- Identify potential weaknesses in the market(s) that could be hindering its ability to deliver qualifications that demonstrate RRRI characteristics; and
- Finally, to assess the benefits and risks associated with potential options for reforming the market to address those weaknesses.

We have carried out both quantitative and qualitative analysis to inform our findings. Our quantitative analysis has drawn on specialised administrative data sets (such as the Individualised Learner Record, ILR) and other secondary data (such as the Employer Perspectives Survey). Alongside this, we have undertaken a programme of qualitative fieldwork involving semi-structured interviews with around 35 stakeholders across the market including Awarding Organisations (AOs); training providers, employers and regulators.

¹ For example, for qualifications to be recognisable, it may be desirable for qualifications to be stable and unchanging. However, this could in some circumstances directly contradict the ability of qualifications to be responsive, particularly if employer and learner needs evolve over time. Similarly, fixed assessment methods may ensure a consistent standard and therefore promote rigour, but could potentially inhibit innovation in response to new technologies and demands.

² Whilst HNCs and HNDs are within scope of this definition, for reasons of data availability, the analysis within this report has not been able to examine them in any detail.

Defining the market

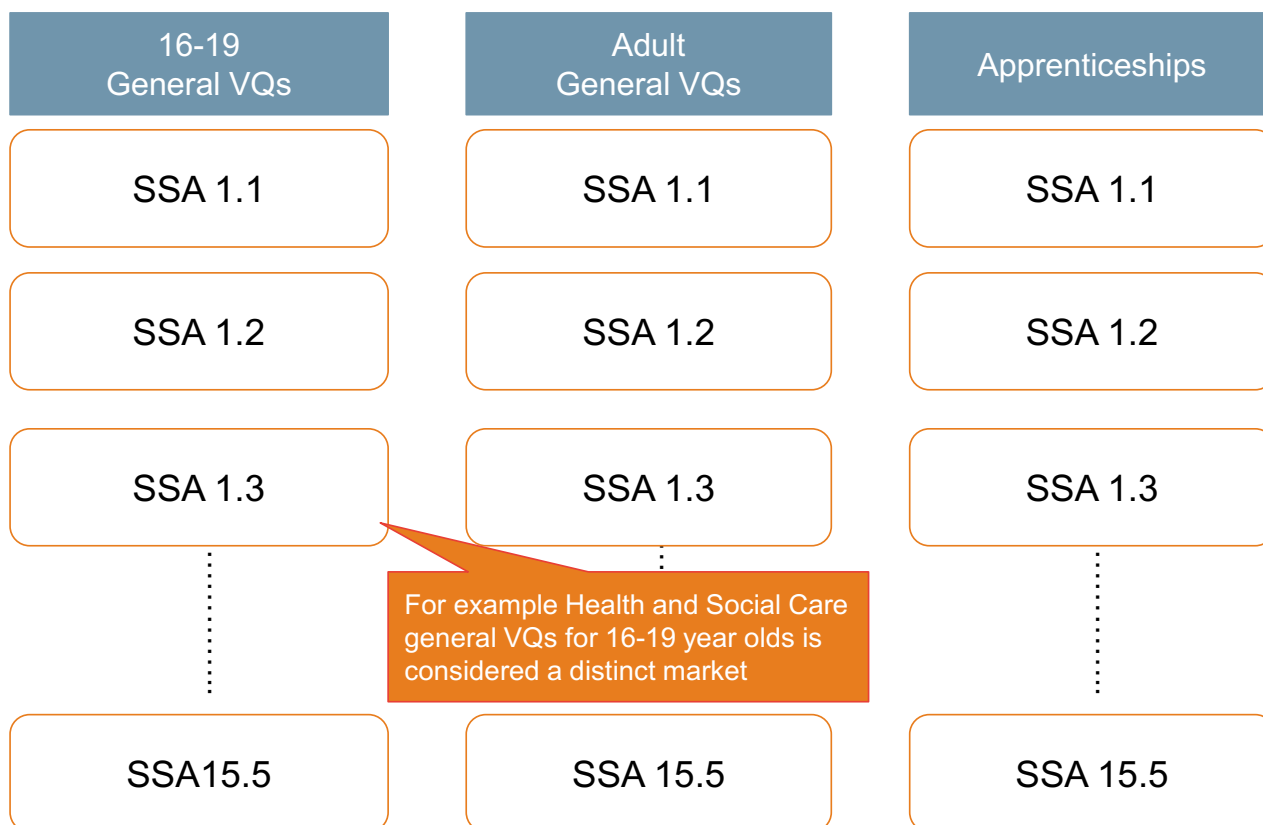
Market definition was an important first stage of our assessment. The purpose of the market definition exercise was to identify the scope of actual and potential competition across the publicly funded vocational qualifications market so that we could analyse if competition is working well or not. The process of market definition allowed us to narrow the focus of later competition analysis to the relevant products (e.g. vocational qualifications in a given sector subject area) and geographies (e.g. regions in England) by identifying the main competitive constraints that operate within the sub-markets of interest.

We reviewed a range of evidence to reach a view about the different markets that form part of the vocational qualifications space. We were guided by the standard Competition and Markets Authority framework, but took a pragmatic rather than exhaustive approach to definition, in keeping with the policy driven objectives of this study.

Our analysis suggests that the vocational qualifications market is appropriately delineated and analysed according to Sector Subject Areas (SSA), method of learning (classroom-based vocational qualifications³ or workplace-based apprenticeships) and by age group of learners, as shown below.

³ We refer throughout the report to these as “general VQs” to distinguish them from apprenticeship provision.

Figure 1 Defined sub-markets in the vocational qualifications sector



Our analysis has examined how each of these separate sub-markets is demonstrating RRRi features as well as drawing together findings across the vocational qualifications market as a whole.

Assessing the extent to which vocational qualifications demonstrate RRRi characteristics

Using the market definition above, the next stage of our analysis assessed the extent to which each of the different vocational qualifications markets could be seen to be delivering vocational qualifications with RRRi characteristics.

This part of our analysis was designed to assess the relative performance of different parts of the vocational qualifications market, rather than provide an assessment of their absolute performance⁴. This indicative analysis underpins our assessment of the weaknesses in the market that hinder RRRi characteristics being observed, described later.

⁴ A quantitative assessment of the absolute performance of the market was not considered to be sufficiently robust.

Our assessment of the extent to which different parts of the market were delivering vocational qualifications with RRRI characteristics drew upon both quantitative and qualitative evidence. Our quantitative assessment relied on a suite of indicators, developed using the range of available data (such as from the Individualised Learner Record (ILR), the Employer Perspectives Survey (EPS) and the Employer Skills Survey (ESS)). As an illustration, the table below provides an overview of the indicators used to capture the extent to which vocational qualifications in a market could be considered to be rigorous (and to some extent recognisable⁵).

Table 1 Indicators

RRRI feature	Aggregate indicator	Sub Indicator	Measure of poor performance
Rigorous	Performance improvement	Business performance	High % employers disagree with statement that VQs improve business performance
		Ability to do jobs	High % employers disagree with statement that VQs improve staff's ability to do jobs
		Productivity	High % employers disagree with statement that VQs improve productivity
		Preparation for work	High % employers think college leavers are poorly or very poorly prepared for work
		Improve skills	High % employers think staff had skills gaps because training did not improve their skills
		Perceived rigour	High % employers think VQs are not as rigorous as other qualifications
	Changes over time	Course duration	Large % drop in average planned course duration 2010/11-2014/15
		Success rates	Large % rise success rates 2010/11-2014/15
Rigorous/ recognisable	Destinations	Sustained employment	Low % of learners in sustained employment 1 year after completing course
		Sustained learning or employment	Low % learners in sustained learning or employment 1 year after completing course
		Increased pay	High % employers think VQs rarely or never lead to increased pay

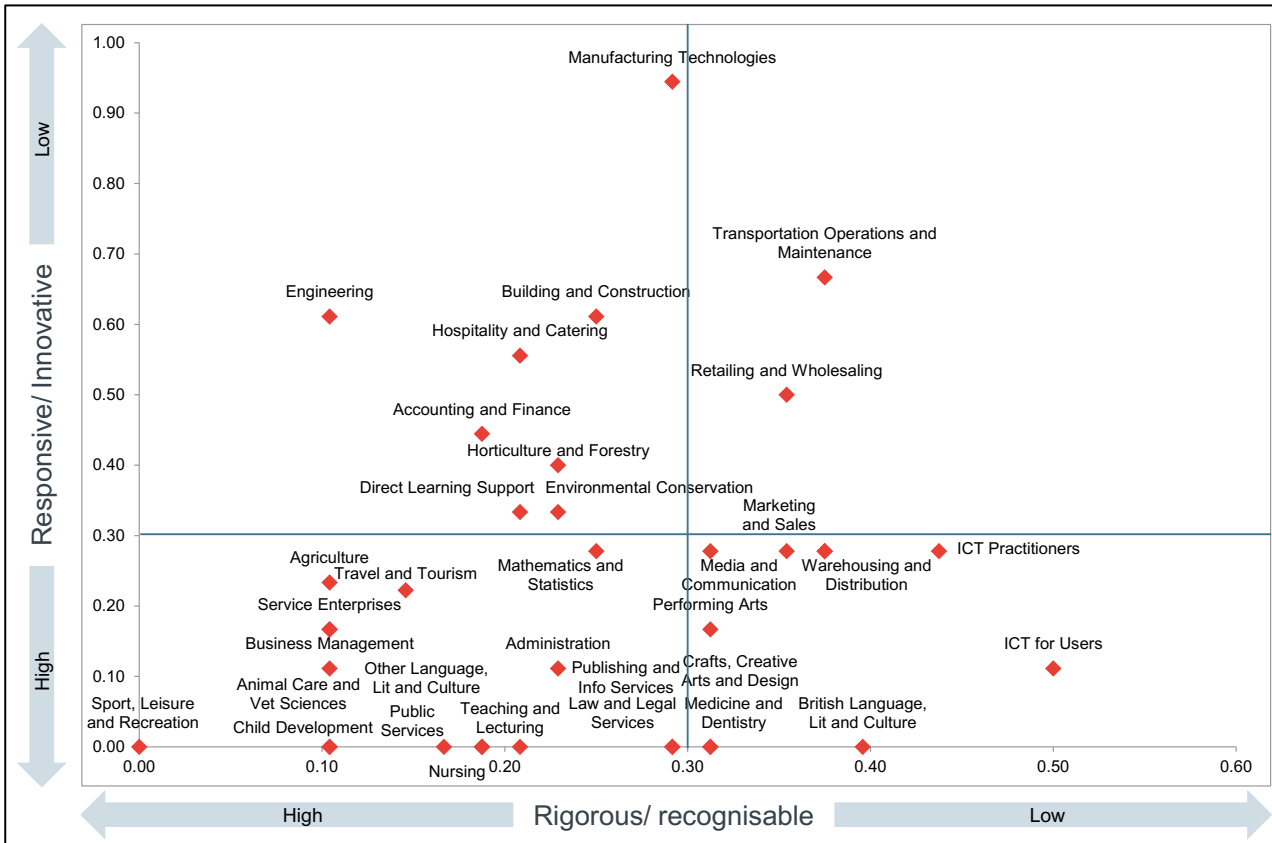
⁵ Although we used the best available data, in some cases it was not straightforward to disentangle one measure from another. For practical reasons, we therefore assessed market performance along two RRRI dimensions (i) recognisability and rigour, and (ii) responsiveness and innovation.

		Promotion or increased job status	High % employers think VQs rarely or never lead to promotion or improved job status
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Source: Frontier Economics

Our quantitative assessment of relative performance across the adult general vocational qualifications (VQ) market⁶ is illustrated in the figure below.

Figure 2: Relative performance for adult general VQs – relative performance quadrants at SSA Tier⁷ 2 level



Source: Frontier analysis using data from the ILR, ESS, EPS

The findings of the quantitative analysis were tested and explored during our stakeholder interviews. Overall, our work indicated a substantial variation in performance across the market with some subject areas delivering a weak performance (relative to other subjects) against the RRRI characteristics.

⁶ Separate analysis was undertaken for the 16-19 year old general vocational qualification market and apprenticeships.

⁷ Note that the horizontal axis spans 0-0.6, whilst the vertical axis spans 0-1.

Assessing market weaknesses

Further analysis was then undertaken to determine what might be driving this differential performance and the extent to which this indicated weaknesses in individual markets or across the vocational qualifications market as a whole.

We identified evidence of the following market weaknesses:

- **Misaligned incentives, potentially leading to a ‘race to the bottom’ in terms of rigour** – The importance of success rates as part of Ofsted ratings may provide an incentive for training providers to choose AOs and qualifications that are ‘easier to pass’. These incentives are particularly linked with the AO’s role in content development and assessment methods. With the exception of the apprenticeships market, we observe a rise in success rates and a fall in course duration over time. We also find that AOs that have higher success rates (than their competitors) in one year attract higher numbers of learners the following year. These findings are consistent with a race to the bottom in terms of rigour, though we note other factors also drive training providers’ decisions and thus we cannot definitively prove the link.
- **Insufficient content regulation, potentially leading to lower rigour** – The regulation of general vocational qualifications, which does not include regulation of curriculum content and assessment strategies, appears insufficient to prevent a race to the bottom in terms of rigour. In contrast, in the apprenticeships market we do not observe a race to the bottom in terms of higher success rates and reductions in course durations. Content in this part of the market is directly regulated through apprenticeship frameworks, potentially mitigating this risk.
- **High barriers to training providers switching between AOs in other parts of the market, potentially leading to lower rigour, responsiveness and innovation from AOs** – Our stakeholder interviews suggested that high barriers to switching restrict effective choice by training providers between AOs even in sub-markets where multiple AOs exist. This analysis suggests there are multiple parts of the vocational qualification market where AOs operate in a way that is neither constrained by competitors nor by a regulatory framework mimicking competitive pressure. Our quantitative analysis, we found that a low rate of switching between AOs was correlated with lower levels of rigour, responsiveness and innovation.
- **Smaller training providers lacking the tools and capacity to navigate the system is potentially leading to lower rigour, recognisability, responsiveness and innovation from AOs** – Some stakeholders expressed a concern that smaller training providers, in particular private training providers, do not have the capacity or access to the appropriate tools to select qualifications that

best meet their employers' and learners' needs. This is in contrast to FE colleges, who often have dedicated market research teams to monitor the AO market. In our quantitative analysis, we find that the share of private training providers in a sub-market is negatively correlated with RRRRI outcomes i.e. the greater the proportion of smaller training providers in a sub-market, the poorer the overall performance of that market.

- **Smaller employers are less likely to be represented in the development of vocational qualifications and this is potentially leading to lower responsiveness from AOs** – Both our quantitative and qualitative findings indicate that smaller employers are less likely to be involved in designing qualifications than larger employers. This means that the qualifications provided may be less suited to their skills needs, where these are systematically different from the needs of larger employers.
- **Insufficient head-to-head competition on qualifications between AOs is potentially leading to lower responsiveness and innovation from AOs** – Despite the proliferation of AOs in most segments of the market, competition between AOs at the level of individual qualifications is often limited. Where this is the case, AOs may face limited incentives to provide high quality customer service and innovate in terms of technology and support. We find that head-to-head competition is correlated with higher responsiveness and innovation. Training providers we interviewed gave examples of AOs in sub-markets with no alternative options that fail to innovate or respond to changing technologies.

As a wider issue relevant for government policy (not directly linked to the RRRRI features), our analysis also revealed that particularly at lower levels of FE, a high proportion of learners take multiple qualifications at the same level. This suggests that learners may not face clear routes to progression and/ or sufficient incentives to progress onto higher levels of learning.

It is worth noting that these weaknesses were identified and assessed in the context of an overarching assessment of the vocational qualifications market. However, as we have already noted, the sector is very diverse with different segments of the market facing different priorities and demonstrating the desired RRRRI features to different extents. As such, not all of the weaknesses identified will be relevant in all segments of the vocational qualifications market. Therefore, this suggests policy action to address market weaknesses may need to differ across the segments of the market as a policy change in one part of the market may not be appropriate in another.

Assessing options for reforming the market

Previous studies have found structural issues in the vocational qualifications market and questioned whether the competitive model currently in operation is delivering the best

possible outcomes for all market participants. The Wolf Review⁸, for example, found that incentives in the system (e.g. what was included in performance tables) were misaligned such that training providers were rewarded for offering qualifications with little currency in the labour market which led to large numbers of young people enrolling on courses, which did not help them succeed in the world of work.

Although the Wolf report was successful in identifying the need for reform and there has been a large reduction in the range of qualifications which can be included in performance tables since its publication, recent evidence suggests that structural weaknesses in this market persist. The Independent Panel on Technical Education chaired by Lord Sainsbury (The Sainsbury Panel), which reported to government in the Summer of 2016, found that there is little incentive for AOs to design demanding qualifications which meet the requirements of industry because employers find it difficult to navigate the system and to remain up to date on the value of competing qualifications. This, coupled with the lack of accountability to ensure qualifications meet employers' needs can lead to competition enabling a race to the bottom rather than improving outcomes.

Given our findings about potential weaknesses in the market and the direction of travel identified by The Sainsbury Panel, our potential reform options have focused on structural reform. That is, we have explored a number of options that change the nature of competition in the market, whether that is to introduce competition *for* the market (via some form of tendering), or to change the nature of competition *in* the market or a combination of both.

For the purposes of exploring structural reform, we identified five key dimensions that government will need to take into account in enacting such reform, as described below. Importantly, other points of detail will also need to be considered by government in any practical implementation of reforms (such as how to provide for contract flexibility or intellectual property issues), but these are not discussed here. The dimensions we explore are:

- **Market specification.** This dimension has some similarities with activity to define the market. It consists of specifying the scope of the market considered for reform (e.g. 16-19 year olds, adult learners, apprenticeships) and deciding how this market should be delineated into sub-markets in which AOs can deliver services (e.g. by subject area, or by individual qualification). For example, decisions will need to be made around whether reforms cover just the 16-19 vocational

⁸ Wolf, A. (2011), Review of Vocational Education – The Wolf Report (available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf)

qualifications market or adults too; and whether vocational qualifications in those sub-markets should be separated into occupational clusters (e.g. retail and commercial, health care), and if so, the number of routes. A further decision might also be needed around whether these routes should be separated further into sub-routes (either according to parts of the pathway or specific occupational groups) or even individual qualifications which AOs would be licenced to provide. This aspect can be considered the 'contract breadth'.

- **Product chain.** This dimension specifies the elements of the product chain which organisations will be licenced to deliver. The key elements are the development of the content of the qualifications, the provision of delivery support to training providers; and assessment of learners' competence. A decision needs to be made about whether AOs would be licenced to deliver all of the elements, or only some of them. If contracts are awarded, a decision also needs to be made on how elements of the product chain are packaged into contracts. This can be considered the 'contract depth'.
- **Exclusivity of market access.** This dimension specifies the extent to which organisations will face competition both to access the market and once in the market. For example, where a vocational qualifications route is licenced, this would relate to how many AOs are awarded a licence to operate in that space (they could be a monopolist or face competition from other licenced AOs).
- **Length of contract.** This dimension specifies the length of the period for which access to the market is granted, for example three or five years.
- **Wider regulatory and policy environment.** This dimension concerns decisions around the nature of policy and regulatory frameworks to facilitate the desired market outcomes.

Decisions also need to be made on other cross-cutting issues around the following two dimensions:

- **Licence evaluation criteria.** If the market moves towards tendering contracts, the criteria for assessing tenders need to be specified. In particular, decisions need to be made about the weight placed on price and quality, as well as how quality is defined for the different elements of the product chain. Another aspect to consider is how to handle a situation in which, under exclusive licences per route or sub-route, a single AO wins all or most of the contracts.
- **Eligibility to bid.** A decision is needed about who is eligible to bid. The key considerations here may be around whether an AO would need to be Ofqual-regulated or not as well as whether they have sufficient operational capacity. Depending on how the markets are defined and how many contracts per sub-route are awarded, the scale of the contracts might be very substantial. Qualitative

evidence suggests that scaling up operations significantly for small AOs is not straightforward, and at times might be impossible within a fixed period of time. Therefore it needs to be decided if minimum operational capacity requirements are to be imposed on the bidders, the extent to which consortia would be supported, considered and assessed.

It was not feasible for us to cover the full breadth of possible reform options in our analysis so in order to illustrate the risks and benefits associated with different reform options, we carried out an assessment of six policy scenarios designed to reflect the broad range of possible reforms that government may wish to consider going forward.

The scenarios we have examined are broadly reflective of the reforms proposed in the Sainsbury Panel in that they assume the establishment of technical routes and then consider different options for changing the way in which competition operates within the market, moving from free competition between AOs to a more managed system of licences. For the purposes of our analysis we assume that licences are awarded on the basis of a tendering exercise.

The policy scenarios we have analysed are summarised below.

Figure 3: Policy scenarios considered

	Decision 1: which markets to tender	Decision 2: what product is tendered	Decision 3: exclusivity of market access	Decision 4: duration of contract
Scenario 1	16-19 market all routes together, adult market as now	Delivery, assessment [content designed centrally]	Single exclusive license	5 years
Scenario 2	16-19 15 routes (and 4 or 5 sub routes within each route) tendered separately, adult market as now	Delivery, assessment [content designed centrally]	Single exclusive license	3 years
Scenario 3	16-19 15 routes (and 4 or 5 sub routes within each route) tendered separately, adult market as now	Delivery, assessment [content designed centrally]	Multiple licenses	5 years
Scenario 4	Adult 15 routes (and 4 or 5 sub routes within each route) tendered separately, market for 16 - 19 as in Scenario 2 or 3	Delivery, assessment [content designed centrally]	Multiple licenses	5 years
Scenario 5	Adult 15 routes (and multiple, e.g. 20, sub routes within each route) tendered separately, market for 16 - 19 as in Scenario 2 or 3	Delivery, assessment [content designed centrally]	Single exclusive license	3 years
Scenario 6	Adult 15 routes (and multiple, e.g. 20, sub routes within each route) tendered separately, market for 16 - 19 as in Scenario 2 or 3	Content, delivery, assessment [content designed by AOs]	Single exclusive license	3 years

Source: Frontier analysis

In the first three scenarios we examine the effects of possible reforms to the 16-19 market, assuming no changes to the current adult market. The differences between the first three scenarios are around:

- the size of the market segment that a licence is awarded to supply - ranging from the whole of the 16-19 market in scenario 1 to a single sub-route (or tech level) in scenarios 2 and 3;
- whether a single supplier is licenced to offer services in the relevant market segment (as in scenarios 1 and 2) or multiple licences are awarded within each market segment as in scenario 3;
- whether the duration of licences is 5 years (as in scenarios 1 and 3) or 3 years as in scenario 2;

Scenarios 4, 5 and 6 relate to reforms of the adult vocational qualifications market, assuming the 16-19 market undergoes reforms. The differences between the second three scenarios are around:

- the size of the adult market segment that a licence is awarded to supply.
- the aspects of the product chain in which AOs are licenced to offer services ranging from the full product chain (as in the current system) in scenario 6 to customer support and assessment in scenarios 4 and 5.
- whether a single supplier is licenced to offer services in the relevant market segment (as in scenarios 5 and 6) or multiple licences are awarded within each market segment as in scenario 4; and
- whether the duration of licences is 5 years (as in scenario 4) or 3 years as in scenarios 5 and 6.

In the main body of the report we examine in detail the benefits and risks associated with each of these scenarios, which we do not reproduce here. However, our assessment led to a number of cross-cutting findings as described below.

Moving to a more centralised system has the potential to bring significant benefits to the market. For example, centralising content and assessment can improve recognition and rigour and remove the incentives for a race to the bottom style of competition. We found in our analysis that for technical subjects, like manufacturing technologies, engineering and accounting and finance, employers place a high value on recognisable and rigorous content, with perhaps less weight placed on the ability of these vocational qualifications to be innovative in how they are assessed. A small number of clearly defined routes and a single AO delivering all of those routes could aid recognition among learners and employers. What is more, setting content for a period of time provides stability in the market. The improved rigour and recognition should ultimately translate into improved labour market outcomes for learners undertaking vocational qualifications.

However, a centralised system could also present risks. Our work has found that competition can be an effective tool in driving improvements in customer support (our stakeholders reported that this is a service that is high value for them, and that this is a

key way in which AOs compete) so a reduction in competition in that part of the product chain could potentially have negative effects on customer service. Reforms introducing competition *for* the market hence need to be mindful of this dynamic and consider how to mimic competitive incentives for maintaining customer service in a market.

There is also a risk of system failure associated with limiting access to the market to a single AO (or consortia). If the AO (or AO consortium) fails there may be no alternative AO to step in (although this risk could be mitigated against if for example there are contingencies in place for other AOs or indeed government to act as the “provider of last resort”). In the long term, limiting access to the market to a single AO (or consortia) could reduce the competition for that route.

The risks are greater when tendering very broad contracts that award a single monopoly AO (or consortium) a licence to deliver large proportions of the qualifications (i.e. relying only on competition for the market), than if contracts are tendered to allow multiple AOs to operate in the market to deliver particular qualifications (i.e. allowing for some competition in the market). There are also risks associated with constraining contract depth (i.e. licensing only assessment, while designing vocational qualifications’ content centrally). These include challenges to the practical delivery of such content by AOs and a risk to responsiveness if that content is not updated at appropriate intervals in line with employer needs.

Ultimately, designing structural reforms in the market requires a number of decisions to be taken, and each of these involves trade-offs between benefits and risks. The government will have to reach a judgement as to which risks are acceptable and whether or not any mitigating actions can be taken. Mitigation actions to manage these risks must be considered alongside exploring potential reforms. Many of the above risks can be mitigated through appropriate mechanisms, and it is essential to think through these possible mitigating solutions carefully when any reform choices will be made. For example:

- To avoid system failure, there could be a requirement that AOs operating in routes for which they have not tendered have capacity to be called upon to step in to deliver assessment services should an AO fail in another route.
- To avoid ‘shorting’ the market such that upon re-tendering, there remain no alternative AOs who could credibly bid, multiple routes could be tendered such that a number of AOs are able to operate within the market.
- To learn more about the most appropriate means through which to overcome the challenges associated with specifying contracts for such complex deliverables, it may be desirable to phase the introduction of tendering such that some parts of the market can be used as ‘trials’ to help learn what works and the potential behaviours of market participants.

Importantly, given we have identified that there are differences across the market in terms of the extent to which vocational qualifications demonstrate RRRRI characteristics, and the weaknesses in the market that lead to particular outcomes observed, policy makers must ensure policy changes are tailored to the market conditions. That is, there may be justification for implementing a policy change in one part of the market, and a different policy change in others (subject to interdependencies or interactions across those markets). However, risks associated with reforms in one part of the market (e.g. adult vocational qualifications) are likely to be significantly dependent on decisions made about reforms in other parts of the market (e.g. young persons' vocational qualifications). These interdependencies need to be carefully considered when reform options are identified to avoid unintended side-effects in linked markets.

2. Introduction

Context and objectives

Vocational qualifications provide practical skills that are directly aligned to employment in one or more occupations, and can also prepare learners to re-enter academic education. They therefore play a critical role in building a skilled and productive workforce. They are currently developed and supplied by Awarding Organisations (AOs); publicly funded qualifications are regulated by the Office of Qualifications and Examinations Regulation (Ofqual). Trainings, such as Further Education (FE) Colleges and independent providers, buy the right to deliver vocational qualifications from AOs.

The qualifications market is of central importance to the FE sector and absorbs significant levels of public funding through training provider spending. Evidence⁹ from the Association of Colleges (AoC) suggests that FE Colleges spend on average around 3% of their income on examinations which equates to around £215 million annually for those training providers alone.

The government is keen to ensure that the market for vocational qualifications operates effectively and efficiently. The outcomes such a market should aim for were articulated in the recent “Report of the Independent Panel on Technical Education” (Sainsbury et al, 2016):

“The main purpose of our technical education qualifications and certification system should be to signal to employers what an individual can do. To be effective, certification must have genuine labour market currency – evidenced by employers choosing to employ someone who has the technical education certificate over someone who has not – in turn leading to individuals and parents understanding the value of technical education. Equally, individuals must be confident the [16-19] certificate they work hard to achieve, and which either they or the public purse pays for, will be recognised wherever they seek work in the future” (Sainsbury et al, 2016).

With these outcomes in mind, four particular characteristics of vocational qualifications that one would expect to observe if the market were operating effectively are that the qualifications are:

- **Recognisable.** A qualification is recognisable if all relevant stakeholders can quickly and easily identify learners’ skill levels;

⁹ HMT/BIS/DfE Joint Review of Further Education Costs available here: <https://www.aoc.co.uk/sites/default/files/Joint%20review%20of%20Further%20Education%20costs%20-%20BIS,%20DfE,%20HMT.pdf>

- **Rigorous.** A qualification is rigorous if all learners holding a particular qualification meet the required standard;
- **Responsive.** A qualification is responsive if its content remains relevant and responds positively to changing employer and learner demands; and
- **Innovative.** A qualification is innovative if AOs are able to find new and better ways of meeting current or anticipated demand.

These characteristics (recognisable, rigorous, responsive and innovative, referred to as RRRI in this report) are important measures against which we can therefore assess the performance of the market, as described in chapter 6. It is important to note that the extent to which these characteristics is desirable is likely to vary across vocational qualifications.

Over the years, there have been concerns that the market is not performing well in terms of RRRI. This is for a number of reasons.

Firstly, the system is regularly said to be too complex. For example, the Wolf Review¹⁰ suggested that the FE sector is “extraordinarily complex and opaque by international standards”. The system in England is unlike systems in most other countries as it is qualification-led while in most other countries, qualifications tend to be process-based and institutional (i.e. assessment focuses on participation in a programme of study) where final certificates and diplomas are issued by the State and/or regional/local bodies¹¹. In England, qualifications are supplied by Awarding Organisations (AOs) and Ofqual data¹² shows that there are currently 163 AOs in England, Wales and Northern Ireland offering almost 25,000 qualifications in total (though not all are awarded each year). Such complexity in the market could have potential implications for the recognisability of vocational qualifications in the market; and also implies the market is not transparent.

Secondly, there are concerns that the system lacks clear routes for progression to higher level skills or a sustainable career with too many young people¹³ obtaining qualifications which are of little or no labour market value. It is argued that the incentives created by the funding regime (which essentially remunerates on a per qualification basis) may have contributed to a significant growth in the number of qualifications (the number of AOs has increased by nearly 50% over the last 10 years and the number of regulated

¹⁰ Review of Vocational Education – The Wolf Report (2011), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf

¹¹ Young, M. (2002) Contrasting approaches to the role of qualifications in the promotion of lifelong learning. In Evans, K., Hodkinson, P. and Unwin, L. (eds) *Working to Learn*, London: Kogan Page

¹² Ofqual Annual Qualifications Market Report England, Wales and Northern Ireland 2013/14 Academic Year available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544429/Annual-qualifications-market-report-england-wales-and-northern-ireland-2014-15.pdf

¹³ It has been estimated that 350,000 young people 16-19 are relevant here, though more recent work funded by BIS (Urwin et al) is challenging this picture.

qualifications in the sector has increased by 66% in the last 5 years¹⁴). AELP and Pearson analysis published in April 2016 identifies a lack of awareness about vocational learning routes into work, which may be holding back many young people from finding sustainable employment¹⁵. Such proliferation of vocational qualifications again suggests a risk to their recognisability.

Thirdly, many employers report hard to fill vacancies due to a lack of skills¹⁶ - this suggests that vocational qualifications may not always be responsive and meet the needs of employers. However, there are, of course, a number of other reasons why some vacancies may be hard to fill, including the wage offered and wider labour market conditions.

Fourthly, there have been concerns that competition between AOs may have detrimental effects on the rigour of vocational qualifications leading to a potential 'race to the bottom'¹⁷.

To explore these issues in more depth and assess the performance of the publicly funded vocational qualifications market in England, Frontier Economics were commissioned to carry out a robust study.

Objectives of this study

In view of the context described above, this study focuses on publicly funded vocational qualifications in England (regulated by Ofqual and excluding GCSEs and A-Levels) for learners aged 16 and older, and has the following objectives.

- Firstly, to define the vocational qualification market and sub-markets. This provides a framework for us to examine the nature and performance of the market, and importantly, to help us understand how these aspects differ across the various sub-markets;
- Secondly, to carry out an assessment of the extent to which the market is delivering vocational qualifications that have RRRI characteristics, and to identify the parts of the market in which this is more, or less, likely to be the case;

¹⁴ Source: Ofqual statistical release https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544429/Annual-qualifications-market-report-england-wales-and-northern-ireland-2014-15.pdf

¹⁵ <http://www.aelp.org.uk/news/general/details/aelp-pearson-report-routes-into-work-it-s-alrig/>

¹⁶ See UK Employer Skills Survey 2015 available at: <https://www.gov.uk/government/publications/ukces-employer-skills-survey-2015-uk-report>

¹⁷ See for example the Report of the Independent Panel on Technical Education available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536046/Report_of_the_Independent_Panel_on_Technical_Education.pdf; OECD (2014) *Skills Beyond School*; and Review of Vocational Education – The Wolf Report (2011), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf

- Thirdly, to identify any weaknesses in the market that could be hindering the market's ability to deliver vocational qualifications that have RRRRI characteristics; and
- Finally, to explore potential reforms to the market that address those weaknesses, and the associated benefits and risks, along with how those risks could be mitigated.

Approach

We have brought together a wide range of quantitative and qualitative evidence to inform this study including:

- **Quantitative analysis.** We carried out detailed analysis of the most recent and comprehensive data sets available to understand how the vocational qualifications market currently operates as well as any variation in performance across sub-markets. The data sets we have studied include the Individualised Learner Record (ILR) for the most recent 5-year period available (2010/11 to 2014/15), the Work and Pensions Longitudinal Study matched to the ILR (2014/15), the Employer Perspectives Survey (EPS), the Employer Satisfaction Survey (ESS), as well as a number of other publicly available data sets, such as the Ofqual register of qualifications.
- **Qualitative analysis.** We carried out a programme of engagement with stakeholders across the sector to ensure that we have been able to develop a deep understanding of the functioning of the vocational qualifications market from those that operate within it and those that use it. We conducted 35 semi-structured interviews with key stakeholders including learner representatives, private training providers, Further Education Colleges, Awarding Organisations, policy makers and regulators. We wish to thank all the stakeholders for their time and very valuable input to this study.
- **Evidence review.** We have reviewed relevant published literature to understand how the vocational qualifications market in England compares with international comparators. We also reviewed other publications (by Ofqual, the previous Office for Fair Trading and others) which examined the state of the vocational qualifications market. In addition, we have reviewed the websites of funding agencies, Awarding Organisations and others to understand in more detail how different parts of the market work.
- **Workshops and expert challenge.** At key points in the project, we held four workshops with policy leads from the Department for Education (DfE) and the Competition and Markets Authority (CMA) to discuss emerging findings and receive feedback on our work. We also received feedback from DfE's academic

panel, composed of leading academics working in the vocational education field. The work has further benefited from critical challenge from our sector experts Professor Lorna Unwin and Mick Fletcher who have deep knowledge of the FE sector and have published extensively in the area.

Our work was organised into 5 steps (described in Figure 1).

Figure 4: Methodology

Work stage	Output	Method
Market mapping	<ul style="list-style-type: none"> Description of the market for vocational qualifications, key players and the wider system. 	<ul style="list-style-type: none"> Quantitative analysis of ILR data Website review Qualitative work
Outcomes of an effective qualifications market	<ul style="list-style-type: none"> Articulation of the RRRI outcomes Define quantitative indicators of these outcomes. 	<ul style="list-style-type: none"> Workshop Analysis of ILR, EPS and ESS data
Market definition	<ul style="list-style-type: none"> Define the market and sub-markets in line with Competition and Markets Authority framework 	<ul style="list-style-type: none"> Workshop Quantitative analysis of ILR data Qualitative work
Market assessment	<ul style="list-style-type: none"> Assess the performance of the market against RRRI outcomes Identify market weaknesses 	<ul style="list-style-type: none"> Workshop Analysis of ILR, EPS and ESS data Qualitative work
Options for reform	<ul style="list-style-type: none"> Exploration of potential options for reform to address market weaknesses Assess benefits and risks 	<ul style="list-style-type: none"> Rapid evidence review of international and UK sources Workshop

Source: Frontier Economics

- **Step 1 (Chapter 3) - Market mapping of the landscape of vocational qualifications:** this involved describing the breadth and coverage of the publicly funded vocational qualifications market in England and the activities of key parties that engage with it. This includes information on Awarding Organisations, learners, employers, training providers, regulation and funding.
- **Step 2 (Chapter 4) - Outcomes of an effective vocational qualifications market:** we articulated the outcomes likely to be associated with an effective vocational qualifications market. We then identified a range of quantitative indicators which could be used to assess whether the market is delivering those outcomes.

- **Step 3 (Chapter 5) - Market definition:** we carried out a market definition exercise, in line with established Competition and Markets Authority (CMA) methods, to identify distinct areas of provision within this diverse sector. This provided a framework with which we could assess the performance of the market and how this varies across the sub-markets.
- **Step 4 (Chapters 6 and 7) - Market assessment:** we drew on a range of data sets to construct indicators which could allow us to assess how well different sub-markets perform. Chapter 6 illustrates the diversity within the vocational qualifications market and provides a relative assessment of performance across sub-markets. Chapter 7 builds on chapter 6 to formulate hypotheses about the drivers of outcomes observed and the weaknesses in the market, and uses quantitative and qualitative evidence to test those hypotheses.
- **Step 5 (Chapter 8) - Options for reform:** building on the findings from the market assessment work (Step 4 in Chapters 6 and 7), and drawing on evidence from other vocational education systems, we analysed a small number of policy reform scenarios to understand the risks and benefits associated with different types of policy options.

This report follows the structure described above, beginning with a brief overview (in chapter 3) that maps the landscape of the vocational qualifications market in England.

3. Landscape for vocational qualifications in England

Introduction

The vocational qualifications market in England is unlike that of any other country. The key difference is that Awarding Organisations, rather than government, currently play the leading role in the design, development, delivery and award of vocational qualifications.

This chapter maps the landscape for vocational qualifications in terms of:

- Defining what we mean by vocational qualifications;
- Describing the supply of, and demand for, vocational qualifications in England;
- Describing the regulatory environment in which vocational qualifications are delivered;
- Describing public funding for vocational qualifications; and
- Drawing comparisons with international vocational qualifications systems.

Vocational qualifications in England

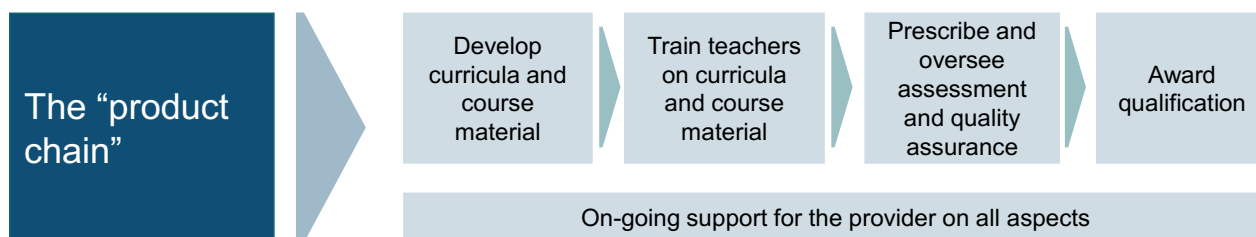
We defined vocational qualifications¹⁸ above as aiming to “...provide practical skills that are directly aligned to employment in one or more occupations, and can also prepare learners to re-enter academic education. They play a critical role in building a skilled and productive workforce.”

In England, FE training providers deliver vocational qualifications to learners primarily via two methods: College-based (where the learner develops their knowledge, skills and competences, largely delivered by teachers in a College or Further Education setting, though the study programme may also include work placements); and employer-based (such as an apprenticeship where the learner develops their skills and competences largely on-the-job while also developing knowledge by spending some time in a Further Education setting).

AOs currently design, support the delivery of, and assess the quality of vocational qualifications in England. FE training providers buy the right to deliver vocational qualifications from AOs. The ‘product’ that FE training providers currently purchase from AOs consists of several elements, as shown in Figure 5. Although the elements are displayed separately, they tend to be bundled together by the AO into a package.

¹⁸ The phrase ‘vocational qualifications’ is used interchangeably with ‘technical qualifications’ throughout this report.

Figure 5: The vocational qualifications product chain



As shown in Figure 5, the component parts of what a training provider buys from the AO are:

- Curriculum and course materials: these refer to the content of the qualification in terms of the curriculum which describes the knowledge, skills or competences that need to be mastered in order for the qualification to be awarded;
- Training on curriculum and course materials: this refers to the work that AOs undertake to ensure that teachers or tutors are familiar with what needs to be covered, and the materials that can be used to support the learning and development of knowledge, skills and competences;
- Design and implementation of assessment method and quality assurance: this important part of the role of AOs refers to the process of developing appropriate methods through which the knowledge, skills and competences of a learner can be accurately assessed to inform whether they have reached the appropriate standard to be awarded a qualification. Alongside this activity is the guidance and verification that the quality assurance processes of the training providers are adequate;
- Award of qualification: vocational qualifications should only be awarded when there are adequate assurances that the learner has achieved the required standard of knowledge, skills and competences. Various methods are used to ensure the standards have been met. For example, in some cases, exams are used (and the AO may check a sample to ensure standards are maintained); in others, course work must be accurately marked (again the AO may carry out sampling to test the rigour of the assessment); while in others a trained assessor (sometimes internal to the training provider where quality assurance processes are in place) must observe the learner carrying out particular tasks to verify that the required standard of skills and competences have been demonstrated.
- On-going support to the training provider: underpinning all of the elements above is the on-going support that AOs offer training providers. Typically, relationship managers from the AOs are assigned to FE training providers to ensure that they have ready access to support and advice as needed.

The qualifications offered by AOs are not regulated, but the AOs themselves are. FE training providers are at liberty to choose to work with whichever AO offers vocational qualifications that best meet the needs of their learners and local employers. For public funding to be drawn down by FE training providers, the AO must be regulated by Ofqual. These issues are explained further below.

Supply of and demand for vocational qualifications in England

The vocational qualification system in England is unique in that qualifications which attract public funding are developed and supplied not by the government but by AOs. AOs differ in their size and nature – some are professional bodies, others are private firms and many have charitable status.

There are currently 163 AOs supplying around 25,000 regulated qualifications (vocational and academic) in England and awarding around 8.4 million vocational certificates annually. As shown in Table 2,¹⁹ the AO market for vocational qualifications is characterised by a small number of very large AOs (the largest 10 AOs award around 70% of all certificates issued) and a long tail of relatively small AOs.

Table 2: Vocational certificates awarded by 10 largest AOs and other AOs in 2014/15

Awarding organisation	Certificates in 2014/15
Pearson Education Ltd	1,899,900
City and Guilds of London Institute	1,330,900
OCR	480,500
Cambridge English Language Assessment	297,200
AQA Education	284,700
Cambridge International Examinations	281,100
Chartered Institute of Environmental Health	279,200
Highfield Awarding Body for Compliance	272,200
NCFE	270,900
Associated Board of the Royal School of Music	255,100

¹⁹ The certificate numbers relate to figures supplied by AOs to Ofqual, and are not specific to publicly-funded provision. The table includes all non-GCSE and A-levels so not all of these would strictly be considered vocational qualifications. The source is:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544429/Annual-qualifications-market-report-england-wales-and-northern-ireland-2014-15.pdf

Other AOs	2,720,000
Total	8,371,800

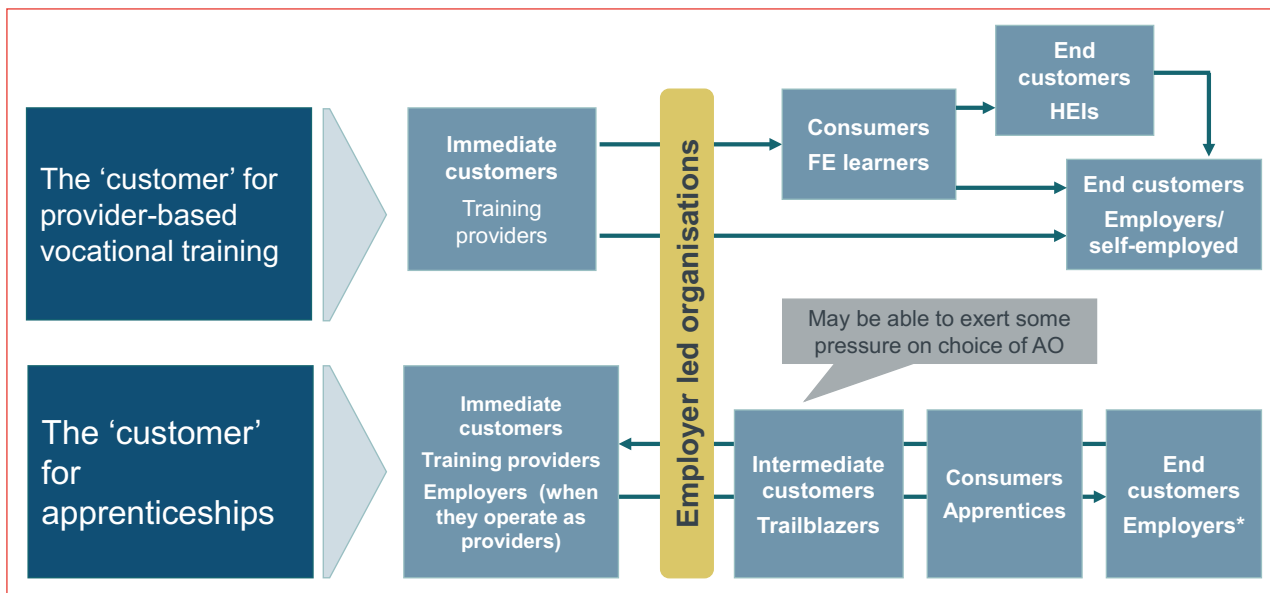
Source: Ofqual Statistical Release 2014/15

The customer chain for vocational qualifications is complex and demand for qualifications is often “derived” in the sense that the ultimate consumer of the qualifications (the learner or employer) is not likely to be the direct purchaser (the FE training provider). The customer chain is stylised in Figure 6. As shown, for provider-based training, the immediate customers of AOs are training providers, which include schools, colleges and independent training providers. There are currently around 350 FE Colleges (including Sixth Form Colleges, General FE and Tertiary Colleges and Agriculture and Horticulture Colleges), more than 600 private training providers, more than 1,160 School Sixth Forms and 247 Adult Community Learning and Skills providers.²⁰ Training providers offer teaching to learners – some of whom may be participating in an FE vocational qualification in order to move on to Higher Education and some of whom will be training with the aim of seeking employment immediately after qualifying.

For employer-based learning (such as apprenticeships), apprenticeship ‘frameworks’ have, to date, typically included one or more vocational qualifications which would be awarded to the learner upon satisfactory completion of the apprenticeship. However, the recent move to apprenticeship ‘standards’, many of which are currently being developed through ‘Trailblazers’, do not necessarily include vocational qualifications and hence AO involvement in this part of the market could be lower in the future than has been the case to date. Where vocational qualifications do form part of the apprenticeship the immediate customer will again be the training provider, with the apprentices and employers both being further along the customer chain.

Figure 6: Customer chain for vocational qualifications

²⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544310/bis-16-360-fe-market-england.pdf



The existence of a long customer chain in which the customer at each stage faces choices that are likely to be influenced by different factors adds to the complexity of the system. It raises the risk that the incentives of different customers may not align. This complex situation is compounded by the fact that ‘quality’ of qualifications is likely to be interpreted differently by each customer. For example, a training provider may interpret ‘quality’ of a vocational qualification as being related to whether the AO is regulated, has a good reputation with training providers and local employers, offers relevant and timely support and provides learners with a well-rounded set of transferable skills to support their future employment. In contrast, an employer may interpret quality of the qualification as the extent to which learners have the specific skills they need for the specific job for which they are employed.

The incentives facing stakeholders under the current regulatory and funding system, and the ways in which these can lead to different outcomes, are discussed in detail in Chapter 7. Inevitably, given the complex nature of the market there are trade-offs between achievable outcomes. Regulation and funding, in particular, are likely to affect the incentives driving behaviours of those in the market.

Regulation

AOs are regulated by Ofqual whose aim is to ensure that AOs can produce valid²¹ qualifications which meet user needs. Ofqual regulates the process of developing qualifications and monitors the financial viability of AOs. Ofqual’s regulatory framework is underpinned by its General Conditions of Recognition (GCR) which set out a series of

²¹ Validity is the degree to which a qualification measures what needs to be measured through its assessment procedure.

requirements (such as validity, reliability, comparability) which regulated qualifications need to meet. There are also a number of governance, compliance and cooperation conditions for AOs. AOs are required by Ofqual to submit an Annual Statement of Compliance which is compared against other information and intelligence. Regulatory action is taken in instances of non-compliance.

Funding

Public funding for vocational qualifications is provided by the Education Funding Agency (for learners aged 16-19), and by the Skills Funding Agency (for learners aged 19-24 and apprentices aged 16+, and advanced learning loans for learners aged 24+). Only qualifications which are regulated by Ofqual can attract public funding from the SFA, but not all Ofqual regulated qualifications are publicly funded. For example, for people aged less than 19, Government has the ability to decide which qualifications are eligible for public funding through the use of *Section 96*²².

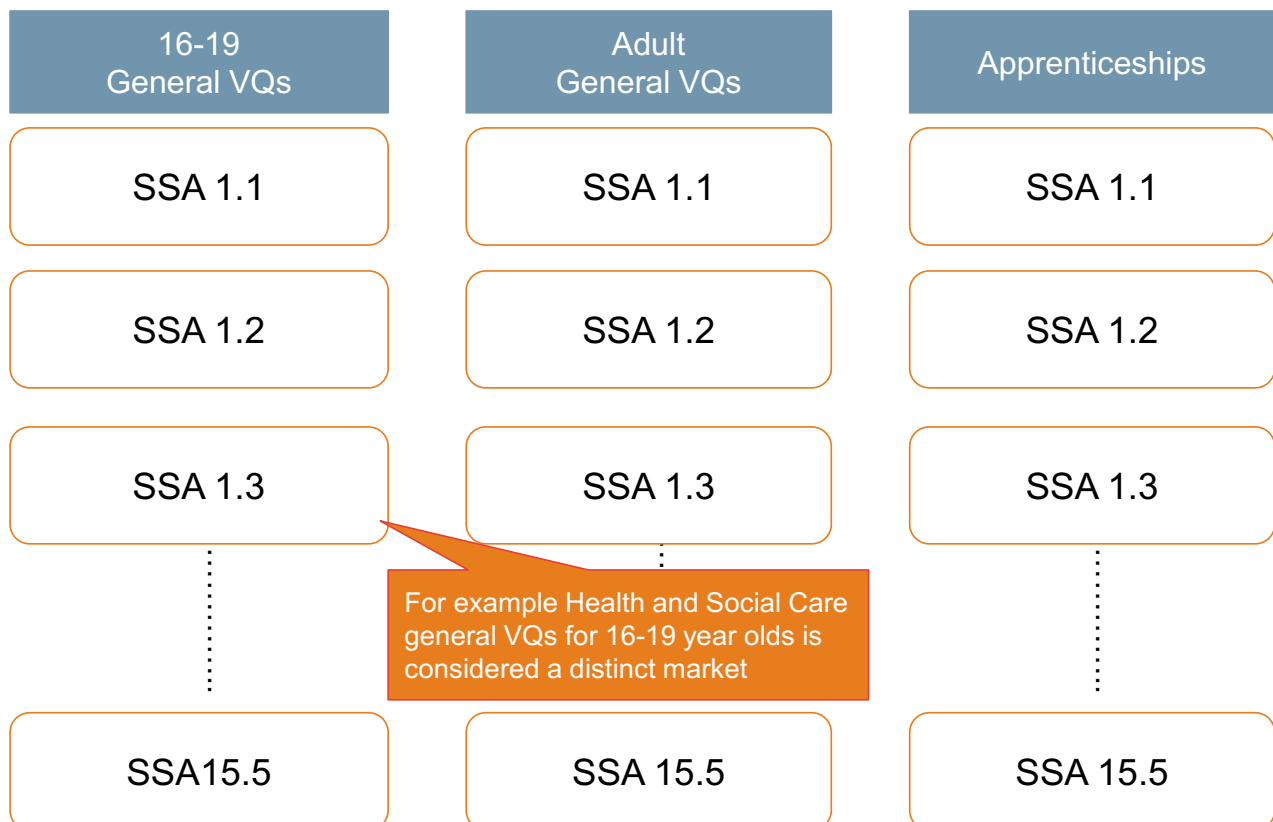
²² Section 96 is a *section* of the Learning and Skills Act 2000. It gives the Secretary of State the power to approve *qualifications* for delivery to young people aged less than 19 years old. Public funding is only available for *qualifications* which have been *section 96* approved.

4. Market Definition

Key findings

- Market definition is an important stage in our assessment of how, and to what extent, competition in the market delivers vocational qualifications which are rigorous, recognisable, responsive and innovative.
- We reviewed a range of evidence to reach a view about the different markets that form part of the vocational qualifications space. We were guided by the standard Competition and Markets Authority framework, but took a pragmatic rather than exhaustive approach to definition, in keeping with the policy driven objectives of this study.
- Our work suggests that the vocational qualifications market is appropriately delineated by Sector Subject Areas (SSA), method of learning (classroom-based general vocational qualifications or workplace-based apprenticeships) and by age group of learners, as shown below.

Figure 7 Defined sub-markets in the vocational qualifications market



Defining the market

To develop a thorough understanding of the way a market is functioning, it is important to develop a clear definition of that market. This chapter describes how we have defined the market for vocational qualifications. In particular we describe:

- The purpose of defining a market;
- The standard economic framework for defining markets; and
- The application of the framework to the vocational qualifications market in England.

The purpose of defining a market

The purpose of market definition is to identify the scope of actual and potential competition so that we can analyse the extent to which competition is working well or not. The process of market definition narrows the focus of the competition analysis to the relevant products (e.g. vocational qualification sector subject area) and geographies (e.g. regions in England) by identifying the main competitive constraints that operate on the product of interest.

For the purposes of this study, we wished to reach a view about the different markets that form part of the vocational qualifications space so that we could analyse these sub-markets separately with a view to understanding how they were functioning and the role that competition was playing. We were guided by the standard Competition and Markets Authority framework, but took a pragmatic rather than exhaustive approach to definition, in keeping with the policy objectives of this study.

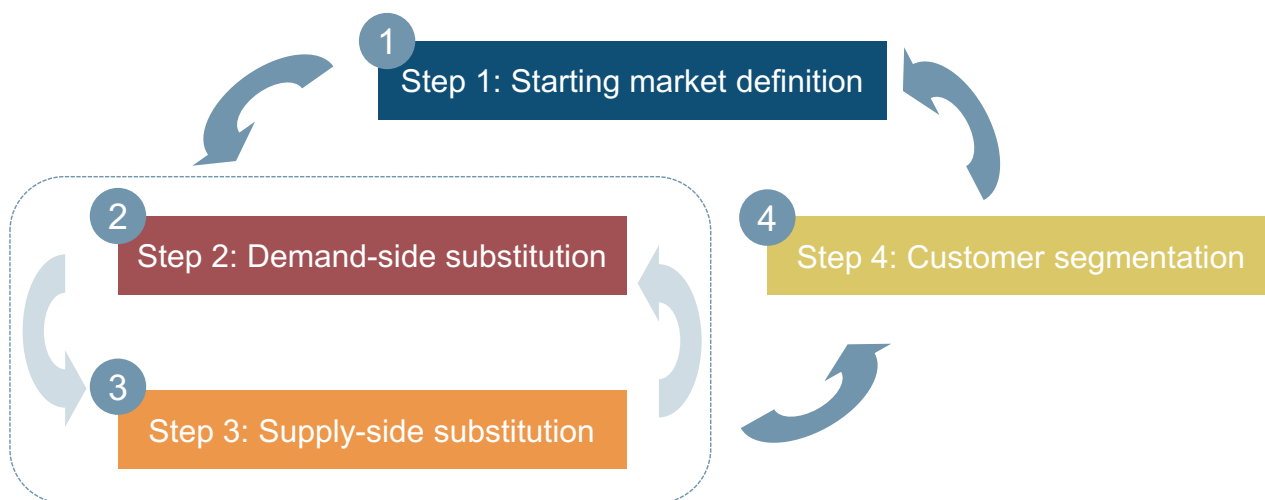
The focus of our market definition effort was the market for vocational qualifications, although we note that many of the AOs supplying qualifications in this space are also active in the supply of academic qualifications which means that there are clear interdependencies between the two markets and changes in the vocational qualifications space is likely to have an effect on the academic qualifications market also.

The standard economic framework for defining markets

Market definition is typically carried out using a standard CMA framework as shown in Figure 8. The approach is an iterative thought experiment, starting with the narrowest possible market definition and then checking if the existence of demand or supply substitution means that the scope of the market needs to be extended. The views

reached are based on a variety of evidence, both quantitative and qualitative evidence and judgements. Below we discuss each of the steps involved in more detail.

Figure 8 Market definition framework



Source: Frontier Economics

Step 1 starts with a narrow definition of products and/or geography. In the case of vocational qualifications this would involve choosing a particular qualification, an associated Awarding Organisation and a level, for example City & Guilds ‘Working in the Health Sector’ at Level 2.

Steps 2 and 3 then consider the extent of substitution between products and/or geographies from the perspective of customers and suppliers. For example, if products (i.e. the particular qualifications) are strong substitutes, they are considered as close competitors and therefore considered to operate in the same market. To make this assessment, we consider the following:

- **Demand-side substitution** looks at the demand response of training providers to a “small but significant” increase in price (or equivalent reduction in quality) in the order of 5-10%. If the price of our product defined in Step 1 rose by 5-10% (or quality fell by 5-10%), would direct customers (training providers) switch to another product or geography in such numbers as to render the price rise unprofitable?
- **Supply-side substitution** looks at the supply response of potential suppliers (alternative AOs) to a price increase, i.e. if the price of the product rose by 5-10%, could AOs offering other products easily (and profitably) switch to provide this product?

If either training providers or AOs would substitute in response to the price increase or reduction in quality, then our definition is too narrow and should be extended to include the product/geography they would switch to/from.

As we highlight in the approach above, in some industries, including vocational qualifications, suppliers compete on a variety of dimensions, not only on price. Quality is often a basis of competition among suppliers (AOs) and a very important consideration to customers (training providers) in the vocational qualifications market. Therefore both price and quality were taken into account in our market definition framework.

Steps 2 and 3 should be repeated until the market definition is broad enough such that no further demand-side or supply-side substitution should be possible.

Step 4 is the final step which considers if, given the defined market scope, some customers may face different competitive conditions. If this is the case, customer segmentation may be necessary. We discuss customer segmentation in more detail below.

Applying the market definition framework in the context of vocational qualifications

In our market definition exercise, we define the AOs as suppliers, and training providers as customers. While learners, employers and HEIs are the end beneficiaries of vocational qualifications, for the purpose of our exercise we consider them only to the extent that their preferences impact on the decisions of the training providers who purchase qualifications from the AOs, and are thus the direct customers.

There are three key dimensions to consider when applying the market definition framework in the context of vocational qualifications:

1. **Geography.** Is the market for vocational qualifications national, regional or local? This involves asking questions like:
 - Demand-side: Do training providers purchase vocational qualifications from AOs in a regional, national or international market?
 - Supply-side: Does the price/quality of the product AOs offer vary by geography and is that related to how much competition they face in certain geographies?
2. **Product.** Specifically, should the market be delineated by subjects, levels, elements of the product chain etc.? This involves asking questions like:
 - Demand-side: Do training providers purchase individual qualifications? Do they buy in bulk? Do they buy bundles?

- Supply-side: How easy/difficult is it for AOs to start offering qualifications in new subject areas, methods of learning (e.g. classroom based versus workplace based)?
3. **Customers.** This involves considerations around whether the market should be delineated by the type of customers, and involves questions like:
- Demand-side: Do different customer groups (training providers) have different purchasing preferences (e.g. some like to buy bundles while others prefer single qualifications)?
 - Supply-side: Do AOs price discriminate (significantly) between different customer groups?

Below we present the evidence we have considered when defining the vocational qualifications market, working through the three dimensions identified above (geography, product, and customers).

Our assessment included quantitative analysis, as well as reviewing the following documents:

- Ofqual/ Frontier (2010) *Report on the markets for regulated qualifications in England, Wales and Northern Ireland.*
- OFT (2011) *Decision on the merger between Pearson PLC and Educational Development International PLC.*
- BIS/Frontier (2016) *Understanding the Further Education Market in England.*

The qualitative evidence we discuss below derives from the above publications. We note that using evidence from publications which are several years old has its limitations as the market has undergone some change since then, but it is our view that many of the findings in the reports alluded to above are still relevant in today's context. The market definition process and outcomes described below were also informed by a workshop we held with DfE policy officials.

Our definition of the market draws together these sources i.e. our new quantitative analysis and our review of relevant published documents to propose a pragmatic and cautious market definition that can underpin our analysis of this market. In some cases we have used professional judgement to be able to interpret the evidence appropriately.

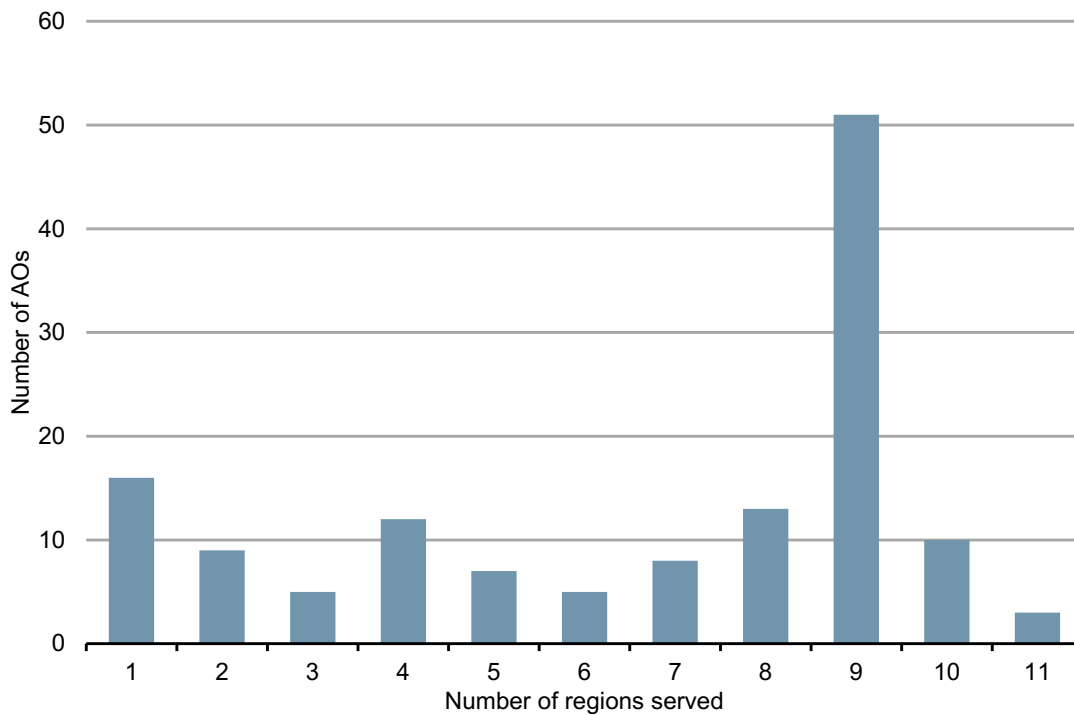
Geography

To determine the appropriate geography to define the market, we looked at AOs' provision of qualifications across regions in England and found that a large number of

AOs serve multiple regions (Figure 9), which points against delineating the market at national level.

We also note that the findings of OFT (2011), suggested that demand and supply conditions were similar across England and Wales. Also, Ofqual/ Frontier (2010) concluded that there is a single geographic market across England, Wales and Scotland.

Figure 9 AOs providing qualifications in different regions



Source: Frontier Economics using the ILR (2014/15). Regions defined as Government Office Regions (GORs), including Scotland and Wales

We therefore conclude that for the purposes of this study, the market for vocational qualifications in England can be considered as national in scope.

Product

To define the appropriate product market, we consider the qualification subject, level and methods of learning (classroom based versus workplace based).

Subject

Demand-side substitution

On the **demand side**, the first question to ask was how easy it is for training providers to switch to a different qualification in response to a change in price/quality. We found that

qualifications are sufficiently differentiated and demand is so subject-specific that there is little substitution between subject groups (Frontier 2010). Therefore training providers are unlikely to switch from purchasing (and offering) qualifications in one subject area to purchasing qualifications in another subject area as a result of an increase in price (or reduction in quality) from AOs. For example, an FE college will not switch from buying nursing qualifications to construction qualifications if the price of nursing qualifications goes up by 10%.

Another consideration with respect to the demand-side is the extent of bulk buying among training providers. The rationale behind this is that, if training providers prefer to buy qualifications in bundles, even if the price of one of the qualifications goes up (or quality drops), they would not be likely to change supplier for only that individual qualification. Instead, if the issue were significant enough they would be likely to switch the whole bundle of qualifications they currently source from that supplier. For this reason, if customers consistently buy in bundles, defining the market at the individual qualification level is likely to be too restrictive.

We found mixed evidence on whether training providers source all/ or multiple qualifications from one AO, or if they source from multiple AOs. In particular:

- Most customers told OFT (2011) that when possible, they prefer to contract with AOs who can offer broad packages as this reduces administration costs. As such, competition among AOs might take place ‘for the market’ rather than ‘in the market’ (i.e. the AOs compete for the business of a training provider, rather than against other AOs for each qualification). This was particularly true for independent training providers and employers.
- However, some FE colleges stated that they must procure from a number of AOs to be able to offer a wide portfolio of qualifications. Different departments make their own supplier choices, and colleges may procure from up to 20 to 30 AOs (OFT, 2011).

The above evidence is mixed, but we conclude that a cautious approach is to define markets at the subject level.

Supply-side substitution

Regarding **supply side substitution**, the movement between subject areas by AOs is also limited; it does happen, but it appears to be more difficult than switching from a particular qualification within a sector to another qualification in that sector.

Evidence was again mixed: some AOs said that entering a market with speed would be likely to require takeover of other AOs rather than being able to develop qualifications in new subject areas alone, while other AOs disagreed (Frontier, 2010).

OFT noted that a number of AOs supply across most sectors, and some AOs have been expanding into new sectors. However, Frontier (2010) pointed out that while some AO's offer a range of awards, those which are involved in many areas had been for a long time. Frontier (2010) also found that most new qualification entry takes place in subject areas close to those the AO already offers. This is demonstrated by the fact that just under 4% of newly accredited qualifications between 2003 and 2009 were in subject areas in which the AO was not present in 2003.

At the same time, OFT's analysis revealed that smaller specialist AOs tend to make most of their revenues from a limited number of sectors (particularly where they are the recognised experts).

Our analysis also showed there is considerable diversity in the scale and scope of AOs; some operate in many areas, while others operate in few. The majority of AOs operate in only one or two subject areas (as shown in Figure 10).

We also find expansion into new subject areas is limited. Figure 11 categorizes all qualifications within subject areas into:

- Qualifications which are established²³ (and thus by default delivered by an established AO²⁴);
- Qualifications which are new but provided by an AO established in the subject area; and
- Qualifications which are new and are provided by an AO new to the subject area.

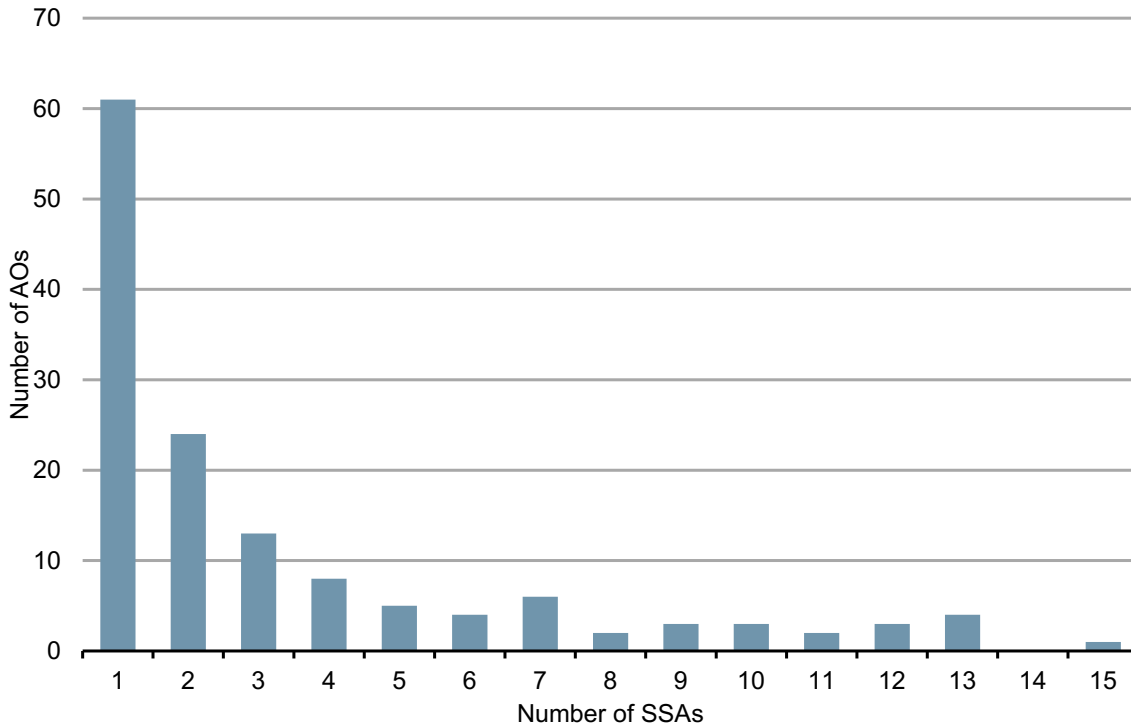
Subject areas are categorised at the level of Subject Sector Area (SSA) according to Ofqual's classification system. There are 15 Tier 1 SSAs and 48 more granular Tier 2 SSAs.

Figure 11 illustrates that with the exception of Social Sciences, in most sector subject areas (SSAs) the newly developed qualifications are from established AOs. This suggests that entry of AOs into new subject areas is limited.

²³ Have been available for one or more years.

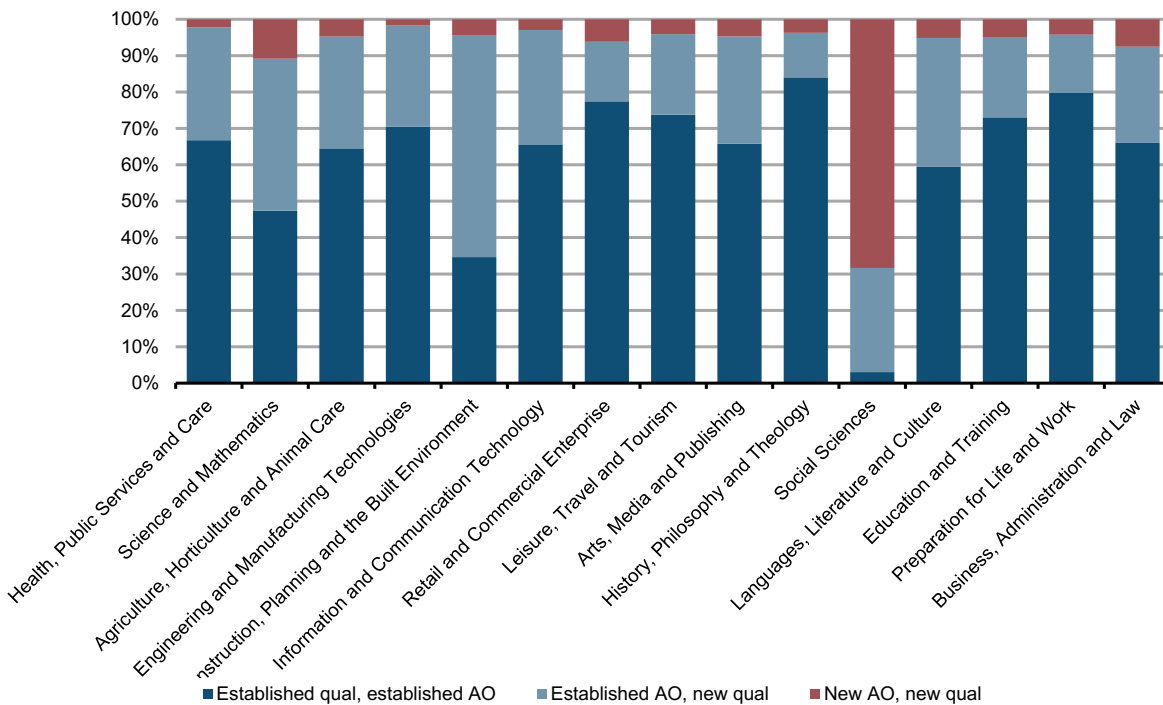
²⁴ One who has been supplying qualifications in the subject area for some time.

Figure 10 AOs providing qualifications in different SSAs Tier 1



Source: Frontier Economics using ILR (2014/15)

Figure 11 Change in qualifications 2010/11-2014/15



Source: Frontier Economics using ILR (2010/11 – 2014/15)

Frontier (2016) pointed out two key constraints on the ability of AOs to switch between subject areas:

- A good relationship with a Sector Skills Council (SSC) (or other influential employer-led organisation) is typically needed to start providing a qualification in a new subject area. This is because it helps to understand employers' needs and acts as a gatekeeper to recognition by Ofqual. The ease of supply-side substitution will depend on how easy it is to develop such a relationship.
- A network of customer relationships (i.e. with training providers) is important to successfully market the qualification. These relationships are a source of market intelligence on the demand for particular qualifications and also are a route to market for those qualifications. However, the importance of reputation in this sector acts as a barrier to supply-side substitution.

Frontier (2016) further noted that even within the subject area, demand-side substitution is typically limited since demand tends to be very occupation specific (e.g. a qualification for a plumber is not substitutable for a qualification for an electrician). However, the key supply factors such as a good relationship with an employer-led organisation and a network of customers do not appear to be material limitations to supply-side substitution within a subject area. If anything, they facilitate expansion; customers often approach AOs with requests to develop new qualifications that meet specific needs.

Furthermore, according to one stakeholder, AOs can offer a range of qualifications within one subject area because:

- Inputs and resources can straightforwardly be sourced from a pool of trusted external specialists (industry experts) if no in-house expertise is available; and,
- AOs often employ external verifiers to help assess the practical components of qualifications.

As such, supply-side substitution within subject areas is more straightforward than between subject areas.

Competitive dynamics

As a last step in our analysis of defining the market by subjects, we explored how competitive dynamics (i.e. the nature of competition and the extent of entry and exit) vary between subject areas. This last step serves as a robustness check, as different competitive dynamics in different subject areas would help us confirm whether they should in fact be treated as separate markets.

- Our analysis showed that both the extent of entry and exit rates and the level of market concentration (Table 3) vary across SSAs. Table 3 illustrates market concentration within SSAs Tier 1 through the following metrics: HHI²⁵ index which is the most commonly accepted measure of market concentration. It is calculated based on market shares of all the companies active in a market. The higher the index, the more concentrated the market is (i.e. the fewer the AOs).
- Number of active AOs within each SSA.

The table illustrates that, for example, market concentration in Maths and Science is much higher than in Business, Administration and Law – that is there are fewer AOs offering Maths and Science than Business Administration and Law. This confirms our earlier conclusions based on demand and supply side substitution because such varying market structures between the SSAs suggest that they are distinct markets.

Table 3 Market concentration within SSAs

Subject area	HHI	# of AOs active
Health, public service, social care	1792	58
Science Maths	3141	20
Agriculture	2233	28
Engineering and Manufacturing	1923	48
Construction	2818	30
Information Communication Technology	1467	26
Retail and Commercial	2338	46
Leisure Travel Tourism	2038	33
Arts, Media, Publishing	2760	38
History, Philosophy, Theology	2625	17
Social Sciences	3768	16
Languages, Literature, Culture	2434	15
Education and Training	2341	28
Prep for Life and Work	2360	52
Business Admin Law	1191	64

Source: Frontier Economics using ILR. Note HHI calculation presented in table equals the sum of squares of the market shares multiplied by 10,000

Given all of the above evidence, we conclude that the sector appears to be delineated at subject level. Therefore in our further assessment of the market, we will look at sub-markets by SSA Tier 2 (and if this is not possible for practical reasons, Tier 1).

Level

²⁵ Herfindahl-Hirschman Index

Vocational qualifications exist at different levels, ranging from entry level, right up to level 8+. The previous evidence suggested that the vocational qualifications market was not delineated by the level of qualification offered. The OFT learned from stakeholders that if the training provider wanted to switch AOs, it was likely to do so for all levels of the same qualification implying little demand side substitution between levels. Likewise, the OFT found that when AOs introduce new qualifications, they tend to do it across all levels, implying little supply side substitution. The OFT also noted that the sets of suppliers do not vary significantly between levels, implying little variation in competitive constraints between levels. This suggests that AOs operate across all FE levels when they offer vocational qualifications in a particular subject area. Segmenting the market by FE level is therefore not justified.

Our analysis did not find any evidence to contradict these findings. We therefore think it makes sense, for the purposes of this work, to not delineate the market further by level of qualification. Note that this analysis assumes that demand is from the training providers and not the learners. The latter's perspective is considered below when we explore 'age' of learners.

Elements of the product chain

The offer of AOs around qualifications consists of three key elements:

- Content development (i.e. the curriculum and assessment strategy)
- Delivery support (e.g. support to the training providers)
- Assessment (including delivering assessments and issuing the certificates)

We considered whether it makes sense to separate the market by these elements, or to consider the whole package as a single market. It is our understanding that both AOs and training providers tend to treat all the elements of the product chain as a single product; suppliers offer them as one product, and training providers currently purchase all of these elements together from a single AO.

We therefore conclude that, for the purposes of market definition, all the elements of the product chain are bundled together, and the market should not be delineated across these elements in our analysis. However, we note that some proposed reforms to the market involve separating out the product offer and could, as such, cause the market definition to look different in future. We consider these reforms in more detail in later chapters of the report.

Methods of learning

Qualifications are offered via a range of methods of learning. For example, work-place based apprenticeships and classroom-based vocational qualifications. We have

considered the extent to which the market definition should reflect the method of learning. Apprenticeships are shifting away from 'frameworks' to employer-led 'standards'. A key difference between the former frameworks and the new standards is that the standard may not include a formal vocational qualification. Standards are developed by employers, often working alongside training providers, and are often highly occupation specific, or even firm-specific. Therefore, there is likely to be little substitutability across them on the demand side²⁶.

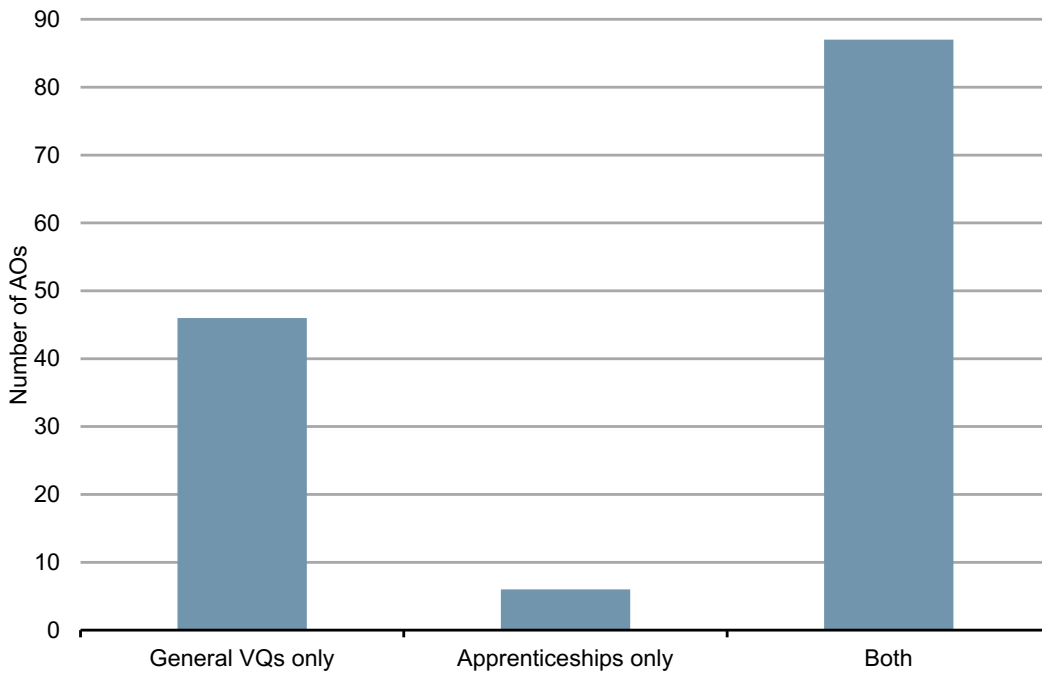
Indeed, apprenticeships are jobs which include formalised training; classroom-based vocational training is not a job but is intended to support the learner towards employment. Apprenticeships involve on-the-job training and off-the-job training (which could be in a college/provider classroom or workshop), both of which contribute to the achievement of specified vocational qualifications. Apprenticeships vary in the amount of classroom-based learning, with those in areas such as engineering or accountancy requiring more traditional theory-based study than others, such as customer service. The extent of classroom-based learning usually increases according to the level of the apprenticeship and also in relation to the way particular vocational qualifications are designed. There is therefore likely to be some substitutability between apprenticeships and classroom-based vocational qualifications. Furthermore, the degree of substitutability may grow over time, in light of the recommendation of the Sainsbury Panel that a single common set of standards should cover both apprenticeships and college-based provision.

On the supply-side, there are differences across training providers, with some of them offering only classroom-based vocational qualifications, and others (although not many) offering only apprenticeship models of learning (this is shown in Figure 12). In addition, the composition of training providers who offer classroom based vocational qualifications varies from those training providers who offer apprenticeships. Fewer FE colleges and many more private training providers are active in the provision of apprenticeships (this is shown in Figure 13).

A further reason why apprenticeships differ from classroom based vocational qualifications is that they are subject to certain attached conditions, so they are eligible for separate specific funding from SFA.

²⁶ We note however that the Sainsbury Panel has recommended that the Institute for Apprenticeships reviews all standards to ensure they are not firm, but occupation, specific.

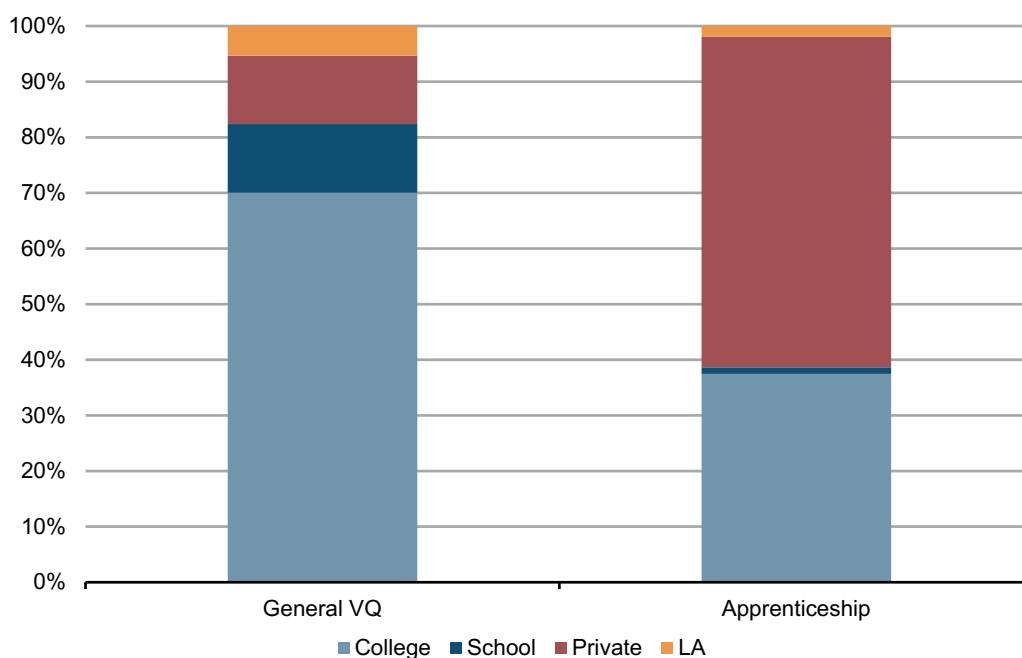
Figure 12 Number of AOs providing different types of qualifications²⁷



Source: Frontier Economics using ILR

²⁷ This chart refers to apprenticeship frameworks currently being delivered and not the new apprenticeship standards that are being introduced.

Figure 13 Composition of training providers offering classroom based vocational qualifications and apprenticeships



Source: Frontier Economics using ILR

Although classroom-based vocational qualifications and apprenticeships are substitutable for some learners, and this trend may accelerate in the future, they are not for other learners. To be cautious when undertaking our market analysis, we therefore conclude that it is appropriate to consider apprenticeships as a separate market²⁸. It is recognised that a more nuanced approach to market segmentation could consider the sub-segments of the market where apprenticeships are substitutable for class-room based learning qualifications, but this is not considered necessary for the purposes of this analysis as we will consider apprenticeships separately.

Age

We have considered the extent to which the age of learners is relevant to market definition.

The OFT (2011) believed that the competitive issues were similar across all age groups. However, they noted that public funding may differ by the relevant policy programmes, which target different age groups²⁹.

²⁸ We note that one of the recommendations from the Sainsbury Panel is that apprenticeships and college based provision should be subject to a common framework of standards in future.

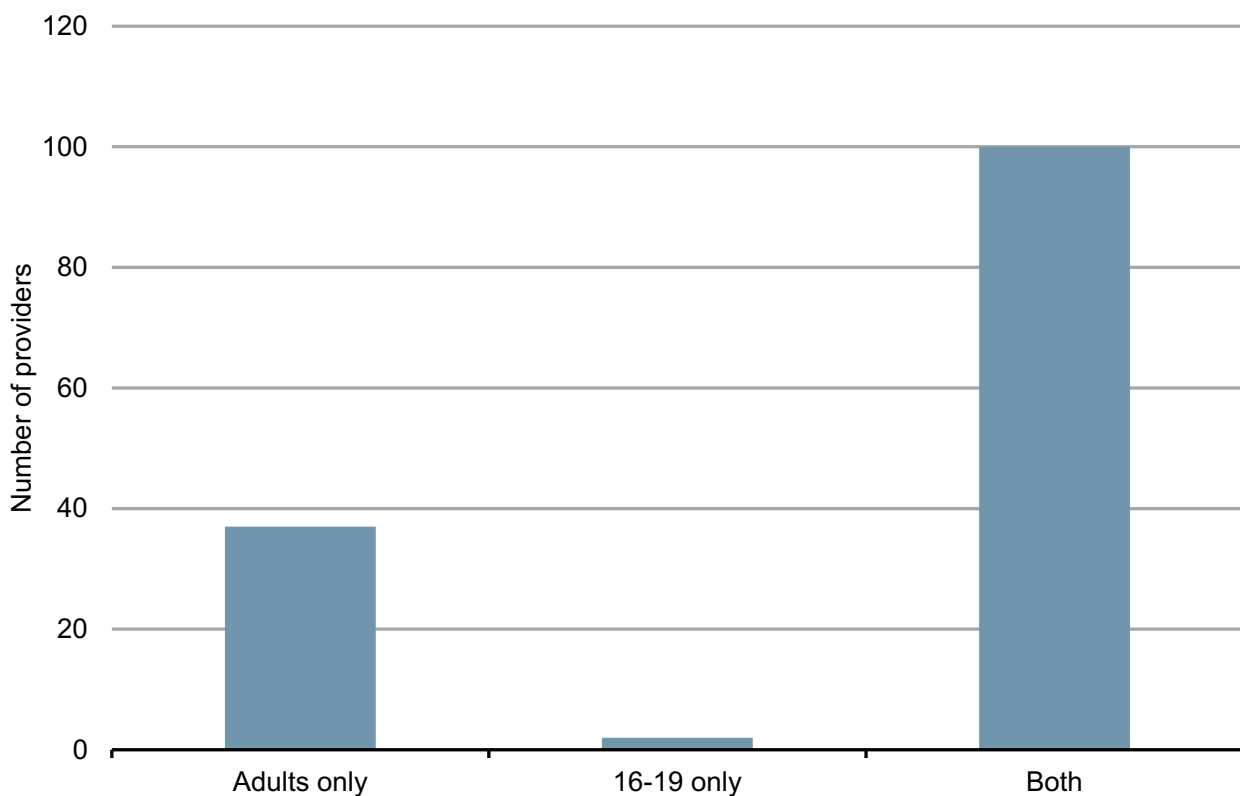
²⁹ We note that the evidence from the OFT is from 2011 so precedes any of the recent changes in the vocational qualifications market which have affected funding for KS4 qualifications and for adults.

As shown in Figure 14, most AOs provide qualifications for young people and adults and therefore would suggest a single market for all age groups.

However, the policy landscape for the 16-19 and 19+ age groups differ substantially. The two age groups are funded differently, participation in 16-19 education or training is compulsory whereas this is not the case for 19+, school sixth forms operate in the 16-19 market but not the adult one etc. Furthermore the reforms recommended by the Sainsbury Panel suggest a different approach to reform of the 16-19 market relative to the 19+ market.

To ensure that our analysis is useful from a policy perspective, we have therefore taken the approach of delineating the sector by age of learners, with separate markets for 16-19 year-olds and adult learners.

Figure 14. AOs providing qualifications in different age groups



Source: Frontier Economics using ILR

Customer types

To define the market, we consider training providers as the customer since they are the ones that purchase the right to deliver qualifications from AOs. There are a number of customer types (training providers) in the sector including:

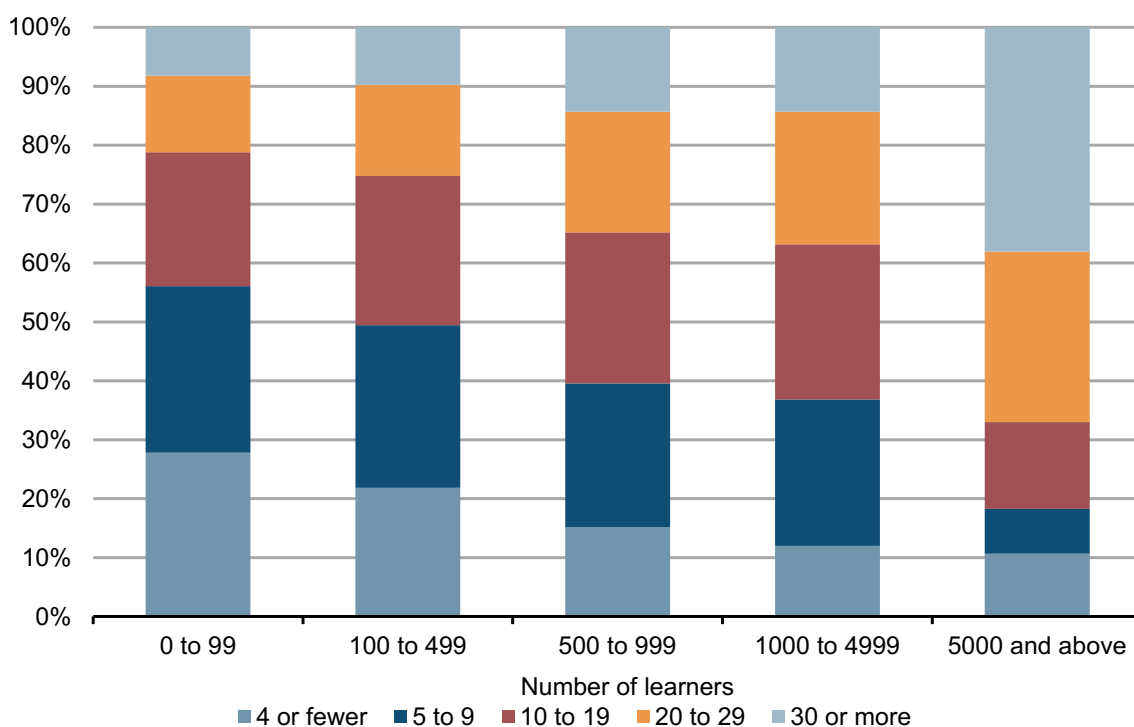
- Schools;
- Colleges;
- Independent Training Providers;
- Local Authorities;
- Charities;
- Employers; and
- Others (such as Group Training Associations).

In its assessment, the OFT considered the perspectives of different customer groups and suggested that customer segmentation was justified because of differing preferences. For example:

- Colleges usually prefer obtaining a range of qualifications from single or multiple suppliers (sometimes with overlapping awards when certain brands/awards are 'must-haves').
- In addition to being a training provider, independent training providers often play the role of intermediaries between AOs and private employers. As such, they might require different products or services to a college.
- Employers may wish to work with a single AO that best suits their training and learning needs.

Our analysis also suggested some differences across customer types; in particular we found that larger training providers appear to obtain qualifications from a wider range of AOs (Figure 15) than smaller training providers.

Figure 15 Proportion of training providers of different sizes (number of learners) using particular numbers of AOs



Source: Frontier Economics using ILR. Note: provider size here is used as a proxy for and customer type (e.g. FE colleges tend to be large in size)

As such, we note some differences between customer types, and acknowledge that they merit some consideration in our market assessment. However, these differences do not appear strong enough to justify delineating the market by customer types.

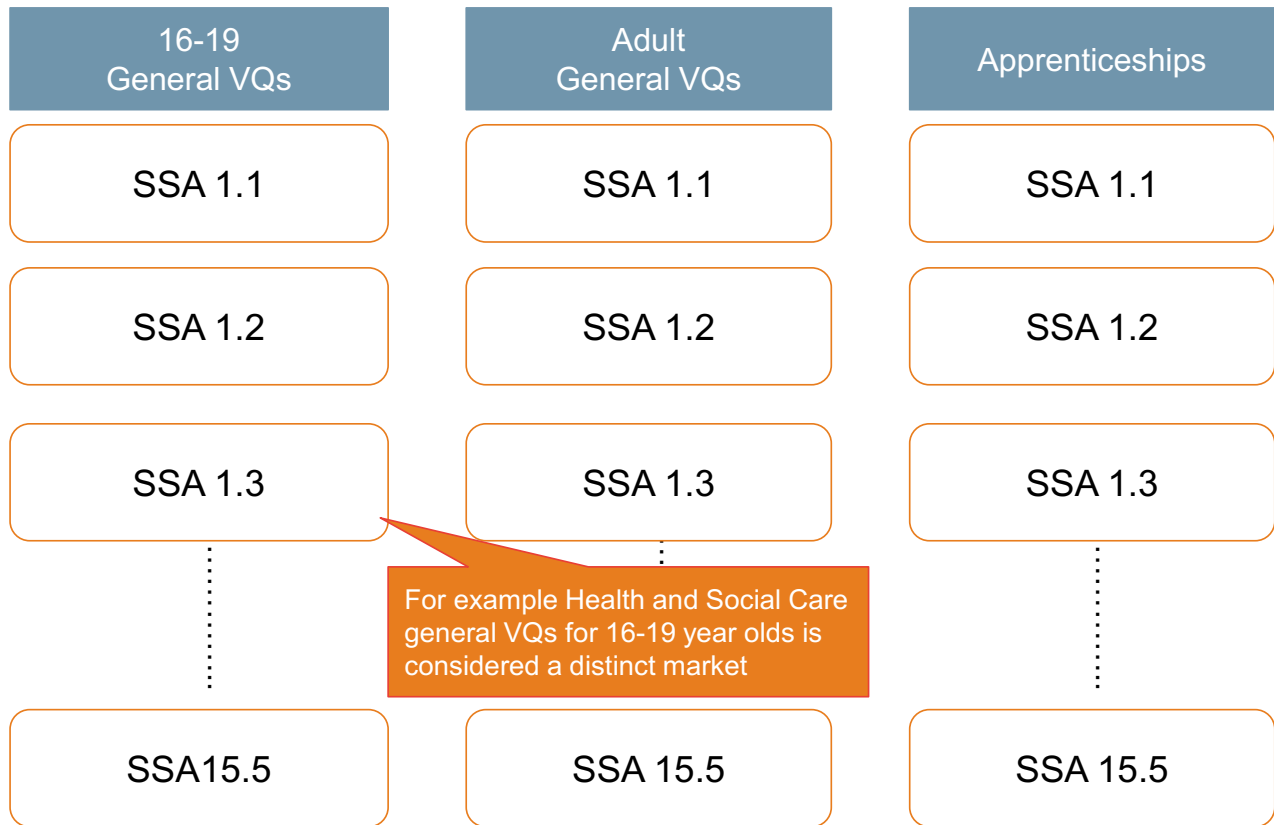
We therefore conclude the market should not be delineated by types of customers (training providers).

Conclusions

Market definition is an important stage in our assessment of how and to what extent competition in the market delivers vocational qualifications which are rigorous, recognisable, responsive and innovative. We reviewed a range of evidence in order to find a market definition which is informative and useful from a policy perspective.

Given the above review, we define markets by their Tier 2 Sector Subject Areas (SSA), qualification type (classroom based vocation qualifications or apprenticeships) and by age group of learners, as shown in Figure 16.

Figure 16 Defined markets in the vocational qualifications sector



5. Features of an effective vocational qualifications market

Key findings

- The Independent Panel on Technical Education (Sainsbury et al, 2016) made clear that if the vocational qualifications market were to be working effectively, then vocational qualifications would be :
 - **Recognisable.** A qualification is recognisable if all relevant stakeholders can quickly and easily identify learners' skill levels.
 - **Rigorous.** A qualification is rigorous if all learners holding a particular qualification meet the required standard.
 - **Responsive.** Qualifications are responsive if their content remains relevant and responds positively to changing employer and learner demands.
 - **Innovative.** Qualifications are innovative if they are able to find new and better ways of meeting current or anticipated demand.
- Tensions can exist between these four (RRRI) features, which mean that it may not be possible, or desirable, for all four to be demonstrated at once. In general there could be a trade-off between rigour and recognisability on the one hand, and responsiveness and innovation on the other.
- When thinking about the performance of the vocational qualifications market against these features (as well as possible options for reform), it is important to reflect on which features are to be considered by policy makers to be most important in any given context. The extent to which each of the four features is important may depend on the type of qualification considered.
- Further trade-offs exist when considering options for reform. For example, market features that deliver recognisable qualifications may not always align with those that deliver rigour (this is considered further in the next chapter).

Features of an effective market for vocational qualifications

A number of reviews of the vocational education system, notably the Wolf Report (2011) and the recent Sainsbury Panel (2016), have identified a range of aims for vocational qualifications. Firstly, vocational qualifications are intended to provide a measure of the skills and knowledge that an individual has acquired through training; this allows individuals to signal to employers their ability to work. For this to be the case, it is important that both learners and employers have good and accurate information about what different qualifications entail so that they can make informed choices about which

qualifications to pursue or which candidates to hire. Furthermore, for vocational qualifications to contribute to a productive and skilled workforce, they need to meet the dynamic needs of employers over time. Finally, to free up resources and provide the best possible service to learners and training providers, the system should encourage efficiency and be innovative.

With this in mind, and to reflect these different aims, the features we would expect to observe if the market were working effectively are that qualifications should be:

- **Recognisable.** A qualification is recognisable if all relevant stakeholders can quickly and easily identify learners' skill levels.
- **Rigorous.** A qualification is rigorous if all learners holding a particular qualification meet the required standard.
- **Responsive.** Qualifications are responsive if their content remains relevant and responds positively to changing employer and learner demands i.e. this relates to *what* awarding organisations provide.
- **Innovative.** Qualifications are innovative if assessment methods and the support AOs provide respond positively to changing demands or AOs are able to introduce improvements in the way they provide their services in anticipation of future demand i.e. this relates to *how* awarding organisations provide qualifications.

In addition to these four (RRRI) characteristics, for the market to work well it would need to be transparent and operate in a cost-effective way.

Potential tensions between these RRRI features

There may be some tensions between the different aims for vocational qualifications such that it may not be possible to achieve all aims at once. For example, for qualifications to be recognisable, it may be desirable for the content of qualifications to be stable and unchanging. However, this could in some circumstances directly contradict the ability of qualifications to be responsive, particularly if employer and learner needs evolve over time. Similarly, fixed assessment methods may ensure a consistent standard and therefore promote rigour, but could potentially inhibit innovation in response to new technologies and demands. Consequently, some qualifications that exhibit certain RRRI features may fail to exhibit others, and that may be entirely appropriate.

Given the potential for such trade-offs, it is important to consider which of the characteristics are most important for different parts of the market. For example, rigour may be more important than responsiveness in certain technical sectors in which standards remain constant over time (such as Accounting), whereas responsiveness may be more important in markets with rapidly evolving technologies (such as ICT for Practitioners).

In general there is likely to be a trade-off between rigour and recognisability on the one hand, and responsiveness and innovation on the other. In the following analysis, we therefore assess markets along both dimensions in a relative sense, rather than creating a ranking of markets along a single dimension. This allows for differences in the appropriate weight placed on the two sets of characteristics across different markets.

Having defined the characteristics of vocational qualifications in a well-functioning market, the next chapter assesses the extent to which these characteristics or features are currently being observed in different parts of the market.

6. Market assessment

This Chapter sets out a relative assessment of the different parts of the vocational qualifications market in England, using a set of indicators to measure the extent to which RRRRI features are achieved across different subject areas. The analysis aims to illustrate the diversity of outcomes across the vocational qualifications market, which could guide consideration of potential options for reform. It also provides a foundation for further analysis on the factors that drive market outcomes, explored in the next Chapter.

In this Chapter we focus on whether or not RRRRI features are observed in the different segments of the vocational qualifications market. Our analysis is designed to assess the relative performance of subject areas within the wider market, rather than provide an assessment of the absolute performance of the market as a whole. The extent to which weaknesses exist throughout the market, and the potential drivers of those weaknesses, are explored in Chapter 7.

Key findings

- To assess the extent to which vocational qualifications in different parts of the market are delivering the RRRRI features, we have drawn upon both quantitative and qualitative evidence. Our quantitative assessment is based on a set of indicators developed using a range of available data, including the Individualised Learner Record (ILR), the Employer Perspectives Survey (EPS) and the Employer Skills Survey (ESS). The selection of indicators has been tested through a workshop with DfE officials and sector experts, and our interpretation of the results has been tested with stakeholders from across the sector, including training providers, regulators, AOs and employers.
- The set of indicators we have used for each of the RRRRI features is shown on page 62. Although we have used the best available data, we note that in some cases it is not straightforward to disentangle one measure from another. For example:
 - Rigour could be assessed using the indicator “% of learners in sustained employment 1 year after completing the course” because it implies learners with that qualification met the standard required of employers. However this could also be an indicator of recognisability because it implies the learner was able to signal his/ her level of skills such that the employer employed them.
 - Responsiveness could be assessed using the indicator “high % of employers think VQs are not relevant or available for their roles or skills” because it implies the content of vocational qualifications does not meet their needs. But it can also be considered an indicator of innovation as a lack of relevance could imply that skills are not being taught or assessed in an appropriate way.

- We have therefore assessed market performance along two RRRI dimensions (i) recognisability and rigour, and (ii) responsiveness and innovation.
- Our indicator analysis in this Chapter provides an assessment of the relative performance of subject areas within the wider sub-market (adult general VQs, 16-19 general VQs and apprenticeships), rather than an assessment of how the vocational qualifications market is performing as a whole.³⁰ We find that performance varies across different parts of the market, for example:
 - ‘Technical’ subjects including Manufacturing Technologies, Engineering, Building and Construction and Accounting and Finance are relatively recognisable and rigorous, but not particularly responsive and innovative when compared to other subjects. However, this may reflect the relative importance of RRRI features to employers in these sectors. Stakeholders we interviewed did not express particular concern with the responsiveness of qualifications in these sectors, although some training providers and employer bodies we interviewed expressed a concern that smaller employers are not adequately represented in the design of qualifications³¹.
 - ICT subjects (ICT for Users and ICT for Practitioners) and subjects relating to arts and culture (including Performing Arts, Media and Communications and Languages, Literature and Culture of the British Isles) were relatively more responsive and innovative, but not necessarily as recognisable or rigorous as other subject areas.
 - Adult general VQs in Transport Operations and Maintenance and Retailing and Wholesaling appear to perform poorly on both recognisability and rigour, and responsiveness and innovation relative to other subjects.
- The analysis illustrates how varied the vocational qualifications market is, and that vocational qualifications demonstrate RRRI features to different extents in different parts of the market. It is important to appreciate this diversity in understanding how the market works, and in considering policy options of reform that affect the market as a whole.
- Further, the relative assessment in this chapter can be used to understand the potential drivers of weaknesses in the vocational qualifications market more generally, by analysing the correlation between relative performance and market features. This

³⁰ A purely quantitative assessment of absolute performance was not possible without international benchmarks or pre-specified thresholds for performance, which may not be robust.

³¹ It is also possible that this is because employers regard these vocational qualifications as providing the basic underpinning competences that learners need to enable them to do the more occupation-specific training that the employers provide in the workplace. Hence, employers may accept the vocational qualifications can't keep changing to keep pace with workplace change, which is in line with the Sainsbury Panel's view.

is explored further in the following chapter (chapter 7), which uses correlation analysis, other quantitative analysis and qualitative evidence to assess the weaknesses in the current vocational qualifications market.

Assessment of the extent to which vocational qualifications demonstrate RRRI characteristics

This section sets out our approach to assessing the relative performance of different vocational qualifications against the RRRI characteristics and describes our results. Importantly, in this chapter we focus on whether the characteristics have been observed and not on the reasons why that might be the case. For example, we do not explore in this chapter whether the market's performance can be attributed to AOs or qualifications, regulation, market structure or some other factor. The drivers of market weaknesses are considered in chapter 7 below.

Assessing market performance using indicator analysis

Data and methodology

To assess the extent to which vocational qualifications demonstrate RRRI features, we use a number of indicators for each feature. The indicators are drawn from three main data sources:

1. The **Individualised Learner Record (ILR)**, which provides information on all publicly funded qualifications, including their subject area, duration, completion status, awarding organisation and training provider
2. The **Employer Perspectives Survey (EPS)**, a survey of 18,000 employers commissioned by the UK Commission for Employment and Skills' (UKCES). It covers all sectors of the economy, and includes information on how employers are meeting their skills and recruitment needs, including their approaches to recruitment, their awareness and use of vocational qualifications and apprenticeships, and their training and engagement with training providers
3. The **Employer Skills Survey (ESS)**, a survey of over 91,000 employers across all sectors commissioned by the UK Commission for Employment and Skills' (UKCES). It contains information on employers' skills needs and training investment, including vacancies and skills shortages, employee and applicant skill gaps, and the recruitment of education leavers and young people

For the purposes of our analysis, we have grouped individual indicators into aggregate indicators measuring particular aspects of RRRI. For example, responsiveness and innovation is measured by the extent of employer involvement in creating qualifications, the extent to which the supply of qualifications in a particular area matches employer

demand, and the extent of market entry. In turn, each of these aspects is measured by a number of specific indicators; for example, employer involvement is measured by whether employers participate in designing qualifications, and whether employers feel that qualifications can be adapted to their needs. The full list of indicators for each RRRRI feature is shown in Table 4.

Table 4 Indicators

RRRI feature	Aggregate indicator	Sub Indicator	Measure of poor performance
Rigorous	Performance improvement	Business performance	High % employers disagree with statement that VQs improve business performance
		Ability to do jobs	High % employers disagree with statement that VQs improve staff's ability to do jobs
		Productivity	High % employers disagree with statement that VQs improve productivity
		Preparation for work	High % employers think college leavers are poorly or very poorly prepared for work
		Improve skills	High % employers think staff had skills gaps because training did not improve their skills
		Perceived rigour	High % employers think VQs are not as rigorous as other qualifications
	Changes over time	Course duration	Large % drop in average planned course duration 2010/11-2014/15
		Success rates	Large % rise success rates 2010/11-2014/15
Rigorous/ recognisable	Destinations	Sustained employment	Low % of learners in sustained employment 1 year after completing course
		Sustained learning or employment	Low % learners in sustained learning or employment 1 year after completing course
		Increased pay	High % employers think VQs rarely or never lead to increased pay
		Promotion or increased job status	High % employers think VQs rarely or never lead to promotion or improved job status
Recognisable	Recognisability	Fragmentation of AOs	High fragmentation of AOs per qualification (reverse HHI)

		Fragmentation of qualifications	High fragmentation of qualifications within market (reverse HHI)
		VQs significant in candidates	High % employers think having a relevant VQ is not significant in candidates
		Established VQs	Low % of VQs in 2014/15 have existed in substantial numbers (no less than a fifth of 2014/15 figures) since 2010/11
Responsive-ness/ innovation	Employer involvement	Adapted to business needs	High % employers disagree with statement that VQs can be adapted to business needs
		Participation in design	Low % employers in the sector helped design or set coursework
	Balanced demand and supply	Relevant and available	High % employers think VQs are not relevant or available for their roles or skills
		Cover all skills	High % employers disagree that VQs cover all skills needed by company
		Skill shortage vacancies	High % of skill shortage vacancies relative to all vacancies
		Lack of skilled applicants/ qualifications	High % of employers with vacancies that have vacancies due to lack of skilled applicants or qualifications
		Jobs to qualifications ratio	Low ratio of jobs to new qualifications (indicates over-supply of qualifications)
		Vacancies to qualifications ratio	Low ratio of vacancies to new qualifications (indicates over-supply of qualifications)
	Market entry	New qualifications	High % of learners in 2014/15 on qualifications that existed in 2010/11
		New AOs	High % of learners in 2014/15 with AOs that existed in 2010/11

Source: Frontier Economics

To make our observations about the performance of the market in relation to RRR1, we use a three-step process to flag vocational qualifications sub-markets that may not be adequately delivering each feature. The analysis assesses the *relative* performance of each subject area within the relevant sub-market – that is, we consider the sub-markets of adult general vocational qualifications, general vocational qualifications for 16-19 year

olds, and apprenticeships, and assess the relative performance of subjects within each. The process is as follows:

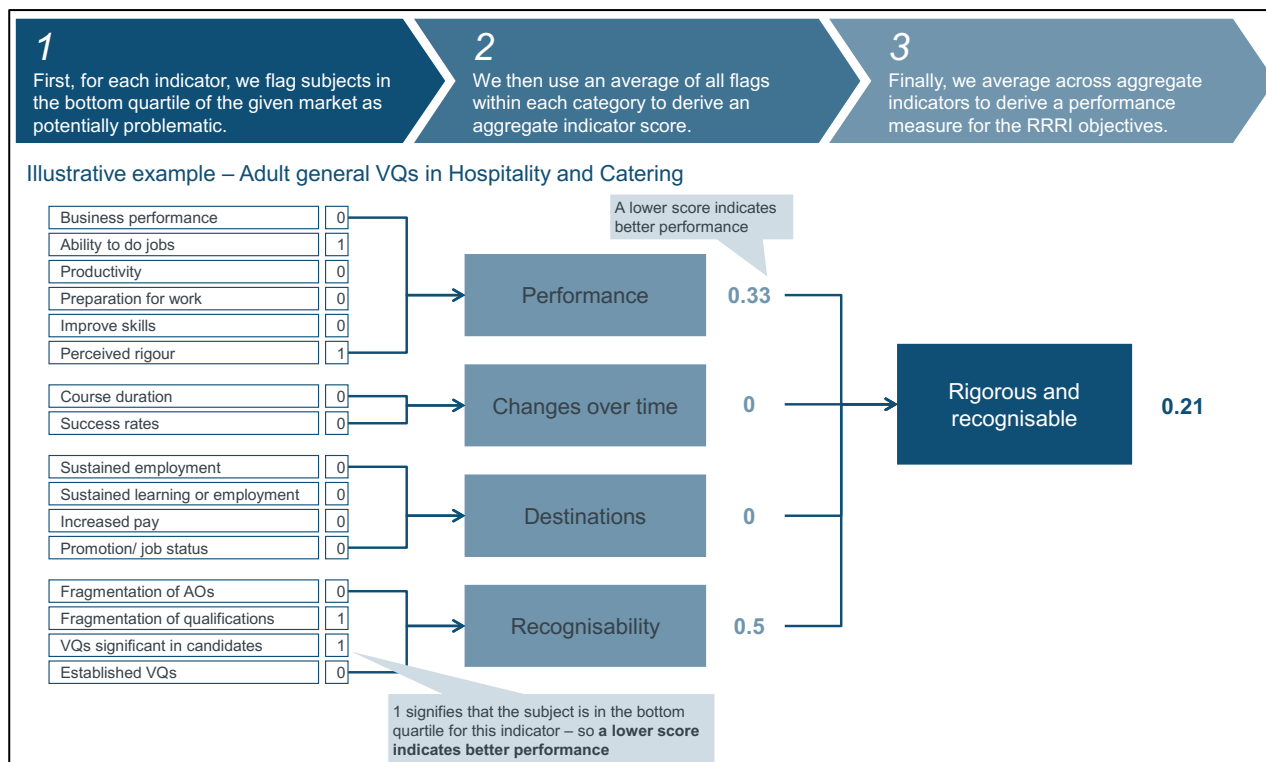
1. First, for each individual indicator we flag subjects that are in the bottom quartile of the sub-market in terms of performance, as potential poor performers relative to other subjects. Subjects in the bottom quartile are assigned a score of 1; all others are assigned a 0.
2. We then use an average of all flags within each category to derive an aggregate indicator score. For example, for an aggregate indicator comprised of two individual indicators (such as employer involvement), a subject that is in the bottom quartile for one indicator but not the other is assigned an aggregate score of 0.5.
3. Finally, we take the simple average (mean) across all aggregate indicators for recognisability and rigour, and for responsiveness and innovation, to derive an overall performance measure for the set of RRRRI features. We assess markets separately along these two dimensions, rather than creating a ranking along a single dimension, to reflect the potential trade-offs outlined above.

The approach of using multiple indicators means that we do not place undue weight on any single indicator. Instead, multiple sources of data are evaluated in combination. This is particularly important given the limitations of our data, set out in the following section.

A lower score indicates better relative performance of a particular subject area.

An illustration of our method for aggregating indicators is shown below.

Figure 17: Method of aggregating indicators



Source: Frontier Economics

We have carried out sensitivity checks of the weighting of indicators, for example by giving all indicators equal weight rather than averaging across aggregate indicators. We have also carried out a sensitivity check using the ranking of subject areas within their sub-markets, rather than simply flagging those subjects in the bottom quartile in terms of performance. The latter tests whether the analysis is sensitive to the threshold used, that is, whether results would differ if we used the bottom third, for example, rather than the bottom quartile. Our results are not particularly sensitive to either specification. Therefore, the overall performance scores for recognisability and rigour, and for responsiveness and innovation, do not appear to be driven by the specification we have selected so our conclusions about relative performance are considered robust.

Thresholds

Thresholds for the bottom quartile in each indicator are given in the table below, which presents separate thresholds for adult general vocational qualifications, general vocational qualifications for 16-19 year olds, and apprenticeships. For example, a threshold of 5% in the first indicator means that if more than 5% of employers disagree with the statement that vocational qualifications improve business performance in a given subject area, the subject area is flagged as being a potential poor performer relative to other subjects. While the choice of threshold is itself arbitrary, the use of bottom quartile gives a wide dispersion of scores across the quadrants. And as we describe above, the assessment of relative performance is not sensitive to our choice of threshold.

Table 5 Thresholds for low-performing indicators (bottom quartile)

RRRI	Aggregate indicator	Indicator	Flag if ___ than threshold	Threshold for low performance		
				Adult general VQ	Young general VQ	Apprenticeship
Rigorous	Performance improvement	% Disagree: VQs improve business performance	Higher	5%	5%	5%
		% Disagree: VQs improve ability to do jobs	Higher	4%	4%	4%
		% Disagree: VQs improve productivity	Higher	7%	7%	7%
		% Training did not improve skills	Higher	4%	4%	4%
		% VQs not as rigorous as other qualifications	Higher	14%	14%	14%
		% College leavers poorly prepared for work	Higher	34%	34%	35%
	Changes over time	Change in success rates 2010/11-2014/15	Higher	16%	9%	-1%
		Change in VQ duration 2010/11-2014/15	Lower	-56%	-18%	10%
Rigorous/ recognisable	Destinations	% Sustained employment	Lower	49%	41%	NA
		% Sustained learning or employment	Lower	64%	70%	84%
		% Disagree: VQs lead to better pay	Higher	67%	67%	68%
		% Disagree: VQs lead to promotion or improved job status	Higher	76%	76%	76%
Recognisable	Recognisability	Fragmentation of AOs per qualification	Higher	755	736	533
		Fragmentation qualifications per subject area	Higher	60	43	171

		% Established qualifications	Lower	22%	25%	7%
		% Relevant VQs not significant in candidates	Higher	48%	48%	48%
Responsiveness/ innovation	Employer involvement	% Disagree: VQs can be adapted to business needs	Higher	7%	7%	7%
		% Helped design or set coursework	Lower	3%	3%	3%
	Balanced demand and supply	% VQs not relevant or available	Higher	20%	20%	20%
		% VQs do not cover all skills needed	Higher	21%	21%	22%
		% Vacancies due to skills shortage	Higher	30%	30%	31%
		% Vacancies due to lack of skilled applicants or qualifications	Higher	12%	12%	13%
		Jobs to new qualifications ratio	Lower	15.6	15.6	15.6
		Vacancies to new qualifications ratio	Lower	0.3	0.3	0.3
	Market entry	% Learners on new AO	Lower	4%	1%	2%
		% Learners on new qualification	Lower	29%	26%	13%

Source: ILR, ESS, EPS

It is worth noting that in some cases, thresholds differ between adult general vocational qualifications, 16-19 general vocational qualifications and apprenticeships, reflecting differences between these sub-markets. For example, there has been a sharp drop in the average duration of qualifications in the adult general vocational qualifications market between 2010/11 and 2014/15, a smaller drop in the 16-19 general vocational qualifications market, and a rise in the market for qualifications as part of apprenticeships. The thresholds reflect these differences: subject areas that have seen more than a 16% drop in duration fall within the bottom quartile for adult general vocational qualifications, whilst the threshold is just 9% for 16-19 general vocational qualifications and a 1% rise for apprenticeships.

Marked differences in thresholds across the sub-markets are also found in the following indicators:

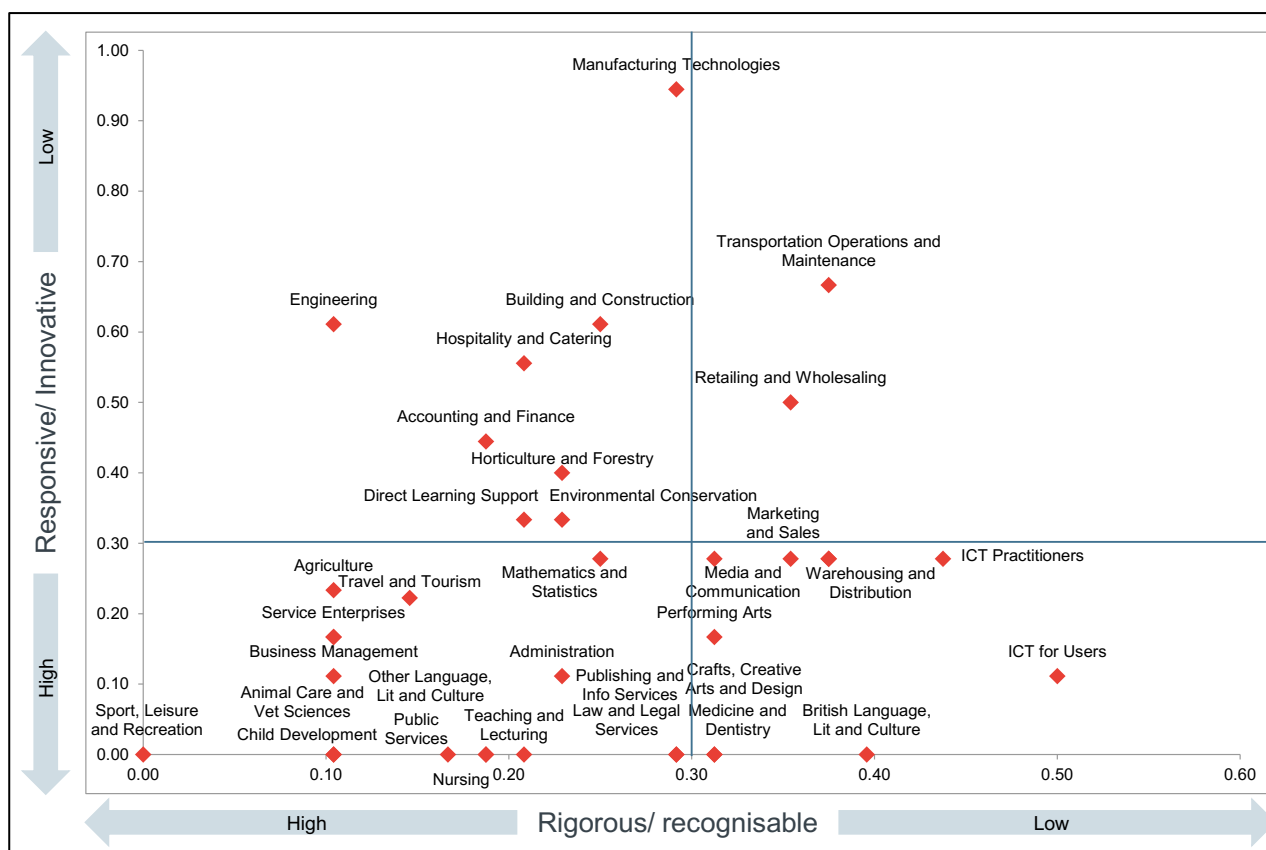
- The change in the average duration of qualifications – adult general vocational qualifications experienced large reductions in duration whereas apprenticeships experienced increases.
- The percentage of learners going into sustained learning or employment – adult general vocational qualifications led to lower rates of positive destinations (1 year after completing their qualification) and apprenticeships to higher rates
- The share of established qualifications and the percentage of learners on new qualifications – qualifications for apprenticeship tend to be newer.
- The level of fragmentation (reflecting the extent to which multiple AOs and/ or qualifications exist in the market) – general vocational qualifications are more fragmented than apprenticeships in terms of the number of awarding organisations offering each qualification, but less fragmented in terms of the number of qualifications offered within each subject area.

Findings of our indicator analysis

A summary of the overall performance of subject areas in the adult general vocational qualifications market in terms of recognisability and rigour, and responsiveness and innovation, is given below. Summaries of the 16-19 general vocational qualifications and apprenticeships markets can be found in the annex, along with the performance of subject areas in each individual indicator in each of the three sub-markets.

As indicators were awarded a '1' if they were in the bottom quartile, this means that when we aggregate indicators to provide an overall assessment by subject area, subjects scoring closer to zero along either dimension are higher performing than those scoring closer to 1, i.e. the lower the score, the better the relative performance.

Figure 18: Relative performance for adult general VQs – relative performance quadrants³²



Source: Frontier analysis using data from the ILR, ESS, EPS

We have divided subject areas into four quadrants for ease of illustration, as seen above. The top right quadrant contains subjects that score relatively poorly on both recognisability and rigour, and responsiveness and innovation, and therefore give cause for concern. The bottom left quadrant contains subjects that are rarely flagged (in the bottom quartile) on either dimension of RRRRI – this implies that they are less likely to be problematic, however this does not mean that they are the ‘highest scoring’ subjects in all indicators, if indeed such a thing can be defined. The bottom right and top left quadrants contain subjects that score relatively poorly on either recognisability and rigour, or responsiveness and innovation, but relatively well on the other dimension. This could reflect potential problems in the market; however, it could also result from the trade-off between RRRRI features discussed above, and how particular elements of the RRRRI characteristics may be more important for particular subject areas.

An overall performance score of 0.3 was used as a dividing line for the quadrants. This was chosen in order to assign roughly equal numbers of subjects to the well-performing quadrant as to the three potentially poorly performing quadrants. We note that the

³² Note that the horizontal axis spans 0-0.6, whilst the vertical axis spans 0-1.

dividing line was chosen for illustrative purposes, to more easily discuss groups of subjects, and does not as such have any underlying significance. Naturally, the subjects in each quadrant will be sensitive to the dividing line chosen.

The two subject areas in the top right quadrant are Transport Operations and Maintenance, and Retailing and Wholesaling. Transport Operations and Maintenance qualifications scored particularly poorly on positive destinations, balancing supply and demand and market entry, in which they were flagged as being in the bottom quartile along all or almost all indicators. To give an indication of absolute performance, only 47% of learners in this subject area achieved sustained learning or employment (including self-employment), 21% of employers thought that VQs were not relevant or available, and only 3% of learners in 2014/15 were taking qualifications from a new AO (that entered the subject area after 2010/11).

Retailing and Wholesaling qualifications performed relatively poorly across most aggregate indicators. Average course duration within Retailing and Wholesaling fell by 85% between 2010/11 and 2014/15, and only 52% of learners achieved sustained learning or employment. Only 1% of Retailing and Wholesaling employers were involved in designing content, 31% had vacancies due to skills shortages, and only 7% of learners were taking qualifications from a new AO.

Subject areas in the top left quadrant include Manufacturing Technologies, Engineering, Building and Construction, Hospitality and Catering and Accounting and Finance. These subjects appear to be relatively recognisable and rigorous, but not particularly responsive and innovative. It is worth noting that many of these subjects relate to 'technical' sectors, in which Professional Bodies have a strong presence. Their relative performance along the two dimensions may simply reflect the relative importance of recognisability and rigour, as opposed to responsiveness and innovation, by employers in the sectors. Indeed, stakeholders we interviewed as part of our qualitative research did not express particular concern with the responsiveness of qualifications in these sectors.

However, it is worth noting that Manufacturing Technologies, Engineering and Building and Construction scored particularly poorly on employer involvement, with only 1-2% of employers involved in the design of content, and 8-11% of employers stating that VQs could not be adapted to business needs. Our qualitative research suggests that this may be because smaller employers are not adequately consulted by awarding organisations in these subject areas, and employer panels involved in designing qualifications tend to include representatives from predominantly larger firms.

The bottom right quadrant of subject areas that are responsive and innovative, but not necessarily recognisable and rigorous, largely contains ICT subjects and subjects relating to arts and culture. ICT for Users and ICT for Practitioners scored particularly poorly on performance improvement and positive destinations; only 54% and 59% of

learners respectively achieved sustained learning or employment. Most subject areas in this quadrant scored poorly on changes over time, but this was particularly the case for the two arts subjects, Performing Arts and Crafts, Creative Arts and Design. Both saw a drop in average course duration of 60% between 2010/11 and 2014/15, whilst average success rates rose by 25% and 16% respectively.

The bottom left quadrant contains subjects that are performing relatively well in terms of all RRRRI features. As stated above, it is important to note that this means they have not been flagged as potential poor performers (in the bottom quartile) of many or any individual indicators, and not that they are the 'highest scoring' subjects in all indicators, if indeed such a thing can be defined. As such, the way to interpret subjects in this quadrant is that they do not appear to be performing relatively poorly in any dimension based on our indicator analysis, and not necessarily that they are the 'top performers' in the market.

For example, Sports, Leisure and Recreation has an overall performance score of 0 along both dimensions, which means that it was not in the bottom quartile of any RRRRI indicators. However, this does not mean that it was the highest performing subject in all indicators: for example, 71% of learners in Sports, Leisure and Recreation achieved sustained learning or employment, which is high but not as high as in Medicine and Dentistry (85%). For other indicators, for example indicators on fragmentation or market entry, it is not clear what the optimal level should be. We can say that very high fragmentation or very low market entry is potentially problematic, but we cannot say that no fragmentation (only one AO and one qualification per subject) or 100% market entry (no learners on pre-existing AOs or qualifications) is desirable; therefore, we cannot compare Sports, Leisure and Recreation with other subjects that also have relatively low fragmentation and relatively high market entry.

To reiterate, the aim of the indicator analysis is to make observations about the market and highlight areas of concern, and not to identify the 'top performers' in the market.

It is worth noting that the distribution of subject areas across quadrants is generally similar for 16-19 general VQs and apprenticeships as for the adult general VQs described above. The notable exception is Retailing and Wholesaling apprenticeships, which score well among on all four RRRRI dimensions. Retailing and Wholesaling apprenticeships appear to have become substantially more demanding over time, with average course duration increasing by 58% between 2010/11 and 2014/15, and average success rates falling by 24%. Positive destinations are particularly high, with 92% of learners moving into sustained learning or employment; and 16% of learners in 2014/15 were taking qualifications from a new AO.

Preparation for Work and Foundations for Life and Work are not included in the summary above, due to missing data from employer surveys. However, it is worth noting that both

score poorly on positive destinations, with 61% and 45% of learners moving into sustained learning or employment respectively. Both subjects also score poorly on changes over time, with average course duration falling by 20% and 65% respectively, and success rates rising by 7% and 18% respectively. The ILR data therefore suggests that these subjects may potentially be underperforming, although we do not have enough data to assess their overall performance.

Limitations

Our quantitative assessment of the market aims to explore the variation within the qualifications market and produce measures of performance in different parts of the market. It uses the best available data, but is subject to a number of limitations. A particular limitation is that it offers only a relative assessment of different subject areas within a particular sub-market, rather than an absolute assessment of performance.

The difference in thresholds for the bottom quartile between adult general vocational qualifications, 16-19 general vocational qualifications and apprenticeships illustrates the fact that subjects that perform the same in absolute terms (for instance, subjects that see a 16% drop in duration) may be scored differently in relative terms across the three sub-markets. Further, it is possible that all subject areas are performing well – or performing poorly – from an absolute standpoint, which would not be picked up by our relative approach.

For an assessment of absolute performance at the sub-market level, we would either need international benchmarks along the same indicators or some predetermined thresholds for each indicator. The data was not available for international benchmarks, and it was felt that using predetermined thresholds would not be sufficiently robust. However, in the following chapter we use a range of both quantitative and qualitative sources to perform an absolute assessment of the vocational qualifications market as a whole (not at the level of individual sub-markets).

For some markets and subjects, indicator data were not available at the appropriate level of detail. Some survey data could only be matched at the sector and occupation level (for example, Technical Professions in Manufacturing), rather than to the individual sub-markets defined above. In these cases, outcomes in specific markets were proxied by the most appropriate sector-occupation data (for example, apprenticeships in Manufacturing Technologies being proxied by Technical Professions in Manufacturing), which means that certain indicators may be imprecisely matched for some market segments. Preparation for Work and Foundations for Life and Work could not be matched at all for indicators derived from employer surveys (ESS and EPS), which means that there were not enough indicators to form an overall performance score for these two subjects. Further, some data were only available for adult learners.

Data shortcomings mean that some individual indicators may not be adequately robust. We attempt to mitigate this by averaging individual indicators into aggregate indicators, and further aggregating these into an overall performance score for each RRI dimension. It is therefore important to take each individual measure as indicative rather than conclusive; all indicators should be viewed alongside all other indicators of the RRI outcome.

7. Assessment of market weaknesses

In the previous chapter we presented analysis on the relative performance of different parts of the vocational qualifications market. This chapter focuses on the extent to which weaknesses exist in the market as a whole and the drivers of those weaknesses.

To do this, we start from first principles and consider the incentives and capabilities of different stakeholders in the vocational qualifications market, including AOs, training providers, learners, employers and regulators. We then form a number of hypotheses on how these incentives and capabilities could prevent the desirable RRRRI features from being achieved. We then test our hypotheses using a range of evidence including the following:

- Quantitative analysis on the hypotheses (for example, if the data shows success rates rising and course lengths falling over time, and if AOs with higher success rates in one year attract more training providers the following year, this could suggest a race to the bottom in terms of rigour);
- Quantitative analysis of the relationship between relative performance and observed RRRRI features (for example, if segments of the market with less competition between AOs also have lower levels of innovation, this could suggest that a lack of competition inhibits innovation); and
- Qualitative evidence from 35 semi-structured stakeholder interviews that directly address the hypotheses.

We conclude the chapter with the potential weaknesses in the market, in particular discussing the role of market structure in preventing the RRRRI features of vocational qualifications from being observed. Options for reforming the vocational qualifications market to improve recognisability, rigour, responsiveness and/ or innovation are discussed in Chapter 8.

Key findings

Our analysis has identified evidence of the following market weaknesses:

- **Misaligned incentives potentially lead to a ‘race to the bottom’ in terms of rigour** – The importance of success rates as part of Ofsted ratings may provide an incentive for training providers to choose AOs and qualifications that are ‘easier to pass’. For both young and adult vocational qualification markets (but not the apprenticeships market), we observe a rise in success rates and a fall in course duration over time, and find that AOs that have higher success rates than their competitors in one year attract higher numbers of learners the following year. These findings are consistent with a race to the bottom in terms of rigour, though

we note other factors also drive training providers' decisions and thus we cannot prove the link.

- **Insufficient content regulation potentially leads to lower rigour** – The regulation of general vocational qualifications, which does not include regulation of curriculum content and assessment strategies, appears insufficient to prevent a race to the bottom in terms of rigour. In contrast, in the apprenticeships market where content is directly regulated through apprenticeship frameworks, we do not observe a race to the bottom.
- **High barriers to training providers switching between AOs in other parts of the market, potentially leading to lower rigour, responsiveness and innovation from AOs** – Our stakeholder interviews suggested that high barriers to switching restrict effective choice by training providers between AOs even in sub-markets where multiple AOs exist. This analysis suggests there are multiple parts of the vocational qualification market where AOs operate in a way that is not constrained by competitors or a regulatory framework mimicking competitive pressure. Our quantitative analysis, we found that a low rate of switching between AOs was correlated with lower levels of rigour, responsiveness and innovation.
- **Some smaller training providers lack the tools to navigate the system which potentially leads to lower rigour, recognisability, responsiveness and innovation** – Some stakeholders expressed a concern that smaller training providers, in particular private providers, do not have the capacity or access to the appropriate tools to select qualifications that best meet their employers' and learners' needs. This is in contrast to FE colleges, which often have dedicated market research teams to monitor the market. In our quantitative analysis, we find that the share of private training providers in a sub-market is negatively correlated with RRRI outcomes i.e. the greater the proportion of smaller training providers in a sub-market, the poorer the overall performance of that market.
- **Smaller employers are often less likely to be represented in the development of vocational qualifications which potentially leads to lower responsiveness** – Both our quantitative and qualitative findings indicate that smaller employers are less likely to be involved in designing qualifications than larger employers. This means that the qualifications provided may be less suited to their skills needs, where these are systematically different from the needs of larger employers.
- **Insufficient head-to-head competition potentially leads to lower responsiveness and innovation** – Despite the proliferation of AOs in most segments of the market, competition between AOs at the level of individual qualifications is limited. If this is the case, AOs may face limited incentives to provide high quality customer service and innovate in terms of technology and support. We find that head-to-head competition is correlated with higher responsiveness and innovation. Training providers we interviewed gave examples

of AOs in sub-markets with no alternative options that fail to innovate or respond to changing technologies. Stakeholders suggested that AOs often compete on the basis of the services they provide and their ability to offer innovative assessment methods, particularly in relation to some subject areas (e.g. by moving to online approaches).

As a wider issue relevant for government policy (not directly linked to the RRRRI features), our analysis also reveals that particularly at lower levels of study, a high proportion of learners take multiple qualifications at the same level. This suggests that learners may not face clear routes to progression and/ or sufficient incentives to progress onto higher levels of learning.

Some of the weaknesses listed above could be addressed through incremental reforms; however it appears that a number of weaknesses are inherently linked to the competitive nature of the market for vocational qualifications. This is due to the complex nature of the vocational qualifications market, including a long customer chain and quality that is difficult to define and observe, as discussed in Chapter 2. In our assessment of policy options for reform in Chapter 8 below, we therefore focus our analysis on reforms to market structure.

It is worth noting that the weaknesses above were identified and assessed in the context of an overarching assessment of the vocational qualifications market. As discussed in Chapter 6, the sector is very diverse with different segments of the market facing different priorities and demonstrating the desired RRRRI features to different extents. As such, not all of the weaknesses identified will be relevant in all segments of the vocational qualifications market, and it is important to consider the implications of overarching reforms to the market on different market segments.

The rest of this chapter explores the stakeholders in the vocational qualifications market and the incentives they face which in turn drives their behaviour. We then consider a number of hypotheses relating to weaknesses in the vocational qualifications market that hinder RRRRI outcomes being observed, and test these hypotheses using both quantitative and qualitative analysis.

Stakeholders in the vocational qualifications market

The publicly funded vocational qualifications market consists of a large number of stakeholders, including:

- **Awarding organisations** who are responsible for developing qualifications that qualify for public funding and meet the needs of training providers and employers. As independent organisations, they must ensure profitability and financial viability, which implies maintaining revenue by selling qualifications and reducing costs.

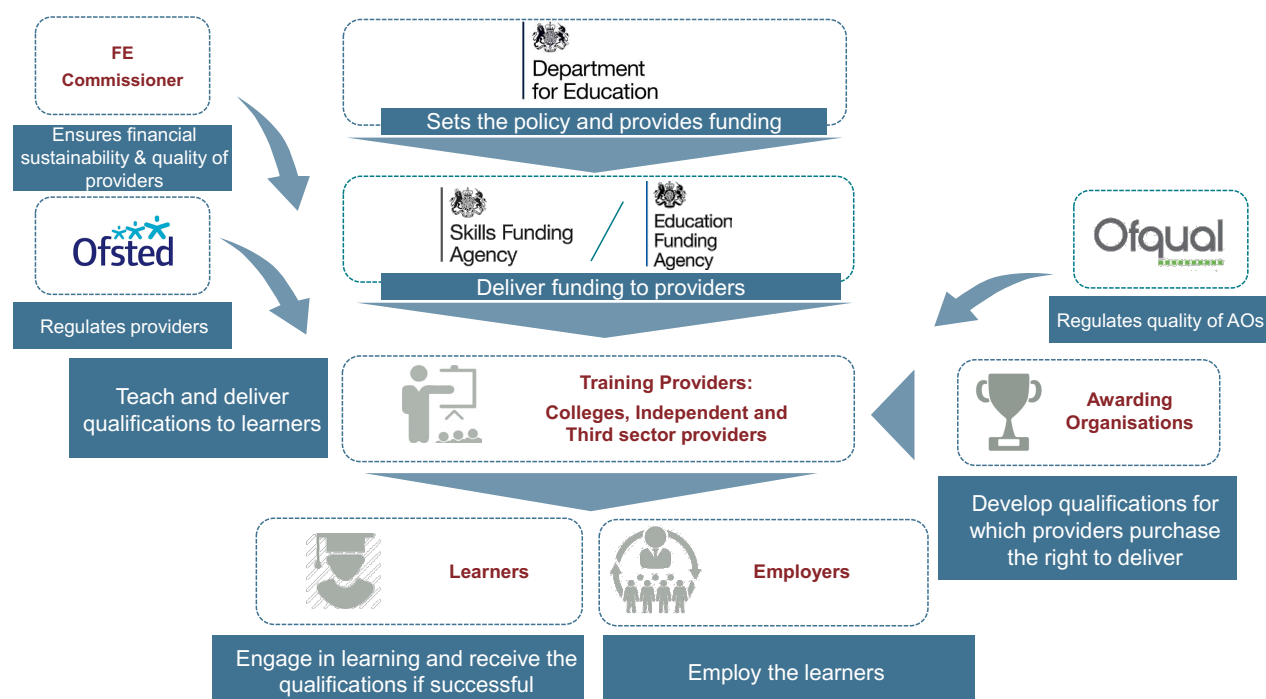
The strength of the profit motive will vary depending on the status of each AO, some of whom are private companies and many of whom are charities.

- **Training providers** who purchase the right to deliver qualifications from AOs. Their public funding is affected by outcomes in terms of retention (16-19) and success rates (19+). Training providers must aim for a good Ofsted performance and other minimum standards such as financial viability in order to be eligible for public funding.
- **Learners** who study towards qualifications to increase their chances of employment or continued education (HE or onward FE).³³ They generally choose the training provider and not the AO.
- **Employers** who employ learners with (or undertaking) vocational qualifications or pay for staff to undergo training. Some employers also work with training providers and AOs to design qualifications to meet their needs. They are likely to be sensitive to the price of staff training.
- **Regulators** who regulate AOs and training providers. Ofqual is responsible for regulating the processes and financial viability of AOs supplying publicly funded qualifications, but does not regulate content directly. Ofsted is responsible for regulating training providers. Following inspections, Ofsted produces 'ratings' as an indicator of quality of training providers, with success rates and learner destinations among the key assessment metrics.
- **Central government** which sets and implements policy on which qualifications are funded, and delivers funding to eligible training providers. The structure and incentives in funding will in turn affect training providers' (and employers') behaviour.

The interactions between the different stakeholders in the publicly funded vocational qualifications market are summarised below. The incentives and capabilities of each stakeholder group, and the ways in which they could potentially lead to negative outcomes (adverse effects), are discussed in the following section.

³³ Under Raising the Participation Age (RPA) all young people are expected to continue in education or training until their 18th birthday.

Figure 19: Interaction of parties in the vocational qualifications market



Incentives and capabilities of stakeholders

The range of stakeholders above face different and sometimes conflicting incentives. Further, stakeholders may face a range of constraints, including limits to their resources or remits (in the case of regulators). The incentives and capabilities of each of these organisations are key to the way in which the market functions and the outcomes it delivers. In some cases, these incentives can lead to negative outcomes (adverse effects), which inhibit the RRR characteristics from being demonstrated. We therefore consider the incentives and capabilities of each type of stakeholder in detail, to form hypotheses about potential weaknesses in the vocational qualifications market.

Awarding Organisations

AOs are private commercial organisations and charities that must ensure financial viability, while meeting Ofqual requirements.

To maximise revenue and ensure financial viability, AOs have an incentive to provide qualifications that are in demand from training providers, as well as develop new qualifications that will be in demand. They also have an incentive to minimise costs, subject to meeting Ofqual standards. One way for AOs to cut costs is by reducing the level and quality of service provided to training providers, for example reducing customer

service, teaching and learning support and/ or limiting technological innovations. Another way is by being slower to adapt to changing employer demands, for example not refreshing content to reflect changes in technology.

Many AOs are charities, which may dilute their profit motive. In particular, in some sectors the Professional Body of the sector (for example the Association of Accounting Technicians in Accounting) also acts as an AO. In these cases, the supplier of qualifications (the AO) also represents the ultimate consumers of qualifications (the employers)³⁴.

The incentives facing and capabilities of AOs could potentially give rise to the following weaknesses:

- AOs may reduce costs by reducing innovation, in particular in the quality and level of service provided, or by reducing responsiveness by adapting more slowly to changes in employer demands. This is particularly likely in segments of the market where training providers have few AOs to choose from, as they are less able to switch to other AOs.
- Qualifications in sectors without Professional Bodies may be less recognisable, rigorous and responsive to employer needs. This would be the case if the incentives of AOs are more closely aligned with those of employers in sectors with Professional Bodies, and/ or if AOs were better informed of employer needs in these sectors.

Training providers

Training providers receive public funding based on the number and type of learners recruited, retention (for 16-19 year olds) and success rates (for 19+ year olds). Their Ofsted rating is affected by their retention and success rates, as well as the destinations of their leavers (whether they are in sustained learning or employment after completing the qualification)³⁵. They therefore have an incentive to maximise recruitment as well as their learners' success rates.

Our stakeholder evidence suggests that training providers aim to meet their learners' needs by choosing qualifications that suit them and prepare them for further education or employment. As such, training providers serve as 'gatekeepers' between AOs and the end consumer. However, in many markets there are a very large number of qualifications

³⁴ Where the professional body plays this dual role, there clearly needs to be a separation of these two functions.

³⁵ Only a small proportion of the qualifications eligible for public funding will count in performance tables, which will directly influence their choice of qualifications.

available, which means that training providers may lack the capacity to monitor the entire market to identify the most suitable ones for their learners. Further, if training providers spend a high proportion of their costs on AOs, they may have an incentive to choose low-price qualifications at the expense of rigour, recognisability and/ or responsiveness. This is more likely in markets with a high proportion of private training providers, for whom qualifications account for a much larger share of their costs (around 10%) than for colleges (around 2-3%).

Stakeholders suggested that training providers face substantial costs when switching AOs, due to the costs of running multiple qualifications in the transition period, re-training staff and the costs of building a relationship with a new AO. Further, training providers we interviewed suggested that different AOs typically place different requirements on training providers, which means that switching AOs may entail substantial investments to meet new quality assurance processes.

The incentives and capabilities of training providers could potentially lead to the following weaknesses in the market:

- The importance of success rates to funding may lead training providers to choose qualifications and AOs that are 'easier to pass', rather than those that are more rigorous or suited to the needs of learners and employers. This could lead to a 'race to the bottom' in terms of rigour, particularly if the content of qualifications is not regulated (discussed below).
- Because of the wide range of qualifications available in some markets, smaller and/ or less informed training providers (without the scale needed for dedicated market research teams) may find it difficult to select qualifications and AOs that best meet their needs. Further, private training providers may place more emphasis on price than quality in selecting qualifications (compared to colleges), since qualification-related costs account for a higher proportion of their overall costs. In both of these cases, we would expect worse performance against some or all of the RRRRI features.
- Barriers to switching AOs may prevent training providers from exercising choice between AOs, even in segments of the market in which multiple AOs are present. This could lead to lower responsiveness and innovation on the part of AOs.

Learners and employers

Learners seek vocational qualifications to increase their chances of employment, career progression or continued education. However, stakeholders suggest that they may not always be informed about the best options available. Given the proliferation of qualifications in some subject areas, there may not be clear routes to progression in terms of one qualification leading to another (for example, a Level 2 qualification clearly

and directly following from a Level 1 qualification). Further, under the current system it is possible to obtain public funding for multiple qualifications at the same level without progressing onto higher levels of learning.

Our stakeholder evidence suggested that employers would prefer the learners they hire to take qualifications that closely match the skills and competencies required in their jobs. However, as the content and assessment of qualifications is generally set by AOs, in most cases employers can only influence content and assessment methods through engagement with AOs (the exception is the apprenticeships market, in which employers will engage directly in setting the new apprenticeship standards). The capability of employers to actively engage in designing qualifications will depend on their size, due to the resources required. Larger employers are also likely to have more incentive to engage, as the cost of engagement is roughly independent of size whilst employers hiring a larger number of learners would derive more benefit from engagement. Further, in selecting representatives to their employer panels AOs are likely to favour larger employers, who would be likely to hire a larger number of the AOs' learners.

The incentives and capabilities of learners and employers could potentially give rise to the following weaknesses:

- Some learners may take multiple qualifications at the same level without progressing onto higher levels of learning, due to a lack of clear routes to progression (given a proliferation of qualifications) and/ or insufficient incentives to progress.
- Smaller employers may be less likely to be involved in designing qualifications, which may mean that qualifications in the market are less responsive to the skills needs of smaller employers, which matters if these differ from the needs of larger employers.

Regulators

Ofsted regulates training providers through inspections. Achievement, retention and success rates are key metrics in Ofsted ratings. Following inspection Ofsted produces 'ratings' which are a key indicator of quality for training providers, which has implications on the ability of training providers to attract learners (and therefore generate revenue) and, in the case of private training providers, direct implications on eligibility for SFA funding.

Ofqual regulates the process and financial viability of AOs, to ensure compliance with the General Conditions of Recognition (the Conditions). An AO must meet the Conditions to be recognised by Ofqual, which has serious implications on the ability of training providers to attract public funding when using that AO. The Conditions apply to the processes AOs take in designing and delivering qualifications (for example, requiring

AOs to engage with employers), but crucially do not apply directly to the content of qualifications offered by AOs for general vocational qualifications. However, the regulatory system for apprenticeships has changed in recent years, such that the content of apprenticeships is directly regulated through apprenticeship frameworks.

AOs are responsible for setting the standards of training providers: in accordance with the Conditions, AOs will check whether the training provider has a robust internal quality assurance system to maintain the consistency and accuracy of assessments. In most cases, AOs will also conduct external quality assurance visits to ensure that training providers are meeting required standards.

However, some training providers may be awarded Direct Claims Status (DCS), which allows them to directly claim credit certificates for their learners without the need for an external quality assurance visit from the AO. This gives the internal quality assurer greater control over the process for checking and approving awards, which may bring some administrative benefits. AOs have their own criteria for awarding DCS, and usually require training providers to have achieved successful consecutive number of external quality assurance visits from the AO, have a working internal review system and have good financial standings. DCS status is not regulated by Ofqual; nor is there a current record of which training providers hold DCS status.

The incentives and capabilities of regulators may potentially result in the following weaknesses in the market:

- The focus of Ofsted inspections on achievement and retention (which together determine success rates) may induce training providers to select qualifications and AOs that are easier to pass, potentially driving a 'race to the bottom' as discussed above.
- The limits to Ofqual's remit, in particular the lack of direct content regulation for general vocational qualifications, may mean that current regulation is not sufficient to prevent a race to the bottom.
- The use of DCS may further reduce rigour if training providers do not adequately maintain standards, especially given incentives on training providers to maximise success rates.

Hypotheses on market weaknesses

Our analysis of the incentives and capabilities of key stakeholders allowed us to form a number of hypotheses about potential weaknesses in the market, which limit the ability of the market to deliver against one or more desirable RRRI features.

Table 6 Hypotheses on market weaknesses

Hypothesis	RRRI outcome affected
1. There may be a race to the bottom in terms of rigour, if training providers choose qualifications and AOs that are easier to pass to maximise success rates	Rigour
2. The race to the bottom may be prevented or mitigated in the market for apprenticeships, where content is regulated through apprenticeship frameworks. However, this may not be the case in for general vocational qualifications, as Ofqual does not directly regulate content.	Rigour
3. The use of Direct Claims Status may further reduce rigour and drive a race to the bottom, if assessment standards are not appropriately maintained by colleges or monitored by AOs.	Rigour
4. Barriers to switching AOs may prevent training providers from exercising choice between AOs, even in segments of the market in which multiple AOs are present. This means that AOs may not select the most suitable qualifications for their learners and employers.	Responsiveness and/ or innovation
5. Smaller training providers may lack sufficient resources to navigate the market, whilst private training providers may place more emphasis on price rather than quality. This may result in poorer outcomes in parts of the market with a high share of such providers.	Any/ all RRRI outcomes
6. Smaller employers may be less likely to be involved in designing qualifications than larger employers, which may mean that qualifications in the market are less responsive to their skills needs.	Responsiveness
7. Segments of the market with high levels of concentration (fewer AOs to choose from) may be less responsive and/ or innovative, as AOs are able cut costs by reducing levels and quality of service and/ or adapting more slowly to employer demands without losing training providers.	Responsiveness and/ or innovation

<p>8. Subjects without Professional Bodies may be less recognisable, rigorous and/ or responsive, if AOs that are also Professional Bodies are more closely aligned with employers (in terms of their incentives), and/ or better informed of employer needs.</p>	<p>Recognisability, rigour and/ or responsiveness</p>
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Further, as a more general weakness in the market (not directly related to RRRRI metrics), we hypothesise that some learners may fail to progress onto higher levels of learning. In particular, some learners may take multiple qualifications at the same level due to a lack of clear routes to progression and/ or insufficient incentives to progress.

The above hypotheses are based on a first principles analysis of the incentives facing stakeholders in the market. In the following section, we test these hypotheses using a range of quantitative and qualitative evidence.

Analysis of market weaknesses

We test our hypotheses on potential market weaknesses using a range of evidence. In particular, we draw on:

- Quantitative analysis directly testing the hypotheses. For example, if the data shows success rates rising and course lengths falling over time, and if AOs with higher success rates (than its competitors) in one year attract more training providers the following year, this provides evidence supportive of the ‘race to the bottom’ hypothesis.
- Quantitative analysis of the relationship between relative performance and market features. For example, if segments of the market with high levels of concentration (fewer AOs to choose from) also have lower levels of innovation, this provides evidence supportive of the hypothesis that concentration reduces innovation.
- Qualitative analysis of 35 semi-structured stakeholder interviews that directly address the hypotheses. Stakeholders interviewed included regulators and a cross-section of training providers, AOs and employers/ employer bodies of different sizes, subject areas and locations.

Our analysis found little or inconclusive evidence to support hypotheses 3 and 8 in Table 6:

- **Hypothesis 3: The use of DCS may further reduce rigour.** Based on our interviews, DCS appears to be very widespread, with some training providers using DCS for the majority of their qualifications. However, as data on DCS is not

centrally held, it was not possible to quantitatively test the impact of DCS on rigour. Further, our stakeholder interviews suggest that DCS provides substantial benefits to training providers in terms of flexibility and control over assessment timings, but lack of evidence about the impacts on RRRRI outcomes means that we cannot robustly test this hypothesis.

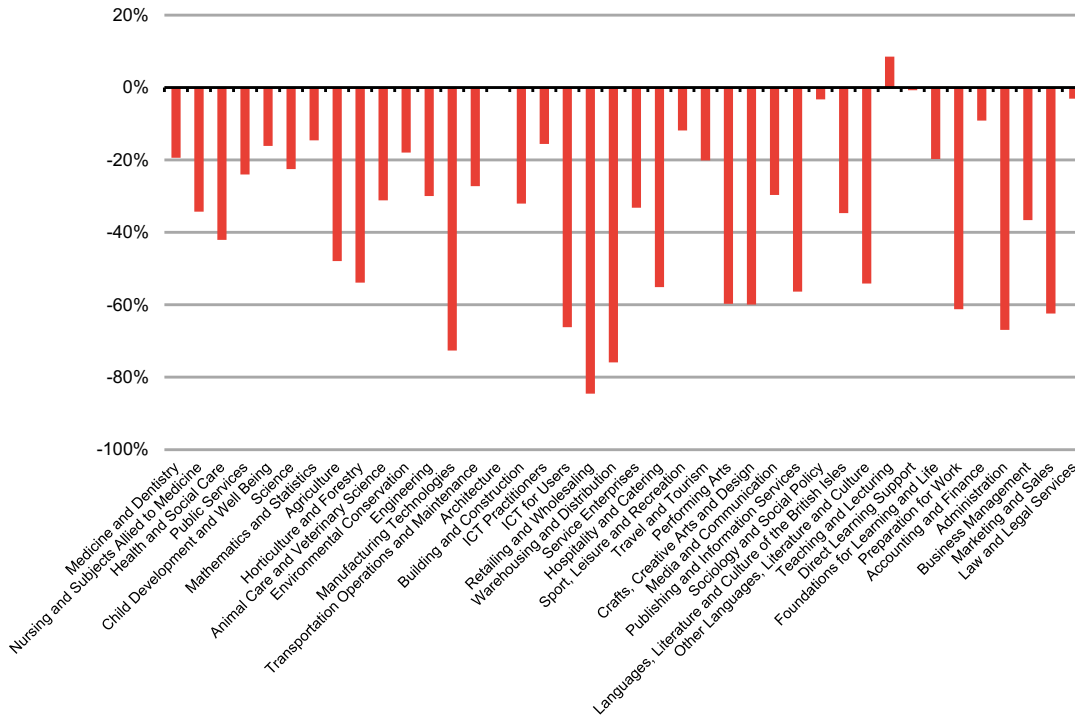
- **Hypothesis 8: Sectors without Professional Bodies may be less rigorous, recognisable and/ or responsive.** Most training providers we interviewed felt that Professional Bodies are the natural choice of AO where they exist, as they are preferred by employers. This implies higher rigour, recognisability and/ or responsiveness in sectors with Professional Bodies. However, our quantitative analysis contradicts this finding, as the market share of Professional Bodies (indicating the prominence of Professional Bodies in a sector) is negatively correlated with both rigour/ recognisable and responsive/ innovative indicators. This could suggest a number of possible issues, including perceptions of quality not being aligned with actual quality, and the reputation of the AO being trusted at the expense of an objective assessment of rigour by employers and training providers. Given the apparent contradiction in findings between our quantitative evidence and our qualitative evidence, we cannot robustly test this hypothesis. However, where Professional Bodies act as the AO for the sector, we believe that there should be a clear separation of these different functions.

We find some evidence supporting the remaining hypotheses in Table 6, as well as the hypothesis that learners may face insufficient incentives and/ or ability to progress onto higher levels of learning. Details on our findings and the analysis we conducted is described below.

Finding 1: Misaligned incentives could lead to lower rigour i.e. a potential ‘race to the bottom’

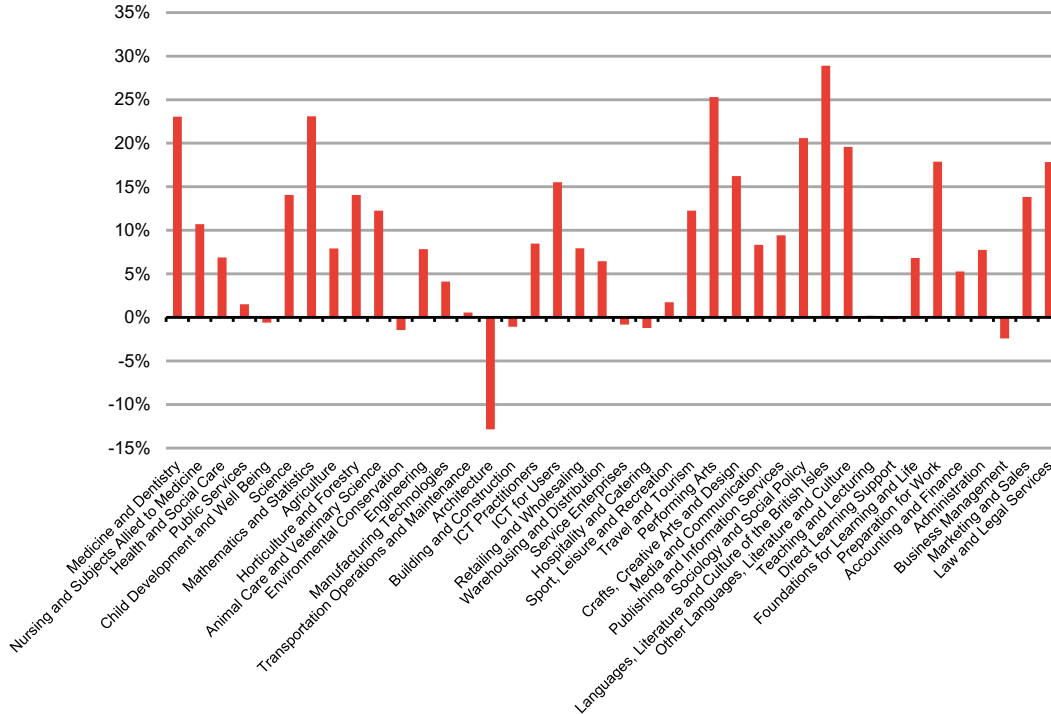
We used a combination of quantitative analysis and qualitative interviews to test this hypothesis. First, if a race to the bottom were taking place, we would expect to observe a substantial and sustained increase in pass rates and a corresponding drop in course durations over time. Based on data over the past 4 years, we find that this is indeed the case for almost all adult general VQ markets, as shown below. It is worth noting that the observed trend does not apply to apprenticeships, which have generally become longer and more ‘difficult’ to pass over the past 4 years, likely due to changes in regulatory requirements.

Figure 20: Change in duration by subject for adult general VQs, 2010-11 – 2014-15



Source: Frontier analysis of ILR data

Figure 21: Change in success rate by subject for adult general VQs, 2010-11 – 2014-15



Source: Frontier analysis of ILR data

The fall in duration per learning aim appears to be due partly to learners taking shorter qualifications, and partly to individual qualifications becoming shorter. Even without any changes in difficulty, we would expect shorter courses to be associated with higher success rates, as there is less time for learners to drop out of the course. To isolate changes in 'difficulty' from changes in duration, we further explore changes in achievement rates, which measure the proportion of passes among learners who take the assessment (that is, learners who do not drop out). We find an increase in achievement rates over time,³⁶ particularly among qualifications for which there are multiple competing AOs. Our findings are as follows:

1. We find a modest increase of 0.3 percentage points per year in average achievement rates across all qualifications between 2010/11 and 2014/15. In particular, focusing on qualifications that remained in use between 2010/11 and 2014/15 (controlling for changes in the composition of qualifications over time); we find a marked rise in achievement rates of around 1.1 percentage points per year.
2. The rise in achievement rates is considerably stronger where multiple AOs offer the same qualifications, that is, where there is head-to-head competition at the individual qualification level. In qualifications with multiple AOs, average achievement rates rose by 1.3 percentage points per year, compared to 0.4 percentage points per year among qualifications with only one AO. This could be considered consistent with competition driving a 'race to the bottom' in terms of rigour, though we note that there are other factors that drive achievement rates (see below).

We note that trends across the market as a whole do not necessarily hold for each individual qualification. For example, course duration fell and success rates increased for qualifications in Level 2-3 Manufacturing Technologies and Level 1 Preparation for Life and Work. However, in Level 4+ VQs in Accounting and Finance, and Level 2-3 VQs in Building and Construction, course duration increased and success rates fell for individual qualifications between 2010/11 and 2014/15.

We further tested the 'race to the bottom' hypothesis by analysing how training provider behaviour correlates with changes in AO achievement rates. We find that AOs that have higher achievement rates than their competitors – in particular qualifications in a particular year – experience an increase in their market share the following year. Based on our analysis, a 1 percentage point higher achievement rate is associated with a 0.4 percentage point increase in market share the following year. This is consistent with the hypothesis of training providers offering qualifications from AOs that are 'easier to pass', in order to maximise their achievement rates.

³⁶ This analysis considers the whole range of vocational qualifications, so does not disaggregate by market segment.

However, it is worth noting that rising success and achievement rates do not necessarily indicate falling rigour as they may reflect more accessible materials, better teaching and / or higher ability learners instead or as well. Similarly, falling duration may reflect a move towards multi-unit programmes of learning rather than falling rigour. We can therefore only conclude that our quantitative findings could be consistent with a 'race to the bottom' in terms of rigour, and not that they are definite proof of such dynamics.

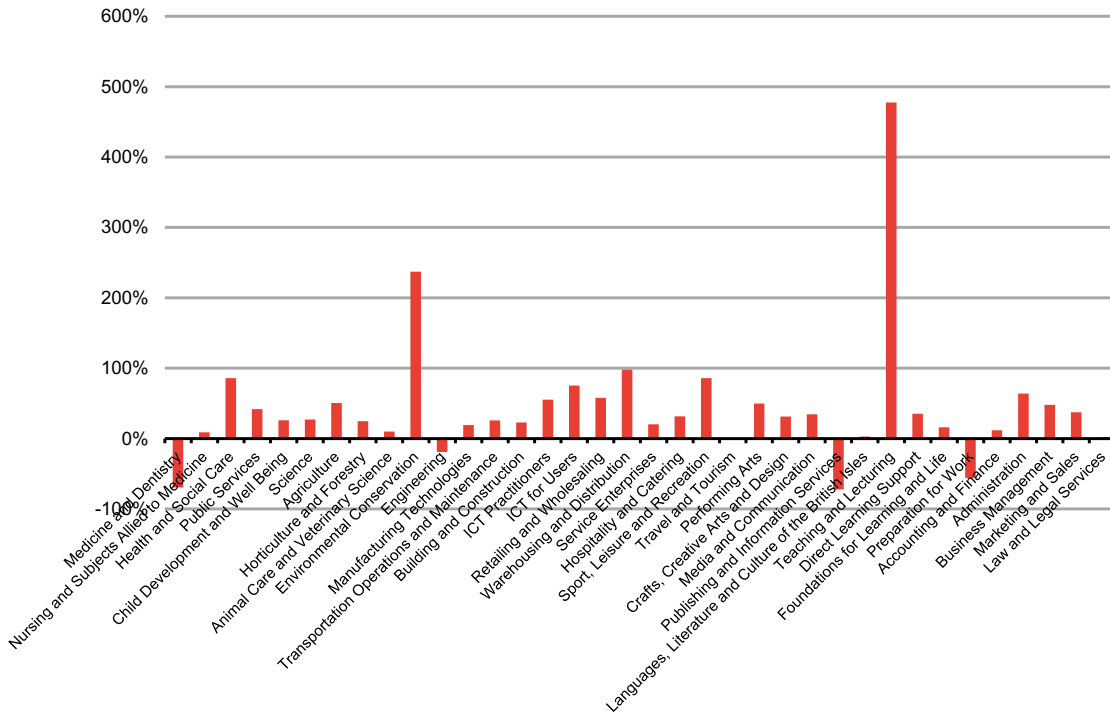
In our qualitative research, we heard evidence of some AOs being perceived as 'easier to pass' than others. We also heard evidence of training providers switching AOs to improve their learners' success rates; however, in these cases it was not clear that this is associated with declining rigour, rather than previous AOs having less appropriate assessment methods. We note that the stakeholders we interviewed (in particular, training providers and AOs) may not have an incentive to provide examples of switching to 'easier to pass' AOs.

Finding 2: Insufficient content regulation could lead to lower rigour

Whilst Ofqual regulates the process through which AOs develop vocational qualifications (for example AOs are required to engage employers in the design of qualifications), the content of vocational qualifications is not currently regulated. Given the incentives described above on training providers and AOs, this regulatory approach does not appear to sufficiently mitigate a race to the bottom in terms of rigour.

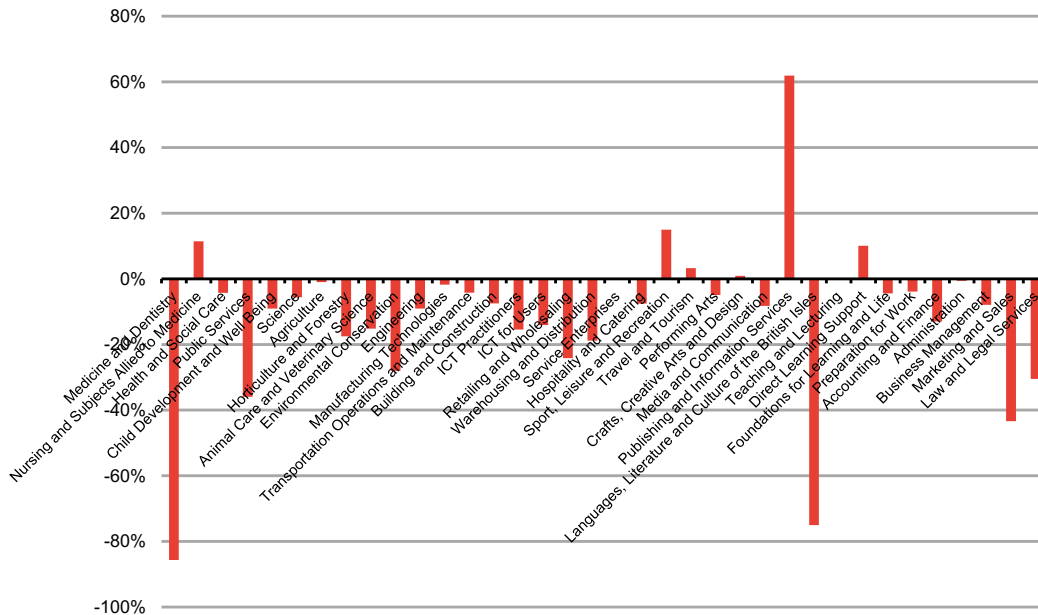
Evidence on the apprenticeships market highlights the importance of content regulation in maintaining rigour. As noted above, average durations have increased and success rates fallen in almost all segments of the apprenticeships market over the past four years. This is shown the figures below.

Figure 22: Change in duration by subject for apprenticeships, 2010-11 – 2014-15



Source: Frontier analysis of ILR data

Figure 23: Change in success rate by subject for apprenticeships, 2010-11 – 2014-15



Source: Frontier analysis of ILR data

The trend towards longer and ‘harder to pass’ apprenticeships, in stark contrast to the market for general VQs, is likely to result from changes to the regulation of

apprenticeships, in particular minimum requirements introduced in 2012 including but not limited to the following³⁷:

1. **A minimum length:** all apprenticeships for 16-19 year olds are required to last at least one year. The same applies for 19 and over unless prior learning or attainment has been recorded.
2. **Minimum guided learning hours:** all apprentices need to spend at least 280 guided learning hours in their first year, of which 100 hours or 30% (whichever is greater) must be delivered off-the-job.
3. **Minimum employment hours:** all apprentices must be employed for a minimum of 30 hours a week except in exceptional circumstances.
4. **Maths and English:** all apprenticeships are required to offer training to Level 2 in Functional Skills or English and Maths, if the apprentice does not already have these or equivalent qualifications.
5. **Quality requirements:** government introduced safeguards designed to strengthen the monitoring and reporting process, including an 'enquiry panel' to manage poor quality training providers with the right to impose sanctions on sub-standard training providers.

The fact that content regulation of apprenticeships appears to have increased rigour over the past few years suggests a key role for regulation in maintaining rigour within a competitive qualifications market. In contrast, regulation of the general VQs market by Ofqual does not appear to have been sufficient to prevent a race to the bottom.

Finding 3: High barriers to switching AOs in other parts of the market could lead to lower responsiveness and innovation.

Our qualitative evidence suggests that barriers to switching AOs may be high, even in markets with a large number of AOs. This means that training providers often face a limited choice of AOs, even in segments of the market where multiple AOs exist. Issues raised by our stakeholders include the following:

- Most of the training providers we interviewed suggested they felt well informed about the qualifications that are on offer. However, some training providers (including large providers) indicated that they only choose from a restricted range of established AOs rather than the full range of AOs in the subject area.
- All training providers we spoke to reported that they review the qualifications they offer continuously, which may or may not prompt a switch of AO. The evidence

³⁷ House of Commons Briefing Paper, Apprenticeships Policy, England 2010-2015, <http://researchbriefings.files.parliament.uk/documents/CBP-7278/CBP-7278.pdf>

from these interviews suggested that switching AOs is usually prompted by some significant event such as change in course content or assessment method, high failure rates among students, or changes to the qualifications offered by their current AO. Prices are not typically seen as a factor in the decision to switch (though costs of delivering qualifications to the training provider could be).

- Training providers we interviewed suggested that effective relationships with AOs are crucial because it allows them access to the required support and ensures that problems can be sorted out swiftly. This limits the ability to switch to some extent – though many larger training providers use multiple AOs within a given subject area and so are able to switch between AOs with which they have longstanding relationships. Even so, there are substantial costs to switching AOs, including to the costs of running multiple qualifications in the transition period, re-training staff and other administrative costs.

Since barriers to switching may be high even in markets with a large number of AOs, measures of market concentration may mask the actual degree of choice training providers have between AOs. We explored the extent of switching observed in practice as a proxy for the existence of barriers to entry (explained in the annex),³⁸ and found that higher levels of switching were associated with better outcomes in terms of responsiveness and/ or innovation. This suggests that barriers to switching (which reduce switching rates) would be likely to reduce the responsiveness of AOs and the level of service they provide to training providers. The finding corroborates our hypothesis (discussed later) that facing competition at the level of individual qualifications appears to be positively associated with an AO's quality of customer service and technological innovations.

Finding 4: Smaller training providers may lack the tools to navigate the system which could lead to lower rigour, recognisability, responsiveness and innovation.

Training providers are intermediaries between learners and awarding bodies, and are directly responsible for which qualifications are offered. But they may have different capabilities to select the most appropriate qualifications for their learners (and employers), and/ or may place different emphasis on quality and price. For example:

- **Colleges** typically use a range of AOs, often multiple AOs within a subject area. Based on our qualitative evidence, colleges (in particular large colleges) often have specialised teams conducting market research on the full range of

³⁸ We measured switching at the qualification title level – identifying for each training provider and qualification the AO they used in 2010/11 and in 2013/14, and comparing 'switchers' with those continuing with the same AO for particular qualifications. We note that this could in some cases understate the 'true' extent of switching, as training providers might switch to totally different qualifications.

qualifications. We were told by some AOs and colleges that larger colleges can have some power to influence the qualifications offered by AOs, for example by asking them to supply a new qualification, amend content or enter a new sector where the college is dissatisfied with its current AO. Based on our interviews, AO costs typically account for a very small proportion (around 2-3%) of the total costs of colleges; colleges do not therefore tend to choose qualifications based on price.

- **Private training providers** typically have fewer learners, narrower subject offerings and transact with fewer AOs. Unlike colleges, they do not tend to have bargaining power over AOs. Evidence from our interviews suggests that AO costs could account for around 10% of the costs of private training providers, and as such they may place relatively more emphasis on price than colleges³⁹.

Our qualitative evidence suggests that smaller training providers and in particular private training providers find it more difficult to keep track of the full range of qualifications on offer, partly due to a lack of dedicated market research teams. They also tend to have less influence on the content of qualifications – though it should be noted that only a few large colleges reported being able to influence content in any way. Quantitatively, we find that provision by colleges has a statistically significant relationship with better rigour and recognisability, whereas the opposite relationship is found for private training providers.⁴⁰ This analysis is described in more detail in the annex.

Finding 5: Smaller employers are typically insufficiently represented in the development of vocational qualifications which could lead to lower responsiveness.

Interviews with stakeholders have revealed a concern among smaller employers and training providers that AOs and government have historically been focused on large employers, which has led to qualifications which typically suit the needs of large employers better than those of smaller employers. For example, one stakeholder mentioned that the skills required for culinary staff in large high-end restaurants are very different from the skills required in small bistros.

The design of new apprenticeship standards (under the government's 'Trailblazers' initiative) is a good example of this, where many small employers do not have the resources to commit to developing a new standard that meets their needs. Further, smaller employee numbers mean that they are less likely to be seen as attractive for

³⁹ It is worth noting that the FE market is characterised by a significant degree of subcontracting where colleges may subcontract considerable levels of activity to private training providers. As such, some of the results observed in relation to private training providers may also capture college behaviour where there is subcontracting.

⁴⁰ Note that our analysis on this issue focuses on the general vocational qualifications market – these findings are not necessarily representative of apprenticeships

engagement by AOs; we have heard from a range of stakeholders that AOs' employer panels tend to consist of the major employers within the subject area. This could lead to smaller employers having to use qualifications and standards which were developed for larger employers and are less able to meet their needs.

Our quantitative analysis supports the view that smaller employers are less likely to be involved in the process of designing qualifications. As shown in Table 4 below, one in seven employers with over 100 employees (14%) have helped design or set coursework for students, compared to around one in thirty (3-4%) employers with fewer than 25 employees. This difference is likely to matter if small and large employers have different skills needs.

Table 7 Employer engagement in VQ design

Establishment size (employees)	Share of employers who helped design or set coursework for students
2 to 4	3%
5 to 9	3%
10 to 24	4%
25 to 99	7%
100+	14%

Source: Employers Skills Survey

Finding 6: Insufficient head-to-head competition could lead to lower levels of responsiveness and innovation.

The existence of misaligned incentives in the market means that competition between AOs may not result in higher rigour, as training providers may demand less rigorous AOs, resulting in a race to the bottom. However, training providers are likely to demand innovative AOs that provide high levels of customer service. Further, all else equal training providers are likely to prefer responsive AOs – unlike rigour, this does not affect their success rates and funding. Theory would therefore suggest that competition could improve AOs' incentives to respond and innovate, whereas in markets with no competition, training providers have no option but to use the monopoly AO.

It is worth noting that the appropriate measure of competition is likely to differ across different parts of the vocational qualifications market. Some markets consist of very few qualifications, in which case training providers can easily substitute one AO for another. For example, there is only one main qualification in Level 4+ Accounting and Finance, which accounts for 99% of all learners in this segment. However, in some parts of the market, qualifications within a subject area are very varied and specialised. For example,

qualifications in Building and Construction cover a wide range of skills, from bench joinery to painting and decorating to bricklaying to plumbing.

In markets where there are a large number of specialised qualifications within a subject area, market shares at a subject-level would not be likely to capture the true level of competition in the market, as the qualifications offered by different AOs would not be interchangeable. However, it is also possible that head-to-head competition is too narrow a measure of competition and understates the true level of competition in subject areas with many equivalent qualifications with different titles.

In our analysis of the relationship between competition and responsiveness and innovation, we therefore considered two measures of concentration:⁴¹

1. **Subject-level competition:** overall share of the AO within subject area
2. **Head-to-head competition:** share of the AO within qualification title measuring the extent to which AOs compete at the level of individual qualifications)

Our regression analysis⁴² finds that competition is associated with better outcomes in terms of responsiveness and innovation using the head-to-head measure of competition. However, we do not appear to find the same result if we measure concentration at the subject area level. This suggests that competition between AOs does indeed increase incentives to provide better quality service, but only when AOs compete directly over individual qualifications.

Our qualitative evidence supports our general finding that there is some relationship between the extent of competition faced by AOs and their level of responsiveness and innovation. In particular, some training providers gave examples of AOs with high market shares that are not innovative, for example using outdated online systems and providing poor customer service. However, the training providers did not feel that they could switch away from these AOs, as they were the only ones providing a particular qualification. Some training providers felt that certain large AOs were unresponsive to changing industry demands, for example failing to adapt the content of their qualifications to reflect technological changes.

Wider policy-relevant findings

Given a core purpose of vocational education is to contribute to a skilled and productive workforce, in a well-functioning market we would expect to see individuals either leave

⁴¹ We measure concentration using the HHI index, which is the standard measure in competition economics. A higher HHI index corresponds to a higher level of concentration (fewer AOs competing).

⁴² For further details, please refer to the Annex (technical analysis on drivers of market outcomes).

learning at the point at which they have the requisite skills and become employed, or go on and acquire skills to a higher level. However, there is a concern that some learners repeat learning at levels already attained. The prevalence of this is useful to explore.

We consider learners observed in 2010-11 at different levels and look at the learning subsequently undertaken up to 2014-15. Table 8 shows the progression of Level 1 learners. Of these learners, 42% did not undertake any further learning (top left cell). 43% went on to do another Level 1 qualification in the following years (sum of bottom row): 32% did not progress beyond Level 1, and 11% progressed to Level 2 or higher (bottom right cell). Only 15% went on to learn at Level 2 or higher without any further learning at Level 1 (top right cell).

This is to say that a greater proportion of Level 1 learners repeat Level 1 learning without progressing, than those who progress. This may be due to a lack of incentives (funding or otherwise) in the system for learners to progress, which may be compounded by the importance of success rates to training providers.

Table 8 Progression of Level 1 learners first observed in 2010-11 over subsequent 5 years

Years spent at Level 1	Maximum level reached	
	Level 1	Level 2+
1	42%	15%
2+	32%	11%

Source: Frontier analysis of ILR data

Our analysis also found that Level 2 learning has a low progression rate (7%) relative to 'repeat' rate (23%), as shown below. This may be explained in part by longer course duration and more sector-specific skills, so that changing path requires more learning at levels already attained. The 'repeat' rate may also reflect a learner in a particular vocation adding further Level 2 units in that area, complementing the current stock of qualifications (for example, a plumber gaining an additional plumbing certificate in a specific area). Indeed, in many vocations a Level 2 qualification is sufficient and there is no need to progress further. As such the lack of progression at Level 2 is perhaps less cause for concern than the substantial proportion of learners taking multiple qualifications at Level 1.

Table 9 Progression of Level 2 learners first observed in 2010-11 over subsequent 5 years

Years spent at Level 2	Maximum level reached	
	Level 2	Level 3+
1	67%	7%
2+	23%	3%

Source: Frontier analysis of ILR data

Having identified a number of potential weaknesses in the market, the next chapter explores some potential reforms to the market to address these weaknesses, with particular focus on reforms to the structure of the market.

8. Options for reforming the vocational qualifications market

In general, in any market, competition is a desirable feature as it can enable the delivery of efficient outcomes. In the context of the vocational qualifications market, an effective market should be delivering qualifications that demonstrate the RRRI features described earlier. Our work shows that the extent to which the qualifications market demonstrates these features varies considerably across different market segments. This raises questions about the ability of the market, as it is currently set up, to deliver efficient outcomes.

Previous studies have found structural issues in the vocational qualifications market and questioned whether the model currently in operation, which is intended to be competitive, is delivering the best possible outcomes for all market participants. The Wolf Review⁴³, for example, found that incentives in the system (e.g. a reliance on performance tables) were misaligned such that training providers were rewarded for offering qualifications with little currency in the labour market which led to large numbers of young people enrolling on courses which did not help them succeed in the world of work.

Although the Wolf report was successful in identifying the need for reform and there has been a large reduction in the range of qualifications which can be included in performance tables since its publication, recent evidence suggests that structural weaknesses in this market persist. The Independent Panel on Technical Education chaired by Lord Sainsbury (The Sainsbury Panel), which reported to government in the Summer of 2016, found that there is little incentive for AOs to design demanding qualifications which meet the requirements of industry because employers find it difficult to navigate the system and to remain up to date on the value of competing qualifications. This, coupled with the lack of accountability to ensure qualifications meet employers' needs can lead to competition enabling a race to the bottom rather than improving outcomes.

Our own work summarised in Chapter 7 identified a number of potential weaknesses in the vocational qualifications market that could hinder the ability of the market to function effectively and deliver qualifications that have RRRI characteristics. It is important to note that a number of weaknesses identified in the market appear to be associated with its current market structure.

⁴³ Wolf, A. (2011), Review of Vocational Education – The Wolf Report (available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf)

As discussed in the previous chapter, competition in the market appears to have led to a large number of qualifications and AOs; that is, the very force that improves responsiveness and innovation inevitably reduces recognisability. This highlights the inherent tensions between the RRRRI features and that they actually cannot simultaneously exist in every part of the market, and nor would this be desirable.

Further, whilst a race to the bottom may be driven by the particular regulatory regime in place, it is difficult to conceive of any regulatory system that would not produce some negative outcomes (adverse effects). If, for example, training providers were rewarded on the basis of employment destinations rather than success rates, they would have an incentive to ‘cherry-pick’ the most able learners and offer specialised routes at the expense of qualifications that develop general transferable skills, which would help their longer term careers. The complex nature of the vocational qualifications market, characterised by a long customer chain whose objectives are not always aligned and in which quality is difficult to define and verify, means that it is inherently difficult to deliver qualifications that demonstrate RRRRI characteristics within a competitive market structure.

Against this backdrop, the Sainsbury Panel has put forward a case for wholesale reforms of the 16-19 market which aims to simplify and streamline the system and create clear routes of progression leading into employment in specific occupations. At the heart of the proposed reforms is the creation of standards, developed by employers to ensure that the skills of learners meet the needs of employers. Rather than continuing with the existing market-based qualifications system which appears to be unique internationally⁴⁴ (in most other countries we have examined the state has a larger role in the design of qualifications), the Sainsbury Panel has recommended a move towards a licensing model where for each occupation (or cluster of occupations) a single AO (or a consortium of AOs) are licenced to offer the relevant new tech levels. The move towards a more centralised system proposed by the Sainsbury Panel is consistent with models used in many other countries.

The purpose of this chapter is to examine a series of policy scenarios which could be used to address the market weaknesses discussed previously. We consider the potential benefits of reforms at the high level and then examine in some detail their associated downsides and any mitigating actions that could be taken to prevent these from materialising. This highlights to policy makers the potential risks that could be introduced in the system following changes as well as what choices and trade-offs may be available to them under different circumstances.

⁴⁴ We are not aware of any other countries where qualifications are developed and delivered in a competitive market as they are in the UK (See Chapter 3 for some international evidence)

It is important to note that there are different risks associated with different approaches and there are no risk free options. The preferred approach policy makers ultimately take will depend on their priorities. This analysis can help decision makers identify which policy options best meet their objectives and preferences but does not, in its own right, show if one option is better than another.

Importantly also, the diversity of the vocational qualifications market must be borne in mind. Therefore, policy makers should be open to implementing reforms in some parts of the market but not others, and indeed different policy reforms may be justified in different market segments.

Given that the majority of the potential market weaknesses identified in Chapter 7 relate to market structure (i.e. who operates in the market, the incentives they face and hence their market behaviour), and the strength of other existing evidence confirming this finding, the focus of this chapter is on structural policy reform options. That is, we focus on options that change the nature and scale of competition in the market, whether that is to introduce competition *for* the market, or to change the nature of competition *in* the market. This is clearly of particular relevance to policy makers following the recommendations in the Sainsbury Panel which proposed structural reforms in the 16-19 vocational qualifications market (briefly outlined above).

Structural reforms aimed at addressing the market weaknesses discussed previously, can lead to improved outcomes in relation to the ability of qualifications to demonstrate RRR characteristics. For example, streamlining the system into a relatively small number of routes (as recommended by the Sainsbury Panel) leading into specific occupations with a single qualification attached to each new tech level is likely to improve recognition compared to the current system in which there are thousands of competing qualifications. Similarly, the introduction of a common framework of technical education standards designed by panels of professionals could improve the consistency of qualifications and thus aid rigour. Obviously, the most appropriate policy reform option will depend on what policy makers are trying to achieve i.e. whether they place greater weight on recognisability and rigour or on responsiveness and innovation.

In this Chapter we first describe our headline findings before presenting:

- An overview of our assessment approach
- Key decision dimensions that policy-makers need to consider when exploring potential reforms
- Overarching risks and benefits
- Potential reform scenarios
- Implementation issues to consider

Headline findings

We have considered six policy scenarios in total. Some cover competition *for* the market where a single licence is awarded to an AO (or consortium) to offer qualifications in a segment of the market, while others consider competition *in* the market where multiple AOs can compete in a market segment. Drawing on first principles, we have been able to identify the potential benefits and risks associated with each scenario. We have also considered how the benefits and risks may vary under different forms of contract, for example, different contract periods and different parts of the product chain being tendered (e.g. whether the content of the qualifications is for the successful contractor to determine, or developed centrally).

As previously noted, moving to a more centralised system in which government has control over the content of vocational qualifications and stipulates how they are assessed has the potential to bring significant benefits to the market. For example, centralising content and assessment, while allowing competition either in or for the market in delivering qualifications that meet those government specifications can improve recognition and rigour and remove the incentives for a race to the bottom.

Having a small number of clearly defined routes and a single AO (or single AO consortium) delivering all of those routes could aid recognition among learners and employers. What is more, setting content for a period of time provides stability in the market. The improved rigour and recognition should ultimately translate into improved labour market outcomes for learners undertaking technical vocational education.

A centralised system can also have downsides too that would need to be mitigated. As our work has found, competition can be an effective tool in driving improvements in customer support so a reduction in competition in that part of the product chain could potentially have negative effects on customer service, which training providers say they value. Policy reforms that introduce competition *for* the market (i.e. AOs compete for the single licence to operate in a part of the market) need to be designed to mimic the competitive incentives for maintaining customer service in a market.

Structural reforms, as well as introducing benefits, also entail a number of risks for which action is needed to mitigate. These include for example, a risk of system failure where limiting market access to a single AO can lead to a situation where there are no alternative AO to step in in the event of failure. Another issue associated with limiting market access is the potential removal of future competition - AOs that do not successfully win a contract may not be able to viably continue offering services in the market until the contract is next awarded, leaving few or no credible alternative to existing licensees in future. A set of wider risks associated with structural reforms are discussed in more detail in subsequent sections.

Many of the above risks can be mitigated through appropriate mechanisms, and it is essential to think through these possible mitigating solutions carefully when considering any reform choices.

In addition to the risks and benefits discussed above, we identified a number of cross-cutting implementation issues which the government should consider.

- **Timing of reforms.** When structural reforms are proposed for any market, it is important to allow adequate time for implementation so that market participants (e.g. AOs) can respond to changes effectively.
- **Potential for planning blight.** Uncertainty as to what changes will take place and when could create planning blight, i.e. reduce the incentive for AOs to invest in developing qualifications while they wait for policy to be fully specified. Naturally there is a flipside to this in that that government may not desire AOs to develop qualifications which do not meet its new requirements.
- **Involvement of AOs.** It will be important to continue to engage with AOs to ensure that any reforms are practical and deliverable.
- **Interaction with vocational education policy other parts of the UK.** Policy changes implemented by DfE for England could have a knock-on effect on other countries of the UK. AOs supply qualifications in England as well as other parts of the UK (as well as internationally), but for most, England is the biggest market.
- **Interaction with other parts of the education system.** Policy changes in the vocational qualifications could impact on academic qualifications, particularly if the same market participants operate in both.

Overview of our assessment approach

Given many of the weaknesses which hinder some parts of the vocational qualifications market from demonstrating RRR characteristics relate to market structure, our assessment of the potential policy reform options to overcome the market weaknesses focus on structural reforms i.e. those that affect the way in which participants in the market interact and compete with each other. Examples of structural reforms would include moving from a competitive market to exclusive tenders; or moving from the market participants delivering all parts of the product chain (i.e. developing qualifications content, providing delivery support and competence assessment) to some of the parts being determined centrally (e.g. the content would be set by government as part of a national curriculum).

There are clearly many different approaches that policy makers can take to address the weaknesses that characterise this market and we are unable to analyse all of these. We have selected a small number of policy scenarios to illustrate the benefits, risks and

trade-offs that policy makers could face. The scenarios are broadly reflective of the types of reforms proposed by the Sainsbury Panel so consider the establishment of technical routes and potentially sub-routes (or new tech levels within a route) and the different dynamics that might emerge following their establishment. For the purposes of our analysis we have assumed that licences are awarded on the basis of competitive tenders. The scenarios are a useful thought experiment which helps bring to life some of the issues that policy makers ought to consider. What choices are ultimately made will depend on the priorities and preferences of decision makers.

Choices policy makers make will in some cases need to be a finely based judgement having weighed up the trade-offs of risks and benefits. The choices described in this chapter are not intended to be exhaustive as there will be other points of detail that policy makers will need to address. These might include, for example, who owns the intellectual property rights if licences are tendered.

We used a 4-step approach in making our assessment of potential policy reform options:

1. We began by defining the key dimensions along which policy decisions could be made. This included, for example, determining the duration over which licences for the delivery of services could be awarded.
2. We then outlined the overarching benefits and risks associated with these high-level policy decisions. More specifically, we looked at the potential benefits and risks to the ability of the market to deliver qualifications that are rigorous, recognisable, responsive and innovative, as well as identifying other systemic and procurement risks.
3. To explore the potential implications of different reform options, we assessed six scenarios for reform in detail, each reflecting different combinations of policy choices along the dimensions identified in step 1. This included consideration of the associated risks and benefits, along with options for mitigating any resultant risks.
4. Lastly, we identified a number of implementation issues, which should be considered if structural reforms are to be pursued.

The elements of the four step approach are described in detail below.

Key decision dimensions

We identified the following five key dimensions along which structural reforms (which introduce some form of tendering to award licences) require decisions:

- **Market specification.** This dimension has some similarities with the market definition stage of the market assessment. It consists of:

- Firstly, specifying the scope of the market considered for reform (e.g. 16-19 year olds, adult learners, apprenticeships); and
- Secondly, deciding how this market should be delineated into sub-markets in which organisations can deliver services (e.g. by subject area, or by individual qualification).

For example, decisions will need to be made around whether reforms cover just the 16-19 vocational qualifications market or adults too; and whether vocational qualifications in those sub-markets should be separated into thematic routes (e.g. retail and commercial, health care), and if so, the number of routes. A further decision might also be needed around whether these routes should be separated further into sub-routes or even individual qualifications which AOs would be licenced to provide. This aspect can be considered the 'contract breadth'.

- **Product chain.** This dimension specifies the elements of the product chain which organisations will be licenced to deliver. The key elements are the development of the content of the qualifications, the provision of delivery support to training providers; and assessment of learners' competence. A decision needs to be made about whether AOs would be licenced to deliver all of the elements, or only some of them. If contracts are awarded, a decision also needs to be made on how elements of the product chain are packaged into contracts. This can be considered the 'contract depth'.
- **Exclusivity of market access.** This dimension specifies the extent to which organisations will face competition both to access the market and once in the market. For example, where a vocational qualifications route is licenced, this would relate to how many AOs are awarded a licence to operate in that sub-market (they could be a monopolist or face competition from other licenced AOs).
- **Length of contract.** This dimension specifies the length of the period for which access to the market is granted, for example three or five years.
- **Wider regulatory and policy environment.** This dimension concerns decisions around the nature of policy and regulatory frameworks to facilitate the desired market outcomes.

Decisions also need to be made on other cross-cutting issues around the following two dimensions:

- **Licence evaluation criteria.** If the market moves towards tendering contracts, the criteria for assessing tenders need to be specified. In particular, decisions need to be made about the weight placed on price and quality, as well as how quality is defined for the different elements of the product chain. Another aspect to consider is how to handle a situation in which, under exclusive licences per sub-route, a single AO wins all or most of the contracts.

- **Eligibility to bid.** A decision is needed about who is eligible to bid. The key considerations here may be around whether an AO would need to be Ofqual-regulated or not as well as whether they have sufficient operational capacity. Depending on how the markets are defined and how many contracts per sub-route are awarded, the scale of the contracts might be very substantial. Qualitative evidence suggests that scaling up operations significantly for small AOs is not straightforward, and at times might be impossible within a fixed period of time. Therefore it needs to be decided if minimum operational capacity requirements are to be imposed on the bidders, and the extent to which consortia would be considered and assessed.

Overarching risks and benefits

Having identified the key dimensions for decision-making, we describe below our assessment of the underlying risks and benefits associated with the key decision dimensions. Before describing those risks, we first highlight the potential trade-offs that should be considered, and the potential implications for the extent to which vocational qualifications demonstrate RRRI characteristics.

Structural reforms of the nature considered in this chapter rely on a procurement exercise being able to mimic the competitive constraints that would otherwise be expected in a competitive market. The purpose of such reforms is to overcome the challenges in some parts of the current market that have been identified. The intended benefits of introducing structural reforms would be to improve rigour, recognisability, responsiveness and innovation because these would either be actively specified in contracts or facilitated through the reformed nature of competition.

It is important to note that although we have set out policy reforms referring to the market as a whole (or large parts of the market), in practice, it is likely that the appropriate reforms could vary across the different segments of the market, depending on which of the RRRI characteristics are seen as most desirable, and the particular weaknesses that are currently observed across market segments. Policy makers will need to bear this need for flexibility in mind. Nonetheless, the risks and benefits associated with different reform options we identify are relevant, whatever the scale of their implementation.

For potential reforms to be effective, there are some trade-offs and wider risks that would need to be managed, as described below. It is worth noting that there are a number of mitigating factors that will influence the extent to which the risks set out below are likely to materialise. We do not consider these below but discuss them in some detail within the policy scenarios.

Trade-offs in the decision dimensions

There are trade-offs involved along each of the key decision dimensions. We illustrate some of these below.

- **Market specification** involves the choice over the scope of the market considered and the number of routes or sub-routes that could be tendered. Streamlining the number of routes and sub-routes would facilitate recognisability for learners or employers and transparency of the system. However, tendering more sub-routes may promote flexibility, responsiveness and choice for learners and training providers.
- **Product chain** decisions involve the choice over which part of the product is tendered. On one hand, separating content and developing it centrally facilitates common standards and may therefore improve rigour or recognisability. On the other hand, a centrally determined curriculum may pose risks to responsiveness, in particular when there is no mechanism for the market to choose 'best' content⁴⁵ although clearly there are actions government can take to mitigate against this risk⁴⁶.
- **Exclusivity of market access** requires choosing how many AOs can serve the market (i.e. a route). While a single AO facilitates recognisability, lack of competition may reduce incentives to improve and innovate. Also, while a single AO per route implies the administrative costs for the government would be lower (compared with a scenario in which there are multiple AOs offering services in a route), there could be a longer term risk of system failure (i.e. if the AO fails to deliver and there are no alternative mechanisms in place to provide cover).
- **Duration of contract** decisions could introduce more stability in the market and increase incentives to invest if a longer contract period is chosen. However, longer contracts may reduce the resilience of the market because the longer potential competitors have to wait to rebid for a contract, the less likely they are to survive in the market absent a contract. Therefore, in an extreme case in which contracts last say 10 years, many of the losing bidders (and also potential bidders for the next contracts) may in the meantime go out of business. Another risk of longer

⁴⁵ Under the current system, training providers have the option of switching away from AOs if they are unhappy with the content (or any other part of the product chain). While this might take some time, competitive dynamics would be expected to eventually 'filter out' demand for qualifications with poor content, while demand for qualifications with relevant content is likely to increase. The ability of the current system to withdraw poor content qualifications may be dependent on a number factors (e.g. a period of stability may be needed for this process to take effect and/or training providers would need to be incentivised to withdraw poor content qualifications). It is also worth noting that during the period of transition (where poor qualifications are filtered out) young learners who have only one opportunity to do a fully funded programme would be disadvantaged.

⁴⁶ This involves for example engaging employers in the design of standards as recommended by the Sainsbury Panel.

contracts is the possibility of being locked into a suboptimal arrangement. For example, if the delivery of a contract is below expected standards, or technical developments reduce costs relative to contract price.

- **Wider regulatory and policy environment** involves deciding on the structure and form of regulation. While increased regulation is likely to have some benefits - for example regulation of content ensures rigour - it also increases the regulatory burden on the sector.

Trade-offs in the ability of vocational qualifications to demonstrate all four RRRRI characteristics

Structural policy reforms would aim to improve the functioning of the market to deliver rigorous, recognisable, responsive and innovative (RRRI) vocational qualifications. However, as illustrated above, there are trade-offs involved in choosing the reform options, and there is no solution which will bring only benefits and no risks. In particular, however, we note that structural reforms may improve performance with respect to some of the RRRRI characteristics, but may also introduce some risks:

- **Rigour.** Centralising content development could improve rigour and recognisability, but there is a risk around ensuring the content aligns with market needs and practical deliverability. This risk can be mitigated against by securing adequate stakeholder (employers, practitioners, professionals, education experts) engagement in the development of content.
- **Recognisability.** Simplifying the system into routes would make each route in itself recognisable, shifting the focus of the recognisability off the AOs (where at the moment, the reputation of the AO is often the focus of recognisability for the employer).
- **Responsiveness.** Centralising content could hinder responsiveness if the curriculum is not regularly updated to reflect changing employer needs. On the other hand, if employers are adequately engaged in the development of content, the risk to responsiveness is likely to be substantially reduced⁴⁷.
- **Innovation.** Allowing head to head competition by licensing to multiple AOs on a particular route may increase incentives to innovate while reducing competition may reduce incentives to innovate.

Set of wider risks

⁴⁷ It is also worth noting that too much change is also not desirable as it places a large burden on training providers to continually adapt their provision so periodic (e.g. 3 years) content reviews are likely to be adequate.

In addition to the risks and benefits around RRRI, we have identified a number of other risks which are, to varying degrees, applicable to most policy options. Various mitigation strategies will be available to decision makers to reduce the magnitude of or eliminate these risks. It should be noted that some of these risks will vary in their magnitude and intensity over time:

- **System failure risk.** There is a risk of the market failing if only one or a small number of AOs are in operation with no alternative AOs (when the AOs are ‘too big to fail’). Examples of situations when the system could fail include when the AO(s) become financially unviable; they fail to deliver on key aspects of a qualification (either because of poor management or unforeseen events, like IT failure); or when they do not meet their contract requirements. A possible mitigation against this risk is to put in place a contingency for supplier of last resort (which could be an alternative AO or even government)
- **Procurement risks.** Examples include the risk of mis-specifying the requirements for the tender, or inability to judge tender submissions adequately so that the genuinely best bids are chosen (rather than the ones that look best on paper). In particular, it might be difficult to specify quality in tenders and assess the quality aspect of bids, which may lead to concentrating too much on price. This risk can be mitigated by planning the procurement appropriately.
- **Risk of disruption and increased administration cost for training providers.** Any changes to the current system are likely to entail changes in contracts which impose administrative costs on training providers. In addition, some options for reform could force training providers to contract with multiple AOs, despite some training providers (especially the smaller ones) currently preferring to contract with a small number of AOs to minimise the administrative burden. A possible mitigation against this risk may involve implementing common set of requirements that all successful AOs must adhere to in order to reduce differences between them.
- **Inefficiency risk.** There is a risk of incentives being misaligned, which facilitates inefficiency of the AOs. For example, if AOs do not face actual or prospective competition, or if there is a lack of adequate regulation, they may have little incentive to keep their costs, and hence prices, down. This risk will to some extent be limited by the amount of public funding available per student but an alternative mitigation strategy may be to introduce price regulation (e.g. price caps) applicable to what AOs are allowed to charge.
- **Quality of service risk.** This refers to the risk that training providers may receive poor service from AOs unless adequately incentivised by the contract. If there is no competitive or regulatory pressure on AOs they may reduce their spending and efforts on the support they give to training providers. In the case of tendering

contracts, this risk is enhanced by the separation between who makes the decision (the government) and who receives the service (the training providers). To mitigate against this risk, the contract would need to specify quality of service levels and potentially introduce rewards and penalties for breaching these.

- **Insufficient breadth risk.** There is a risk that too much simplification to the system may deprive it of the necessary breadth and flexibility to reflect the complexity of the vocational qualification needs. This would hinder the ability of the system to meet employer and learner needs. For example, if too few routes are created, some specialisms may be lost, or if content is centrally decided and is over specified, local variation in employer needs might not be met.
- **Risk of removing future competition.** This refers to the longer term risk to levels of competition in the market. More specifically, current and potential competition may leave/ not enter the market, or consolidation through mergers and acquisitions may lead to the same players winning all contracts (e.g. if an AO does not win any contracts it may not be viable when the contract is re-tendered). Consolidation is not necessarily a bad outcome if it leads to the highest quality and most efficient suppliers serving the market.
- **Risk of impractical content.** If relevant stakeholders are not sufficiently involved in the development of content there is a risk that it may be incorrectly specified and/ or impractical to teach or assess. To mitigate against this risk, it is essential that key stakeholders (employers, practitioners, education specialists, assessors and others) are involved in the development of content.
- **Risk of insufficient capacity.** This refers to the fact that the capacity of bidders to serve the whole market maybe insufficient. This could be mitigated by requiring bidders to have minimum capacity levels, including flexibility to form consortia to ensure the required capacity.

In the following section, where we explore selected reform options in more detail, we suggest a number of mitigation actions that could be considered.

Potential policy reform scenarios

Earlier on we identified a number of key decision dimensions that any structural reforms would need to consider. Combining decisions against each dimension suggests a wide number of policy reform scenarios are possible (as illustrated in Figure 24).

Figure 24 Illustration of the breadth of possible policy scenarios

Decision 1: which markets to tender	Decision 2: what product is tendered	Decision 3: exclusivity of market access	Decision 4: duration of contract	
16-19 market all routes together	Content, delivery, assessment	Single exclusive license	3 years	
		Multiple licenses	5 years	
	Delivery, assessment	Single exclusive license	3 years	
		Multiple licenses	5 years	
	Delivery	Single exclusive license	3 years	
		Multiple licenses	5 years	
	⋮			
	16-19 market 15 separate routes			
	16-19 market 15 separate routes with 4/5 tech levels each			
16-19 market 15 separate routes with multiple (e.g. 20) tech levels each				

It is not feasible for us to cover the full breadth of possible reform options in our analysis so in order to illustrate the risks and benefits associated with different reform options, we have carried out an assessment of six illustrative reform scenarios. These are designed to reflect the wide range of possible reforms that government may wish to implement going forward.

The scenarios we have examined are broadly reflective of the reforms proposed by the Sainsbury Panel for 16-19s in that they assume the establishment of technical routes and then consider different options for changing the way in which competition operates within the market, moving from free competition between AOs to a more managed system of licences. For the purposes of our analysis we assume that licences are awarded on the basis of a tendering exercise.

The policy scenarios we have analysed are summarised in Figure 25.

In the first three scenarios we examine the effects of possible reforms to the 16-19 market, assuming no changes are made to the current adult market. The differences between the first three scenarios are around:

- the size of the market segment that a licence is awarded to supply - ranging from the whole of the 16-19 market in scenario 1 to a single sub-route (or tech level) in scenarios 2 and 3;

- whether a single supplier is licenced to offer services in the relevant market segment (as in scenarios 1 and 2) or multiple licences are awarded within each market segment as in scenario 3;
- whether the duration of licences is 5 years (as in scenarios 1 and 3) or 3 years as in scenario 2;

Scenarios 4, 5 and 6 relate to reforms of the adult vocational qualifications market, assuming the 16-19 market undergoes reforms such as that in scenarios 2. The differences between the second three scenarios are around:

- the size of the adult market segment that a licence is awarded to supply. The adult market is divided into routes and further into sub-routes where the number of sub-routes ranges from 4 or 5 in scenario 4 to a considerably larger number (e.g. 20) in scenarios 5 and 6. In each of the scenarios licences are awarded for each individual sub-route;
- the element of the product chain that AOs are licenced to offer services in ranging from the full product chain (as in the current system) in scenario 6 to customer support and assessment in scenarios 4 and 5.
- whether a single supplier is licenced to offer services in the relevant market segment (as in scenarios 5 and 6) or multiple licences are awarded within each market segment as in scenario 4;
- whether the duration of licences is 5 years (as in scenario 4) or 3 years as in scenarios 5 and 6;

Figure 25 Policy scenarios considered

	Decision 1: which markets to tender	Decision 2: what product is tendered	Decision 3: exclusivity of market access	Decision 4: duration of contract
Scenario 1	16-19 market all routes together, adult market as now	Delivery, assessment [content designed centrally]	Single exclusive license	5 years
Scenario 2	16-19 15 routes (and 4 or 5 sub routes within each route) tendered separately, adult market as now	Delivery, assessment [content designed centrally]	Single exclusive license	3 years
Scenario 3	16-19 15 routes (and 4 or 5 sub routes within each route) tendered separately, adult market as now	Delivery, assessment [content designed centrally]	Multiple licenses	5 years
Scenario 4	Adult 15 routes (and 4 or 5 sub routes within each route) tendered separately, market for 16 - 19 as in Scenario 2 or 3	Delivery, assessment [content designed centrally]	Multiple licenses	5 years
Scenario 5	Adult 15 routes (and multiple, e.g. 20, sub routes within each route) tendered separately, market for 16 - 19 as in Scenario 2 or 3	Delivery, assessment [content designed centrally]	Single exclusive license	3 years
Scenario 6	Adult 15 routes (and multiple, e.g. 20, sub routes within each route) tendered separately, market for 16 - 19 as in Scenario 2 or 3	Content, delivery, assessment [content designed by AOs]	Single exclusive license	3 years

Below we discuss the key risks and benefits of each scenario, focusing on differences between them. Scenario 1 is described in most detail, and the following scenarios focus only on the differences relative to the previous scenario(s). As such, all the risks and benefits associated with previous scenarios still apply, unless stated otherwise.

The assessment of risks will be dependent on decisions taken across all parts of the market. For example, the risk of the reforms to the market for 16-19 year-olds will depend on the arrangements in place for adult vocational qualifications.

Scenario 1: All 16-19 routes tendered together under exclusive 5 year licence, content is developed centrally

Scenario 1	16-19 market all routes together, adult market as now	Delivery, assessment [content designed centrally]	Single exclusive license	5 years
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Under this scenario, the whole of the 16-19 market is tendered as a whole for a period of five years and a single licence is awarded.

This scenario entails a number of benefits, such as:

- Economies of scale for the successful AO which could reduce the cost of the associated services;

- Potentially lower contracting costs for training providers given they only need to contract with one AO for all 16-19 provision;
- Transparency around who is operating in the market; and
- Less disruption for training providers (once new contracts are already in place) because they only have one set of AO requirements to comply with in the way they deliver the qualifications.

However, there are also some risks.

- First, there is a high risk of 'shorting' the market. A single licence, together with a long contract period, could eliminate potential future competition, especially if the winning bid acquires all relevant specialists in order to secure the contract with sufficient breadth of expertise. This is because it would mean that whoever wins the first tender could be the only bidder available in 5 years' time to re-bid. However, the fact that this scenario leads to a monopoly in the 16-19 vocational qualifications market, and is accompanied by the current market structure in the adult market means this risk is mitigated to some extent because potential competitors could remain in that side of the market. However, if a similar system were to be created in the adult market, the risk of 'shorting' the market could be substantial.
- Furthermore, there is a risk of system failure. If a single AO is responsible for delivery and assessment of qualifications of all 16-19 vocational qualifications, if it fails, it is not clear who would step in to ensure continuity of service for learners. This risk could however be mitigated to some extent if AOs from the adult vocational qualifications were able to step in as supplier or last resort or indeed government was able to fulfil this role on a temporary basis.
- There is also a risk relating to the quality of service in the market because there is no competitive pressure facing the monopolist AO. This could be particularly problematic if contracts are not able to adequately specify all relevant aspects of quality. This risk could be mitigated through an adequate regulatory framework providing the incentive for the monopolist to deliver a high quality of service through a system of rewards and penalties for over/under performance.
- There is also a risk around the capacity of any one AO to meet the requirements of the whole 16-19 market nation-wide. It is likely that consortia would need to be formed. This in itself could pose risks because AOs would effectively be forced to work together with their competitors which could create problems associated with governance across the partners to the consortium, intellectual property ownership, accountability for performance, financial viability of all partners over the period of the contract, management of exit by any of the partners during the contract period

etc. Given the potential complexity of this relationship, there may be a role for government to facilitate those agreements.

In relation to the extent to which this scenario would be likely to deliver rigour, recognisability, responsiveness and innovation, a centrally designed content could ensure **rigour** and consistency of standards. However, there is a potential risk that content becomes over-specified and impractical to assess or teach (particularly if AOs have little or no involvement in its design). Furthermore, there is no market mechanism in place to allow training providers to choose the content that best meets the needs of their local employers. The risks relating to rigour could be mitigated by ensuring that content development panels comprise stakeholders who are able to both ensure the content is relevant and meets employers' needs, while also being practical and deliverable. For example, AOs could be involved in this process as is currently the case with A-levels.

Recognisability is likely to be enhanced by this scenario, as a small number of clearly defined routes and a single AO delivering all of those routes aid recognition among learners and employers. What is more, setting content for a period of 5 years provides stability in the market.

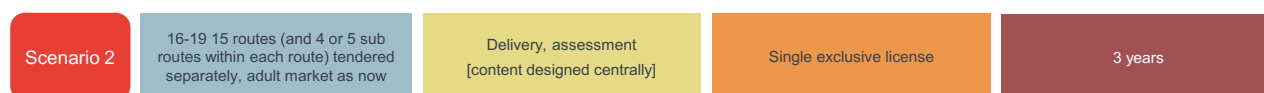
Responsiveness of qualifications could be affected in a number of ways:

- Responsiveness could be impaired if the content of the vocational qualifications is not updated for a long period because there would be little scope for content to respond to changing market conditions. It is also likely that a centrally administered process for updating content may be slower at responding to market needs than a commercially-driven one. This could be mitigated through processes to review content on an on-going basis, with flexibility to adapt it if required (e.g. every 3-5 years) recognising that in practice it would be difficult to implement changes which are too frequent as this places an undue burden on training providers to continually adapt their provision.
- The separation between the decision-maker (the government) and the customer (the training provider) could create a risk that government selects an AO that would not be the preferred scenario of training providers (e.g. if some training providers prefer particular assessment methods over others) which raises concerns about the deliverability of qualifications. This is particularly likely to be a risk since training providers are very diverse and would therefore be likely to have different views about preferred AOs. This could be mitigated by building in a feedback loop between the training providers and the government (though this feedback could only take effect at the time of re-tendering) and ensuring adequate involvement of a broad base of training providers in the design of content.
- In addition, responsiveness could be impaired if centrally designed content and centrally selected assessment methods are over-specified and are not able to

meet the needs of local employers or training providers. This risk could be mitigated by building in sufficient flexibility within the qualifications (for example, by offering flexible modules – though this in itself could have implications for recognisability and rigour).

A longer contract period is good for **innovation** by strengthening incentives to invest in research and development as there is a longer period over which to reap any returns, and this could reinforce subsequent bids. On the other hand, incentives to invest and innovate could be constrained by the lack of competitive pressure facing the monopolist. From a dynamic perspective, a tendering could in itself constrain innovation because there is no incentive for the AO to go above and beyond what is specified in the contract. This could to some extent be mitigated by an appropriate regulatory framework, or contract specification, which incentivises innovation at the appropriate level.

Scenario 2: All 16-19 routes (4 or 5 sub routes) tendered separately with exclusive 3 year licence, development of content is split out



Under this scenario, the market is segmented into routes and sub-routes (new tech levels) and each sub-route is tendered separately, for a shorter period of time – three instead of five years. For the purposes of this scenario we have assumed that each route will be divided into 4 or 5 sub routes so in total around 70 licences would be awarded.

The risks associated with lack of competition identified under scenario 1 are mitigated in this case because:

- Bidding for sub-routes as opposed to the whole market may increase the potential for the process to be more competitive⁴⁸. Competitively tendering sub-routes means that there is a greater chance of selecting the best AO for each defined sub-route, instead of choosing an AO which can deliver the overall set of routes but might not be the ‘best’ for specific sub-routes. Also, the pool of potential bidders is likely to be larger if routes are tendered separately, as only a limited number of AOs would be likely to have sufficient capacity to serve the whole country for all routes.
- Competition at the sub-route level would also be likely to reduce the risk of ‘shorting’ the market, as at the time of re-tendering AOs servicing other sub-routes could be potential competitors. In addition, the risk of not having any alternatives to step in should there be a system failure would be mitigated, since competitors

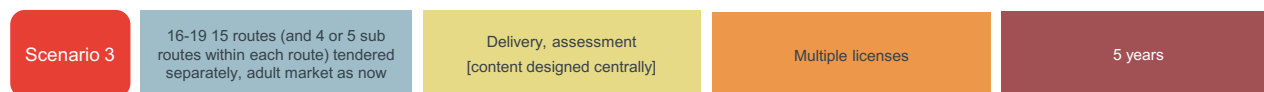
⁴⁸ It is of course possible that a single AO or consortium of AOs wins the tender for several sub-routes.

may potentially step in and service another sub-route. Indeed, this is even more of a possibility if content is centrally developed because the AOs would be developing arguably more generic services.

- The shorter licence period means potential competitors are more likely to remain in business until the time of re-tendering. Moreover, opening up competition for the market more frequently is likely to incentivise AOs to deliver good quality of service and innovate; in order to help their subsequent bids at the time of re-tendering i.e. reputation could be more important.

A key additional risk relative to scenario 1 is the potential increase in administrative costs for training providers and the government due to the tendering process. While under scenario 1 training providers would need to contract with a single AO for all qualifications, under this scenario they would need to hold multiple contracts to cover different sub-routes. What is more, the contracting period under this scenario is 3 years which suggests an increased burden on training providers to adapt to relatively frequent changes. The risk of administrative burden could be somewhat reduced if some sub-routes were aggregated and offered together under a single licence where appropriate. Additionally, the fact that government would lead the re-tendering process means that they would not need to procure their own AOs, as is currently the case.

Scenario 3: All 16-19 routes (4 or 5 sub routes) tendered separately with multiple 5 year licences, development of content is split out



This scenario is a variant of Scenario 2 and we have assumed that each route will be divided into 4 or 5 sub routes so in total around 70 licences would be awarded. In this scenario, however, multiple licences are awarded to service each given sub-route i.e. AOs would still be competing with each other within each sub-route. So while Scenario 2 created competition for the market at the stage of re-bidding, under this arrangement there is also competition in the market. Under this scenario the competitive threat should serve as a strong incentive for AOs to maintain good customer service to training providers. Furthermore, the availability of multiple AOs may serve as a stronger mitigation factor against system failure (relative to scenario 2) assuming that it is possible for AOs to scale up their operations significantly⁴⁹. Overall, combining multiple licences with a longer period of contract introduces stability in the market (relative to scenario 2 with shorter contracts), while also ensuring the benefits of competition are not lost.

⁴⁹ If this is not the case, this option is no better than option 2 at mitigating against the system failure risk.

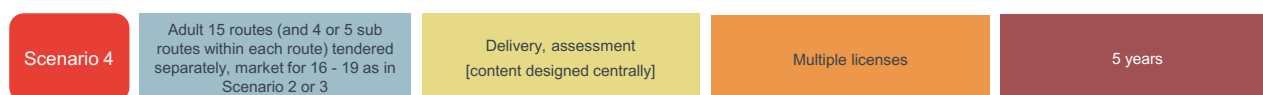
Although contracting multiple AOs to service a sub-route would be likely to create more complexity in the market, this is not likely to significantly hinder recognition of qualifications. This is the case for two reasons:

- AOs which provide qualifications would have had to be awarded a licence, which means they were subject to scrutiny and their qualifications merit recognition; and
- The content would be centrally decided and therefore standardised across AOs.

The scenario of multiple AOs operating in a given sub-route market is also likely to reduce administrative contracts for training providers relative to scenario 2. If multiple AOs are servicing each route, training providers are able to choose the AOs that best meet their needs (and potentially one they have worked with before) – and they would be able to select AOs that operate across sub-routes.

A potential risk related to this scenario would arise if there was insufficient regulatory oversight because AOs may compete on the ‘wrong’ things (for example, they could compete on the ease of passing exams). This is an extension of the current weakness in the market related to the ‘race to the bottom’, which would still remain a risk if competition in the market remains but regulation is not strengthened. Additionally, competition in the market will involve AOs engaging in marketing activities and training providers requiring resource to select their preferred AO. Both may increase costs which are likely to be ultimately absorbed in funding rates over time.

Scenario 4: Adult 15 routes (4 or 5 sub routes) tendered separately with multiple licences for 5 years; development of content is split out; 16-19 routes tendered separately



This scenario repeats all the specifications of scenario 3, but is applied to the adult qualifications market, with the assumption that the 16-19 year-old market takes the form specified under scenario 2⁵⁰.

There are two key issues specific to this scenario that should be considered.

First of all, streamlining any market for qualifications into a fixed number of routes/ qualifications creates the risk of simplifying it too much for it to be fit for purpose. This is

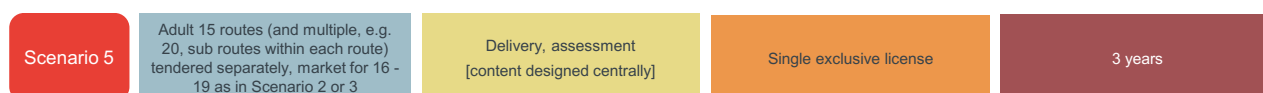
⁵⁰ While the impact on the market for 16-19 year-olds is significantly different between options 2 and 3, for the purpose of our analysis of the adult qualifications space the distinction between the two options is less important. The key issue is that the qualifications for 16 - 19 year olds are streamlined into routes which are tendered separately. It is less important in the context of interaction with the adults market if there are exclusive or multiple licences to serve these routes.

particularly a risk given the 16-19 market would also be streamlined, and this poses risks to responsiveness, as discussed earlier. However, this problem could be even more acute in the context of adult qualifications. This is because these qualifications need to cover a wide range of occupation-specific areas of expertise and specialisations.

For example, currently there are very specific qualifications in healthcare like diplomas in dementia. In the process of streamlining, this might be brought under a general qualification in healthcare, delivered with extended units on dementia. However, this will not allow adults who already have a diploma in healthcare to go back into further education and get a qualification in a specialised area to respond to market needs (i.e. just the specific dementia element, in our example). While similar examples are arguably less applicable in the context of 16-19 year-old learners, given their earlier stage of education where a broader based learning in a particular subject can add value, it is likely that adult qualifications have a greater need to be adequately specialised in order to prepare learners for new work roles.

The second issue relates to the availability of viable AOs that can compete for bids if both the markets for 16-19 and adult routes are streamlined into tendered routes. The problem of shorting the market described under scenario 1 is more severe if both markets for 16-19 year olds and adults are tendered for licences.

Scenario 5: Adult 15 routes (with multiple, say 20, sub routes) tendered separately with single licence for 3 years; development of content is split out; 16-19 routes tendered separately



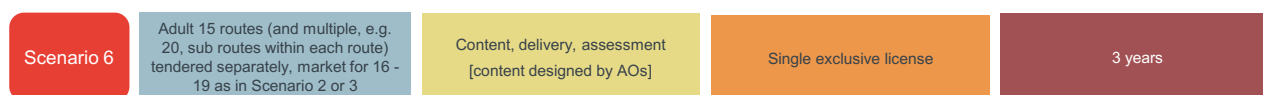
This scenario is variation of scenario 4 with a larger number of sub-routes for the adult vocational qualifications and a shorter licence period.

The larger number of possible routes under this scenario mitigates the risk of streamlining the market too much (described above). While it could create more perceived complexity in the market relative to a scenario with fewer sub-routes, recognition should not be an issue since the development of content is again separated out and qualifications are assessed by AOs that have been verified and won the licences to operate.

Single licences per sub-route are combined with a shorter contract period for AOs to face sufficient level of potential competition.

There would however be likely administration costs for training providers from the need to potentially contract with a larger number of AOs than would be the case with fewer sub-routes being tendered.

Scenario 6: Adult 15 routes (20 sub routes) tendered separately with single licence for 3 years; development of content is not split out; 16-19 routes tendered separately



This is a variant of scenario 5 with a change around the development of content; it is no longer split out and set centrally but instead is also tendered out to the AOs together with the delivery of support to training providers and assessment.

The potential benefit of this scenario is that the content would be developed by the AOs that would be offering it to training providers, as is the case in the system currently. The fact that there is a single licence per route also means that vocational qualifications are likely to be recognisable. However, a key issue around this scenario is the risk that a single AO which develops the content for the particular sub-route may, without appropriate regulatory oversight, do this in such a way that it does not meet the needs of local employers. In addition, stakeholders have suggested that the development of content for new qualifications can take around 18 months – therefore there is a risk that when the contracts are tendered, there may be a lag between contract award and the delivery of the qualifications, or the licensees would need to just deliver the content that was developed by previous AOs who held the licence (which in turn hinders responsiveness). The risks around the quality and relevance of the content could however be mitigated to some extent through appropriate regulatory oversight of content.

Further options: incremental reform

It is of course possible to attempt to address some of the market weaknesses discussed previously through incremental reforms where the current basic market structure is maintained but there is a significantly greater focus on regulation. Concerns about the rigour and recognisability of qualifications could for example be addressed through increased regulatory scrutiny (at the qualification level) before a qualification is approved by the regulator. Furthermore, stricter regulatory oversight of training providers and AOs may be required to counteract any perverse incentives (e.g. making qualifications easier to pass). Both would require a very considerable expansion of the remit and hence capacity of the current regulator (Ofqual).

Other incremental reforms may include:

- Centrally provided information on qualifications and benchmarking tools made available to facilitate navigation around the market and choice of best performing qualifications.

- Incentives for learners to progress on their learning pathway instead of moving from one level 1 vocational qualification to another (e.g. funding could be limited or capped for same level learning).
- Incentives to involve smaller employers in qualification design to ensure their needs are represented in the development of new and updated qualifications.

The advantage of incremental reforms is that the risk of disruption is smaller and some of the benefits of competition (e.g. choice, ability to switch and quality customer support) are retained. The downside is that incremental reforms may not be as effective as structural reforms at addressing the issues of rigour and recognisability and may only lead to marginal improvements in the system.

For example, informational remedies (such as centrally provided information on qualifications and benchmarking tools) may enable better choices which over time would aid recognisability. However, there is risk that despite improvements, the system remains complex and difficult for learners, training providers and employers to navigate. Similarly, greater regulatory oversight over the content of qualifications upfront may aid rigour and reduce incentives for a race-to-the-bottom type competition. However, this implies a higher level of regulatory burden for AOs and the associated need for significantly more resources for the regulators.

Summary assessment of risks

Table 10 provides a summary of the magnitude of different risks (as defined earlier in this chapter) across the policy scenarios we have examined. The assessment of risks in the table does not take into account of any mitigating actions.

Comparing the various risks associated with the six selected scenarios exposes a number of general findings:

- There are generally lower risks (risk of system failure, risk of lower customer service quality) associated with scenarios which maintain a reasonable number of suppliers (AOs) in the market.
- There is likely to be a high level of risk to responsiveness and medium risk of impractical content when the content is determined centrally unless appropriate mitigation actions are taken to involve relevant stakeholders in the development of content.
- Any structural reforms create medium to high risk of disruption and higher administrative costs in the short term as the market adjusts to the new status quo.
- There are inherent trade-offs between risks to rigour, recognition, responsiveness and innovation, as none of the scenarios is free of risks across all the objectives. It

is hence important for government to decide which features it places most weight on to help it determine which policy scenarios may be preferable.

Table 10 Summary of risks for the six reform scenarios

	1. All (15) 16-18 routes tendered together with single license and 5 year contract content split out, adult market as now	2. 16-18 15 routes (and 4/5 sub routes within each route) tendered separately with single license and 3 year contract content split out, adult market as now	3. 16-18 15 routes (and 4/5 sub routes within each route) tendered separately with multiple licenses and 5 year contract content split out, adult market as now	4. Adult 15 routes (and 4/5 sub routes within each route) tendered separately with multiple licenses and 5 year contract content split out, 16-18 market with routes	5. Adult 15 routes (and multiple, e.g. 20, sub routes within each route) tendered separately with single license and 3 year contract content split out, 16-18 market with routes	6. Adult 15 routes (and multiple, e.g. 20, sub routes within each route) tendered separately with single license and 3 year contract content included, 16-18 market with routes
Systemic failure risk						
Procurement risks						
Disruption and increased administration cost risk						
Inefficiency risk						
Quality of service risk						
Insufficient breadth risk						
Risk of removing future competition						
Risk of impractical content						
Risk of insufficient capacity						
Risk of poor recognition						
Risk of poor responsiveness						
Risk of poor rigour						
Risk of low innovation						



Implementation issues

In addition to the benefits and risks associated with structural reform discussed above, we identified a number of cross-cutting implementation issues which the government should consider.

- Timing of reforms.** When structural reforms are proposed for any market, it is important to allow sufficient time so that market participants (e.g. AOs) can respond to changes adequately. For example, structural changes could require the AOs to develop new qualifications (if content is also tendered), and it takes on average between 12-24 months to do this, followed by a pilot period (probably 1 year) when these are embedded among training providers.
- Potential for planning blight.** Uncertainty as to what changes will take place could create planning blight, i.e. reduce the incentive for AOs to invest in developing qualifications while they wait for policy to be fully specified. Having clarity over how the reforms will be implemented as early as possible reduces this issue.

- **Involvement of AOs.** Continuing dialogue with AOs and potentially involving them in content development (if this is to be split out) may reduce the risk of content being specified in a way which makes it difficult to teach and assess.
- **Content updates.** DfE will need to consider how often content is likely to be updated. If content is updated mid-contract, there would need to be mechanisms in place for AOs to adapt their offer to match the change in content.
- **Contract depth.** It needs to be decided how the elements of the product chain which are to be delivered by the market are packaged into contracts. In other words, to what extent these elements are specified in the contracts with the AOs, and thus by extension, how far these elements are 'standardised'. For example, the contracts could be more general, leaving AOs scope to adjust the products to local needs, or they could be very highly specified with no scope for local flexibility.
- **Interaction with vocational education systems in other parts of the UK.** Policy changes implemented by DfE will have a knock-on effect on other countries of the UK. AOs supply qualifications in England as well as other parts of the UK (as well as internationally), but for most England is the biggest market. The effects of reforms on AOs will be felt in other countries of the UK.
- **Interaction with other parts of the education system.** Many AOs which operate in the VQ space also supply academic qualifications. Hence, any changes in their business due to reforms in VQ can affect their ability to provide academic qualifications. The same holds for changes in 16-19 and adult VQ as most AOs supply qualifications in both market segments. There is also the question of how the routes will interact with the adult VQ market.
- **Cost of bids.** Given the vital importance of winning tenders to remain in business, AOs will invest significant resources in preparing the best possible bids. This raises two issues:
 - DfE needs to ensure that there is a robust process in place for selecting tenders such that the best AOs are chosen as opposed to the ones that look best on paper.
 - The costs associated with preparing bids may be passed on to training providers through higher prices. There is also the issue that the cost of bids may put off smaller AOs from participating as they may lack the resource to prepare bids.
- **Cost of changing contracts.** At the point when contracts are re-tendered there would be costs associated with changing from the current set of AOs to another, both centrally but also for training providers.

- **A number of other practical issues also need to be considered:** Decisions will also need to be made on certain practical considerations when working through a possible reform option including:
 - Actions to be taken in the event that there are no bidders for a market segment which is licenced;
 - Actions to be taken if there is failure mid-contract;
 - Conditions for re-opening a tender;
 - Mechanisms for monitoring quality to ensure it is in line with what was in the bid;
 - Mechanisms for regulating and monitoring prices to ensure they are in line with what was in the bid;
 - Mechanisms for penalising/rewarding underperformance/over-performance against the contract; and
 - The resource requirements and infrastructure required to establish tendering process and to judge bids.

Conclusions

We have explored options for reforms to address weaknesses identified in our market assessment analysis.

Designing structural reforms in the market requires a number of decision along key dimensions, and each of these involves trade-offs between benefits and risks. The government needs to be aware of these trade-offs and associated risks for two key reasons:

- Firstly, it is necessary to decide which risks are acceptable, as some outcomes may be more important than others, and this may vary across different parts of the market.
- Secondly, once the associated risks are identified, it is possible to explore how to take action to mitigate them.

Our assessment of selected reform scenario led to a number of findings:

- **Both short and long term risks associated with limiting access to the market need to be considered.** Limiting access to the market to a single AO (or consortia) may create a short-term risk of system failure. If the AO fails there may be no alternative AO to step in (although clearly this risk can be mitigated against if for example there are contingencies in place for other AOs or indeed government to act as provider of last resort). In the long term, limiting access to

the market to a single AO (or consortia) could reduce the competition for that route in the future. Those AOs that do not successfully win the contract may not be able to viably continue offering services in the market until the contract is next awarded, leaving few or no credible alternative to existing licensees.

- **Interdependencies across sub-markets must be accounted for.** The risks associated with reforms in one part of the market (e.g. adult vocational qualifications) are likely to be significantly dependent on decisions made about reforms in other parts of the market (e.g. young persons' vocational qualifications). These interdependencies need to be carefully considered when reform options are identified to avoid unintended side effects in linked markets.
- **Contract breadth and contract depth are both determinants of the potential risks.** Contract breadth relates to the number of qualifications that might be covered by a licence; and contract depth relates to the aspects of the product chain that are licenced (e.g. development of the content as well as assessment, or just the latter). In particular, we find:
 - There are likely to be more risks associated with very broad contracts that award a single monopoly AO (or consortium) a licence to deliver large proportions of the qualifications (i.e. relying only on competition for the market), than if contracts are tendered to allow multiple AOs to operate in the market to deliver particular qualifications (i.e. allowing for some competition in the market);
 - Potential risks associated with constrained contract depth (i.e. licensing only assessment, while designing vocational qualifications' content centrally) include challenges to the practical delivery of such content by AOs and a risk to responsiveness if that content is not updated at appropriate intervals in line with employer needs.
- **Trade-offs across the RRRI characteristics must be made and explicitly accounted for.** The balance of weight placed on RRRI characteristics is likely to differ across the market so 'one size fits all' is not likely to be appropriate.
- **Mitigation actions to manage these risks must be considered alongside exploring potential reforms.** Many of the above risks can be mitigated through appropriate mechanisms, and it is essential to think through these possible mitigating solutions carefully when any reform choices will be made. For example:
 - To avoid system failure, there could be a requirement that AOs operating in routes for which they have not tendered have capacity to be called upon to step in to deliver assessment services should an AO fail in another route.
 - To avoid shorting the market such that upon re-tendering there remain no alternative AOs who could credibly bid; multiple routes could be tendered such that a number of AOs are able to operate within the market.

- To overcome the challenges associated with specifying contracts for such complex deliverables, it may be desirable to phase the introduction of tendering such that some parts of the market can be used as 'trials' to help learn what works and the potential behaviours of market participants.



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