

Economic value

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Introduction

This section provides resources for relating career guidance work to outcomes beyond individuals. This page covers discussions that relate career guidance to economic outcomes, ranging from qualitative arguments, about how career guidance contributes to a functioning labour market. to quantitative assessments of 'return on investment' from career guidance interventions, for the tax-payer or Government. Arguments also exist that review past effects and look forward and argue the need for CEIAG given growing social and economic challenges.

Case study examples are shown that give examples of interventions where the outcomes support economic performance. There are different mechanisms by which these are achieved.

Overall, this page provides references that describe the landscape for careers, CEIAG practice case studies, research-active institutions, relevant publications, and data sources that offer contexts such as effect sizes and trends.

Headlines

Many studies have discussed the inter-relationship between the economy and peoples' career experiences and choices:

Our knowledge-based and digital economy is leading to unprecedented impacts on peoples' careers. While a segment of workers, who are highly digitally capable, will see many more opportunities, most workers will experience globalisation as a source of disruption that may demand changes throughout a career lifespan and greater threats of the obsolescence of their skills or role. (Hood, M., & Creed, P.A., 2019)

We have a number of possible scenarios that determine the UK's future skills demand, but all see a strong demand on upskilling and retraining many across the workforce (Dunkerley et al, 2022)

A review by the National Foundation of Educational Research found that "whilst specialist skills and knowledge are vital in most occupations, it is transferable 'essential employment skills' that will be in greatest demand across the labour market in 2035." (Dicerson, A., and Rossi, G, 2023),

Internationally, the demand for re-skilling is fuelling additional demand for career guidance (Barnes, 2023)

In Europe, there has been a strong recent uplift in the interest for vocational training pathways from younger people, as reported by an strong increased demand for career information resources. The concurrent digital and green transformations are both driving skills needs, but younger people continue to find challenges to secure good quality work (Cedefop, 2022).

There are a range of studies that demonstrate outcomes that contribute to economic prosperity e.g.

The consensus of international evidence finds that the ROI for career guidance is 2.5:1 for schools and 3.2:1 for unemployed adults. (Hooley et al, 2023)

Career guidance can help people to build "career adaptability" (Johnstone, 2018) such that they are more able to proactively and effectively manage their career when labour markets change rapidly, demand new skills. and present uncertainty. This same process helping to fill skills gaps more efficiently.

Career guidance motivates and enables adults to develop their skills through the life course, which contributes to economic performance through human capital (Warwick, 2023)

Careers support services can reduce the time people are unemployed (Gatsby, 2022)

The provision of effective labour market information is particularly important in influencing career choices and supporting the ongoing function of the labour market. However, it is also true that access to information is not sufficient by itself, and it requires careers guidance to supplement it (LMI for All).

Careers support can also help organisations with filling skills gaps, redeployment, and change, so that they can better address their market challenges and maintain or improve their performance. (WEC, 2020).

Even without explicit top down policies, career guidance had adapted to changes in the labour market (Bimrose and Barnes, 2019)

However,

Funding for CEIAG is at a historic low. (Hooley et al, 2023)

Context and landscapes

Selected publications, listed below, cover literature reviews and specific studies that help make the case for the role of career guidance in supporting this agenda: The cases describe both the opportunities and challenges for CEIAG, and/or evidence for positive contributions.

Publications tend to provide one or more of the following types of insight for practitioners, decision-makers or policy makers, denoted in the "Type" column below: U = Understanding users, needs and experiences, P = Practices and their evaluation, C = Supporting or informing the investment case for careers, E = Understanding enablers of success in systems, processes and workplaces, T= Developing and criticising theories and frameworks.

NB: We have generally tried to include resources that are free to access, but have included a few important studies that require payment. These are denoted by "(Paid)" next to the URL link in the title column.

Case studies are described in the section below, also denoting studies where theory has been applied to the design of a service, to generate particular outcomes.

Title	Type	Theme(s)	Brief description
Hughes, D., Bosley, S., Bowes, L. and Bysshe, S. (2002). The economic benefits of career guidance. Report by Centre for Guidance Studies, University of Derby for the Department of Education and Skills, UK. (Link)	C	Understanding the impact of CEIAG in economic value creation	The paper provides an overview of evidence found at the time for the economic benefits of career guidance, along with the intermediate measures (e.g. attitudinal and behavioural) that relate to economic variables. The authors recognised three sorts of evidence: a) opinion surveys, b) Outcome measurement studies with no or very weak counterfactuals; and c) Controlled studies. In light of a missing robust research base, the authors called for a research programme and strategy.
Gillie, S. and Meegan I. (2003) "The Educational, Social, and Economic Value of Informed and Considered Career Decisions America's Career Resource Network Association 1 Research-based Policy Guidance." (Link)	C	Understanding the impact of CEIAG in economic value creation, as well as societal contributions	This literature review recaps the economic and educational contribution from CEIAG at the time of writing, such as increased educational attainment and better preparedness for education,, better career retention and higher tax incomes. The paper is written in the context of the US system, and while the evidence has since evolved significantly, it offers a useful inventory of the various economic contributions that CEIAG can make.
Maguire, M. and Killeen, J. (2003) Outcomes from career guidance	C	Understanding the impact of CEIAG in	The European Commission commissioned the National Institute for Careers Education and Counselling (NICEC) to prepare this paper on

services. OECD (Link)		economic value creation	“evaluating outcomes in guidance service delivery.” Outcomes are covered, for individuals, organisations and the wider society and economy. The paper uses, where possible, a statistical treatment by examining effect-sizes from quantitative studies, but reflects critically on the ability of studies to demonstrate conclusive proof.. References is also made to a prior study by A.C. Nielsen in 1999 that had found relatively little evidence for the economic impact of CEIAG. This paper provides a milestone which helps to chart the subsequent progress in evidence over the past two decades.
Pollard, E., Tyers, C., Tuohy, S., & Cowling, M. (2007). Assessing the Net Added Value of Adult Advice and Guidance. (Link)	C	Understanding how career guidance and individual characteristics combine to shape the economic value-added by guidance.	This research explores the impact of information, advice and guidance (IAG) on adults in work or education, and specifically investigates the relative impact of more in-depth careers support (advice and guidance) over that of information provision. The research design was a longitudinal survey of recipients of careers support. The first survey took place in 2004 and involved more than 4,000 individuals. The second survey, in 2006, followed-up these original participants, achieving almost 1,300 interviews. Several conclusions were found, such as that IAG is more valuable as an ongoing process than a one off. The paper includes a statistical analysis of outcomes
Lamb, M., & Sutherland, M. (2010). The components of career capital for knowledge workers in the global economy. The International Journal of Human Resource Management, 21(3), 295-312. (Link)	C	Recognising attributes of workers to survive and thrive in the current and future economy	This research report from the University of Pretoria includes a review on the concepts of career capital for knowledge workers and discusses the ways that these contribute to individual and economic prosperity. There is discussion about the ways that career capital is formed, and supported with interviews with knowledge workers. The context of the primary research (in South Africa) might not be generically applicable, but the report contains a wide ranging literature review to cover and relate the generic, important topics of knowledge work, career capital, career management and psychological contracts.
Bengtsson, A. (2011). European	C	Understanding and measuring	The paper provides a discussion of career guidance in the context of

<p>policy of career guidance: The interrelationship between career self-management and production of human capital in the knowledge economy. Policy Futures in Education, 9(5), 616-627. (Link)</p>		<p>the impact of CEIAG in economic value creation</p> <p>Adding knowledge capital to the economy</p>	<p>influences from the knowledge and high skilled economy in which it exists. It discusses policy documents in the EU from 2000 and 2008 and concludes: ".reshaping of career guidance {provision} is part of human capital strategies in the knowledge economy of Europe.... policies of career guidance aim to shape not only a competitive workforce, but in in addition, to create entrepreneurial and responsible citizens." This paper describes a picture of a career guidance professional as supporting individuals to create and self-manage their knowledge capital to contribute successfully in the wider knowledge economy.</p>
<p>Hutchinson, J.... (2011) All things being equal? Equality and diversity in careers education, information advice and guidance. University of Derby and National Institute of Economic and Social Research (Link)</p>	<p>C P</p>	<p>Understanding the role of CEIAG in post 16 education and employment outcomes for different groups in society.</p>	<p>This report from the University of Derby and the National Institute of Economic and Social Research came at a time where most students were attaining good educational outcomes, but that educational attainment was strongly influenced by socio-economic background. This report examines the impact of careers education information advice and guidance (CEIAG) on post 16 outcomes, in terms of ways it opened up opportunities in both post 16 education and work. The review comprised multiple components of evaluation and primary research. The influences of different group identities is noted.</p>
<p>Hooley, T., Devins, D., Watts, A. G., Hutchinson, J., Marriott, J., & Walton, F. (2012). Tackling unemployment, supporting business and developing careers. Report for the UK Commission for Employment and Skills (Link).</p>	<p>C E</p>	<p>Understanding and measuring the impact of CEIAG in economic value creation</p> <p>Reducing unemployment</p>	<p>The report "explores the relationship between employers, career guidance professionals, and job seekers, and identifies the ways in which all parties can advance their own agendas". These are defined in terms of "action spaces" where the interested parties can negotiate the best outcomes. Findings are based on a literature review, a call for evidence from employers and intermediaries, and a series of case studies. A call for evidence in this review produced examples of good practice from employers. A productive relationship between employers and intermediary organisations was found important for success.</p>
<p>Bergmo-Prvulovic, I. (2014). Is career</p>	<p>P</p>	<p>Reflecting-on and reconciling</p>	<p>This paper discusses an erstwhile tension felt by many career guidance</p>

<p>guidance for the individual or for the market? Implications of EU policy for career guidance. International Journal of Lifelong Education, 33(3), 376-392. (Link)(Paid)</p>		<p>the provision of CEIAG for individual fulfilment vs. labour market needs</p>	<p>practices, between serving the needs of the labour market and economy or individual. The author argues that “The transition to a knowledge-based society also challenges the traditional view of career: vocational and educational paths are no longer linear, predictable or stable.” Note is made that EU policies place greater emphasis on careers being for the economy than the individual, raising ethical dilemmas for career development professionals.</p>
<p>Harris-Bowlsbey, J. (2014). White paper: evidence for career guidance cost-effectiveness. Adel, IA: Kuder Inc. (Link)</p>	C	<p>Critically evaluating models and estimating ROI</p>	<p>The study is motivated by the need to create a measurement system for career guidance, to inform stakeholders, inform intervention choices and prove value for money. Several international models are reviewed and considered in the analysis of value for money. The paper uses literature on outcome metrics to estimate the returns on career guidance. ROI is estimated. Some complexities are noted with measurement and analysis.</p>
<p>Hooley, T. (2015), The economic benefits of career guidance. Careers England (Link)</p>	C	<p>Understanding the impact of CEIAG in economic value creation, as well as societal contributions</p>	<p>The contributions of career guidance to different sorts of value (to the individual and wider society) are described, “The evidence base provides insights into the effective delivery of career guidance and highlights the three main policy areas that it can support: (1) the effective functioning of the labour market and through this the economy, (2) the effective functioning of the education system; and (3) social equity. This paper focuses on the first of these in the context of current UK (with a focus on England) policy aims around fiscal restraint and deficit reduction.” The paper provides justification for CEIAG and describes the mechanisms of contributing economic value.</p>
<p>Cedefop, Improving career prospects for the low-educated – The role of guidance and lifelong learning, Publications Office, 2016, (Link)</p>	U C	<p>Reducing unemployment Increasing social mobility</p>	<p>This report draws both on literature review and an original collection of stories from biographical interviews of individuals in the Czech Republic, Denmark, Germany, France, Italy, Poland and the UK. The narrative accounts describe the wide variety of experiences with initial and further education, with early negative school experiences having a scarring effect. However, low-skilled people still often have developed a range of work based</p>

			skills and the researchers found there was potential to rekindle interest in education, showing CEIAG to be a bridge towards redeployment, and so tackling the costs of unemployment..
Jidong, D., & Akinyeye, G. A. (2016). The role of counselling services and mentoring on entrepreneurship for sustainable economic growth. (Link)	U C P	Supporting entrepreneur-ship	The paper makes the case for the importance of entrepreneurship and related skills in a healthy economy. In a US context, the role of counselling and mentoring services is examined and proposed as important elements of the support that should be offered to those pursuing entrepreneurial career paths.
Abreu, M. (2018). Skills and productivity. Productivity Insights Network-View website. (Link)	C E	Relating skills gained through life with productivity and economic performance	This evidence review describes economic productivity and the skills required, across a population, to contribute to it. The report reviews each educational stage and adulthood, and reviews the performance of the UK system at creating the means for high productivity. While not directly referencing career guidance, it discusses some of the characteristics and forms of value that career guidance contribute to creating, or helping individuals to deploy in the labour market to wider effect.
Barnes, Sally-Anne. "Career services filling the gap: Reconciling labour market mismatches." Economy, employment and skills: European, regional and global perspectives in an age of uncertainty. Italy: Quaderni Fondazione Giacomo Brodolini Studi E Ricerche (2018): 195-208. (Link)	C	Supporting a functioning labour market using LMI to provide signals	The role of career services is discussed from the perspective of supporting the labour market to function and helping with skills agendas, through the provision of information. The discussion explores where intelligence to anticipate skills needs - as a part of labour market information and intelligence - sits within career guidance and counselling services and how it is often underplayed or neglected by both policy makers and the labour market intermediaries who deliver career services.
P.J.Robertson, T. Hooley, & P.McCash (Eds.) (2020). The Oxford Handbook of Career Development. Oxford University Press. This version is pre-copy editing	C T	Critically considering policies and pre-empting their consequences	This paper explores and questions the aims of public policy for career development. A framework of six types of policy goal for career development services is proposed: (i) labour market goals, (ii) educational goals, (iii) social equity goals, (iv) health and well-being goals, (v) environmental goals, and (vi) peace and justice goal. These

so may contain errors. The finished chapter is available at Oxford Handbooks Online: (Link)			combined six themes subsequently provide a framework to consider the complementary and conflicting goals from practice. The paper mentions the contrasting “enthusiasm” for an agenda of social change expressed by scholars versus governments.
Hood, M., & Creed, P.A. (2019). Globalisation: Implications for Careers and Career Guidance. International Handbook of Career Guidance. (Link)(Paid)	C	Creating employees who can take the career opportunities and manage unemployment and obsolence risks that result from globalisation	The paper reviews the implications of globalisation for employees and how these are factors that the CEIAG profession needs to be attuned to in order to respond: “For so-called global careerists, this new boundaryless world increases opportunities. However, for most, global labour mobility, outsourcing, technological advances, and automation have fuelled fears about job insecurity and wages growth, with unskilled and less well educated workers feeling most at risk of job displacement and unemployment.” Employees will require new skills and also the adaptability to change their career path over the lifespan. “A move away from career practitioners trying to fit clients to existing jobs and toward assisting them to develop adaptable twenty-first century skills will be critical to successful career guidance in a global world.”
Percy, C., & Dodd, V. (2021). The economic outcomes of career development programmes. The Oxford handbook of career development, 35-48. (Link)(Paid)	C	Understanding the impact of CEIAG in economic value creation, as well as societal contributions	The chapter describes a conceptual model of the outcomes of career development work. It is centred on the financial metrics most important to stakeholders at different tiers of the economy.
PWC (2021), The Potential Impact of Artificial Intelligence on UK Employment and the Demand for Skills. A report by PwC for the Department for Business, Energy and Industrial Strategy. (Link)	C	Preparing for future changes to skills demand and jobs	This research provides a review and new estimates of the potential impact on UK employment and skills demand of artificial intelligence (AI) and related technologies such as robotics, drones and autonomous vehicles. The research began with an expert workshop in July 2019 that assessed the potential automatability of a broad range of occupations over 5, 10 and 20 year time horizons. The results of this assessment were used as training data to estimate an explanatory model for all jobs within the OECD’s PIAAC1 survey database taking account of the tasks

			involved in each job and other relevant characteristics. The base case estimate is that around 7% of existing UK jobs could face a high (over 70%) probability of automation over the next 5 years ⁴ , rising to around 18% after 10 years. The paper provides some insight for practice but also to prepare for a different labour market landscape.
Cedefop (2022). The future of work is learning (Link)	C	Making the case for vocational education and lifelong learning	The report discusses the trends and challenges in Europe, with a strong emphasis on lifelong learning and vocational education. Several key trends are noted against the backdrop of a challenging economic scenario. Cedefop reported a strong uplift in the interest and popularity of their online resources directed towards vocational education and training from younger people.
Dunkerley, F., Bruckmayer, M., Flemons, L., Virdee, M., Hofman, J., Wright, S., & Hogarth, T. (2022). Labour market and skills demand horizon scanning and future scenarios. Report by RAND. (Link)	C	Developing foresight in changing skills needs Aiding labour market effectiveness	“The objective of this study was to scan the horizon of the labour market over the next 15- 20 years to identify the drivers and emerging trends, and to create 5 different scenarios of what the labour market could possibly look like in the future.” The study highlights both the shift in likely skills needs and the inherent uncertainty to which both employees and the careers profession will have to adapt. The implicit implications is that CEIAG services need to prepare clients for uncertain futures and to be able to apply and develop their skills flexibly.
Keep, E. (2022), What is the role of skills and the skills system in promoting productivity growth in areas of the country that are poorer performing economically? Skills and Productivity Board (Link)	C	Profiling the individual source of capital that, if grown (through the help of CEIAG), will tend to support economic growth, and thereby address regional inequalities.	The paper begins by stating that there is no consensus on the UK’s productivity puzzle amongst researchers, meaning that subsequent analysis into the contribution of the skills system has some subjectivity: Model 1 believes that economic outcomes correlate directly with human capital and Model 2 believes that skills are an important enabler of economic growth but that this relationship is more complex. However, generally, there are a range of “capitals” that link individuals’ skills with the economy that the author outlines. Such sources of capital form considerations for CEIAG professions. who can support individuals in attaining them to both their own benefit and that of wider economic performance.

Booth, J., Miller, J., Halterbeck, M. and Conlon, G.(2023), The impact of the higher education sector on the UK economy: Summary report for Universities UK. Universities UK (Link)	U C	Helping with transitions from education to the labour market	Universities UK commissioned London Economics to carry out this study to assess the impact of the UK higher education sector on the UK economy, focusing on the 2021-22 academic year. The report analyses the contribution to the economy and finds an economic contribution of £116bn. The sum creates an imperative to optimise this investment, for both the state and students.
Cedefop (2023), Skills in transition. The way to 2035. (Link)	C	Understanding the prognosis of skills transitions needed in Europe to meet future labour market needs	“This report uses Cedefop’s entire skills intelligence resource to grasp what has changed in EU labour markets in the past decade and to identify future trends up to 2035. It blends different types of evidence to foster better understanding of the labour market and skills impacts of the green and digital transitions and reflects on labour markets tensions, current and future.”
Dicerson, A., and Rossi, G. (2023), The Skills Imperative 2035: An analysis of the demand for skills in the labour market in 2035. Report by University of Sheffield for the National Foundation for Educational Research (Link)	C	Creating the capability to manage transformation in labour market demand from technology	This report is the third to be published by The Skills Imperative 2035: Essential skills for tomorrow’s workforce research programme and identifies the skills that will be most needed in the future labour market. This report utilises employment projections that were reliant on data from the Labour Force Survey (LFS) up to 2021. “Whilst specialist skills and knowledge are vital in most occupations, it is transferable ‘essential employment skills’ that will be in greatest demand across the labour market in 2035.”
Hooley, T., Percy, P. and Neary, S. (2023), What is careers development worth?, University of Derby (Link)	C	Understanding and measuring the impact of CEIAG in economic value creation Adopting ROI calculations for evaluation	This paper provides a literature view on previous valuation exercises, and proposes a transferable methodology that works out both the costs and benefits of career interventions. It is found that career guidance offers a ROI of, on average, 2.5:1 for schools and 3.2:1 for unemployed adults. The paper finishes with a rallying call for the future government to reinvest, with investment levels being at a record low.
Percy, C., & Hooley, T. (2023). Lessons for career guidance from return-on-investment analyses in complex education-related fields. British Journal	C	Understanding and measuring the impact of CEIAG in economic value creation	In this systematic review, to inform ideas about evaluating CEIAG, the authors document 32 ROI studies across nine countries that address either school-based guidance or one of three congruent fields: widening participation in education, behaviour in schools and adult career guidance. The

of Guidance & Counselling, 52(3), 503–521. (Link)		Adopting ROI calculations for evaluation	studies show a wide range of disparate approaches and little uniformity. This leads to the proposal to adopt simple and pragmatic methods for measuring the ROI of CEIAG.
Percy, C. (2023), Quantifying the economic impact of career guidance in secondary education. PhD thesis. (Link)	C	Understanding and measuring the impact of CEIAG in economic value creation Adopting ROI calculations for evaluation	This thesis describes the authors' approach to quantifying the ROI of CEIAG in secondary education settings, along with results. The author reviews his own work from 2008-22 in the themes of measuring impact, monetizing impact and interpreting impact. Example quantitative insights from the corpus include "0.8% higher average earnings for those in full-time employment associated with each extra career talk received aged 14-15 and an estimated 4.4x fiscal ROI for the provision of two personal guidance interviews."
"Barnes, Sally-Anne. (2023). Evidence Paper Evidence on adult career guidance and its role in skills development. Publication by Warwick Institute for Employment Research, CERIC and the ESRC (Link)	C	Defining and developing a system that can provide lifelong support	"This paper reviews existing international evidence on career guidance to examine the role it plays in skills development, considers what extended career support for adults could look like and gives policy recommendations." There is deemed to be a "lacking" career support system for adults in England. Examples are provided from other countries, such as France and Denmark, to demonstrate the potential for impact. The author makes the point that there is growing international demand for adult career guidance, to support with re-skilling. Recommendations are made for policy development.
Donald, W. E., Van der Heijden, B. I., & Baruch, Y. (2024). Introducing a sustainable career ecosystem: Theoretical perspectives, conceptualization, and future research agenda. Journal of Vocational Behavior, 151, 103989. (Link)	C E	Considering the components of a sustainable career ecosystem to support individuals	In light of the fast paced change of labour markets, including with the rise of AI, this paper describes and develops the theoretical frameworks relating to "sustainable career ecosystems" - where ecosystems refer to the interconnected elements in an individual's career journey. The paper provides a discussion on the theoretical frameworks involved in developing a "sustainable career ecosystem". This paper advances the theoretical concepts by combining theoretical frameworks of sustainable career and career ecosystem into a "sustainable career ecosystem theory".

Case studies

Selected publications that describe practices and outcomes for different challenges are listed below, with links in the title column. We have mostly included open access sources, but where the sources requires payment, it is noted next to the link by “(Paid)”.

Title	Role	Brief description
C XK, (n.d.), Case studies (Link)	Case studies in career advancement and redeployment following a CEIAG intervention	C XK is an organisation that provides a range of services aiding young people and adults in the South of England. Case studies demonstrate a range of ways that CEIAG has played a key role in getting people back to work or helping with other forms of progression.
Education Development Trust (n.d.) National Career Service case studies (Link)	Case studies in career advancement and redeployment following a CEIAG intervention	The National Careers Service supports thousands of people each year, providing advice and guidance. This resource shows several examples of the positive impact our work has on the lives of users, helping them to transition back to work or take positive choices during transitions between education and sustainable work.
Bridge the Gap (n.d.), Employability Toolkit Case Studies: Employer and Support Organisations. Equality Commission for Northern Ireland. (Link)	Case studies demonstrating different CEIAG interventions within employability projects	Many employers in Northern Ireland have developed employability strategies to help improve access to employment for marginalised groups highlight examples of these strategies and practical ideas that employers can consider in relation to employability. Many of the case studies used CEIAG interventions of different sorts in the wider intervention, including vocational profiling, work experience, work tasters, careers fairs.
Papakota, A. (2016). Career counselling development: A case study of an innovative career counselling tool. Industry and Higher Education, 30(5), 327-333. (Link)	Example of a CEIAG innovation promoting skills development	As well as delivering guidance, CEIAG services offer encompass digital services and information provision: This paper describes an innovation for an online careers service: Promoting the use of new technologies in the career counselling process, the Career Services Office of the Aristotle University of Thessaloniki has developed an “easy-to-use career counselling guide” containing multimedia applications. The purpose of this career guide, called ‘Career Counseling@Career Office of Aristotle University of Thessaloniki’, is to support students and graduates in the development of their professional skills using interactive exercises and self-presentation sample tools.
Bimrose, Jenny, Barnes, Sally-Anne, Owen, David, Hughes, Deirdre, Wilson, Robert A,	Providing widely accessible LMI to support better choices	This paper is based on a project called “Labour Market for All” which attempted to democratise labour market information to, in turn, support individuals to make better decisions about learning and work. This paper describes the

<p>Attwell, Graham and Rustemeier, Philipp (2018) Labour market information (LMI) for all : stakeholder engagement and usage, data and technical developments (research report). London: Department for Education (Link)</p>	<p>in education and employment</p>	<p>principles, goals and operationalisation of the project over the period 2012-17. Feasibility was demonstrated.</p>
<p>CRAC (2023), Supporting local students and graduates: An evaluation of the Office for Students challenge competition: Industrial strategy and skills: support for local students and graduates (Link)</p>	<p>Deriving local economic benefit and growing student career capabilities from partnerships between employers and universities</p>	<p>This challenge project run by the Office for Students was launched in October 2018. The competition aimed to support universities and partnerships to deliver innovative projects targeted at supporting local graduates and students, and through doing so improve both graduate outcomes and local prosperity. Around 6.5k students participated, in line with the initial targets. 89% of student or graduate participants were positive about their participation in the programme with improvements evident in relation to a series of confidence, capability and learning outcomes.</p>
<p>World Employment Confederation (2020), Career Management: Adding value through the work life journey (Link)</p>	<p>Support in organisations to help with business change, reskilling and redeployment</p>	<p>This collection of case studies describes how careers management support has aided individuals in ways that also help with organisational and economic performance. For instance, a series of interventions at a financial institution needed to fill technical positions while also needing to eliminate some current positions: interventions offered 121 coaching, resume development, interviewing, personal branding and networking to the ends of helping the organisation address their market challenges.</p>

Future research questions

The CDI discusses research questions and gaps with expert academics. Amongst the common topics that have been proposed for future research studies, to close gaps in our knowledge, include:

- Understanding the “ROI” for different levels of investment (particularly in education)
- Understanding the “ROI” for different discrete interventions, or combinations of investment.

Research agendas that exist in parallel disciplines and which share some common questions or concerns to the CEIAG profession have also been proposed in recent years. These include, for instance:

Employment and the economy ([Procter et al, 2024](#) (Paid))
Ideal workers and the future of ideal work ([Kossek et al, 2021](#))
The future, automated world of work ([Hanna et al, 2024](#) (Paid))
Work in the circular economy ([Hobson et al, 2021](#))

Relevant institutions

The relationship between CEIAG and labour market demand is considered by all government departments and the various education, careers and public service institutions cited in our reviews across the different career stages which we have cited in those sections of this website. Below, we have identified several further organisations who are active in research and produce reports, articles or data that contribute more specifically to this topic.

Title	Brief description
CEPR (Link)	The CEPR, established in 1983, is an independent, non-partisan, pan-European non-profit organisation. Its mission is to enhance the quality of policy decisions through providing policy-relevant research, based in economic theory to inform government and business.
Chamber of Commerce (Link)	The wider Chamber of Commerce organisation unites 52 accredited UK Chambers and operates in over 75 international markets. The Chamber provides network opportunities and other services to support (largely) smaller and medium sized businesses. The Chamber lobby on behalf of member interests. There is an Insight Unit which publish on economic forecasts and business sentiment
Confederation of British Industry (Link)	The CBI “speak for businesses of all sizes and sectors across the whole economy, in every UK region and nation. Ensuring sustainable growth for the benefit of society.” Campaigns are run based on member interests. The CBI are quoted as supporting 190k businesses.
Federation of Small Business (Link)	The Federation represents the interests of smaller SMEs having been formed in 1974 as the National Federation of Self Employed. Services include business advice, financial advice, support and representation for concerns in the UK government. Publications include reports and case studies, as well as articles giving perspectives on news items.
Institute of Economic Affairs (Link)	The IEA is an educational charity, free market think tank and carries out research, policy analysis and commentary on economic issues generally from the perspective of economic growth and prosperity.
Institute of Fiscal Studies (Link)	The Institute for Fiscal Studies (IFS) is the UK’s leading independent economics research institute. There is an extensive range of papers covering economic trends, interpretation and forecasting at different tiers of the economy.
National Institute of Economic and Social Research (Link)	Established in 1938, the National Institute of Economic and Social Research is Britain's longest established independent research institute. Publications cover economic trends, interpretation and forecasts, as well as providing various economic trackers.
Sector skills councils (Link)	SSCs are independent, employer-led, UK-wide organisations that are licensed by the government through the UK Commission for Employment and Skills (UKCES) . There are currently 18 Sector Skills Councils and 5 sector skills bodies who work with over 550,000 employers to define skills needs and skills standards in their industry.

Publications

The relationship between economic performance and career guidance has been the topic of intermittent papers in both the main careers guidance and development journals, as well from papers for government and supranational bodies like the OECD. The following publications are offer further and more-specific research into this specific agenda, with papers that offer different perspectives on career development and/or guidance related factors:

Title	Brief description
British Journal of Industrial Relations (Link)	A multidisciplinary, international journal of work, labour, and employment relations. It focuses on the institutions, policies, and practices associated with these relations and their implications for matters of economy and society
Business and Society (Link)	The journal focuses specifically with the intersection of business and society. Research develops, tests and refines theory, and which enhances our understanding of important societal issues and their relation to business.
Economic Development Quarterly (Link)	Supports the formulation of evidence-based economic development and workforce development policy, programs and practice, predominantly related to the United States (thought studies can have more generic applicability).
Education + Training (Link)	Addresses the increasingly complex relationships between education, training and employment and the impact of these relationships on national and global labour markets. The journal gives specific consideration to young people, looking at how the transition from school/college to employment is achieved and how the nature of partnerships between the worlds of education and work continues to evolve.
Industry & Higher Education (Link)	The journal is dedicated to the relationships between business and industry and higher education institutions. With a strong emphasis on practical aspects, the journal covers organisational, economic, political, legal, and social issues relating to developments in education-industry collaboration
International Economic Journal (Link)	Publishes theoretical and empirical studies in the broadly-defined development and international economics areas. Papers in other sub-disciplines of economics (e.g., labour, public, money, macro, industrial organisations, health, environment and history) are also included if they contain international or cross-national dimensions in their scope and/or implications
Journal for Labour Market Research (Link)	This is a journal in the interdisciplinary field of labour market research. As of 2016 the Journal publishes open access. Papers are published in areas that include the labour market, employment, education/training and careers
Journal of Economic Surveys (Link)	An international economics journal seeking to improve the communication of new ideas in economics, econometrics, economic history and business economics. Promotes knowledge outside and affecting core economic issues for economists.
Journal of Education and Work (Link)	The journal covers papers that examine how knowledge and skills about work and employment are developed in the education system. The journal also looks at industrial training and its relationship with the economy including changes in infrastructure
Journal of Industrial Relations (Link)	An international journal administered by the Australian Labour and Employment Relations Association (ALERA). The editors invite

	scholarship from a range of disciplinary perspectives, examining any aspect of employment relations.
Journal of Organizational Behavior (Link)	The Journal of Organizational Behavior aims to publish empirical reports and theoretical reviews of research in the field of organisational behaviour. Studies are conducted at all levels (individual, group, organisational or pan-group).
Journal of Vocational Education and Training (Link)	A peer-reviewed international journal which welcomes submissions involving a critical discussion of policy and practice, as well as contributions to conceptual and theoretical developments in the field. It includes articles based on empirical research and analysis (quantitative, qualitative and mixed method) and welcomes papers from a wide range of disciplinary and interdisciplinary perspectives. The journal embraces the broad range of settings and ways in which vocational and occupational learning takes place
Journal of Workplace Learning (Link)	Formerly called 'Employee Counselling Today', this journal covers studies which view the workplace as a site for learning. It encompasses formal, informal and incidental learning in the workplace for individuals, groups and teams, as well as work-based learning, and off-the-job learning for the workplace. It therefore bridges broad career related topics such as employee counselling and knowledge management.
Labour Economics (Link)	Labour Economics is devoted to publishing international research on empirical, theoretical and econometric topics that are of particular interest to labour economists, including comparative studies between policies and systems.
McKinsey Quarterly (Link)(Paid)	Includes a full range of papers covering topics that are affecting the strategies and performance of contemporary organisations, covering global and national political and economic factors, technology disruption, employee relations, culture, leadership and knowledge management.
OECD working papers series in education (Link)	This portal summarises the latest OECD publications in the education area, typically providing reports that recommend policy direction based on findings from international education and outcome datasets.
The Economic Journal (Link)	The Economic Journal is one of the founding journals of modern economics first published in 1891. The journal remains one of the top journals in the profession and provides a platform for high quality, innovative, and imaginative economic research, publishing papers in all fields of economics for a broad international readership. The longstanding journal history lends to providing strong retrospective papers and mapping long term development trends (As of January 1, 2019, The Economic Journal was no longer published by Wiley).
Work, Employment and Society (Link)	A leading international peer-reviewed journal of the British Sociological Association which publishes theoretically informed and original research on the sociology of work. The journal encourages exploration across the boundaries of industrial sociology, industrial relations, labour economics, applied psychology, and organisational analysis.
Youth and Society (Link)	A peer-reviewed and published 8 times a year, is a multidisciplinary peer-reviewed journal that focuses on issues related to the 10-24 year old population. Transitional issues from

	childhood to adolescence and from adolescence to adulthood are also covered, as well as the social, contextual, and political factors that influence development through these life stages.
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Data sources

Reputable data sources that provide context into this area are noted below. These may be useful for measuring effect sizes, studying trends over time or comparing different groups or geographies.

Title	Brief description
Chamber of Commerce Insight Unit (n.d.) (Link), Business Surveys	The Chamber of Commerce Insight Unit produce quarterly economic surveys, economic forecasts and business reports quantifying sentiment to key themes.
Confederation of British Industry, Work Health Index (n.d.) (Link)	The CBI poll members and measure a “work health index” that covers working days lost, costs, and the cost of health interventions taken by British Business.
ILOSTAT (n.d.), Indicators and Data Tools (Link)	Published by the International Labour Organisation, ILOSTAT provide access to global datasets on labour markets, country profiles,
Nomis (n.d.) Official Census and Labour Market Statistics (Link)	Nomis is a service provided by Office for National Statistics (ONS), the UK’s largest independent producer of official statistics. On this website, we publish statistics related to population, society and the labour market at national, regional and local levels. These include data from current and previous censuses. Data also always comparisons between regions and different groups of people over time.
Office of National Statistics, (n.d.) Economy (Link)	This portal pulls together indicators and data sets on the UK economy, covering Economic Output and Productivity, Gross Value Added, regional indicators and Public Sector and Taxation data.
Office of National Statistics (n.d.) Labour Market Overview (Link)	This is a dataset that shows the estimates of employment, unemployment, economic inactivity and other employment-related statistics for the UK. Data are published monthly.
UK Government (n.d.) Jobs and Skills Data (Link)	This portal provides access to a number of datasets on jobs and skills in the UK economy. This data and research aims to support a better understanding of current skill mismatches and future demand. Data includes local/regional dashboards, science and technology skill demand, career pathways dashboards, graduate outcomes dashboard, further education dashboard and a 16-18 dashboard. Links are also provided to LEO data and the national employer skills survey.
Djumaliev, J. and Sleeman, C., (2018), The first publicly available data-driven skills taxonomy for the UK. Economic Statistics Centre of Excellence. (Link)	This is not a dataset, but rather a data-driven taxonomy of UK skills. The structure can be used to construct analyses into skills supply and demand to identify gaps or trends. The authors also use the analysis to show insights such as the skills clusters commanding the highest and lowest salaries.
Alibasic, A., Upadhyay, H., Simsekler, M.C.E. et al. Evaluation of the trends in jobs and skill-sets using data	Big data, analytics and machine learning algorithms are increasingly being applied to analysis of jobs, skills and labour market trends. This paper provides a case study example of a data analysis to examine such trends. The results of the case study show that, while the jobs most likely to be replaced are generally low-skilled, some high-skilled jobs may also be at risk. In

analytics: a case study. J Big Data 9, 32 (2022). (Link)	In addition, mismatches are identified between skills that are imparted by the education system and the skills required in the job market. The paper provides references to a range of sources that cover this topic.
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