

Navigating
Economic
Change

THE
ECONOMY 2030
INQUIRY

Institutional Reform for Inclusive Growth

Lessons from Germany and Sweden

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Lessons from abroad and history

Navigating Economic Change

As the UK is buffeted by the economic shocks and challenges of the 2020s, The Economy 2030 Inquiry, a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics (LSE), funded by the Nuffield Foundation, is publishing a series of essays examining how policy makers from a range of advanced economies, including the UK in the recent past, have managed periods of disruptive economic change. As we seek to reformulate the UK's economic strategy for new times it is vital that we learn the lessons of these comparative and historic perspectives.

Some consider the trajectory of a national economy following a major shock – for instance, Germany after unification, New Zealand after the UK joined the European Community, Estonia post-USSR and the UK during the tumultuous 1980s. Others examine the experience of particular cities – for instance a group of post-industrial ‘turn-around cities’ - or the adjustment of key features of a national economic system, such as Danish ‘flexicurity’. Together they offer a powerful and timely set of insights on the successes and failures of economic policy makers in the face of economic shocks and structural change.

The essays are written by a range of leading economists and national experts and reflect the views of the authors rather than those of the Resolution Foundation, the LSE or The Economy 2030 Inquiry.

They have been commissioned and edited by Gavin Kelly (Chair of the Resolution Foundation and member of the Economy 2030 steering group) and Richard Davies (Professor at University of Bristol and fellow at the LSE's Centre for Economic Performance).

The Economy 2030 Inquiry

The Economy 2030 Inquiry is a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics, funded by the Nuffield Foundation. The Inquiry's subject matter is the nature, scale, and context for the economic change facing the UK during the 2020s. Its goal is not just to describe the change that Covid-19, Brexit, the Net Zero transition and technology will bring, but to help the country and its policy makers better understand and navigate it against a backdrop of low productivity and high inequality. To achieve these aims the Inquiry is leading a two-year national conversation on the future of the UK economy, bridging rigorous research, public involvement and concrete proposals. The work of the Inquiry will be brought together in a final report in 2023 that will set out a renewed economic strategy for the UK to enable the country to successfully navigate the decade ahead, with proposals to drive strong, sustainable and equitable growth, and significant improvements to people's living standards and well-being.

Introduction

Advanced capitalist countries are currently facing an array of challenges. Some of these are of recent origin – for instance, relating to the economic shocks of the Covid pandemic and, in the case of Britain, the impact of Brexit. Others have their source in longer-running and less proximate causes, whose consequences, however, are now impossible to ignore. These more chronic problems include the challenges associated with aging populations; the corrosive effects of persistent high wealth and income inequality; the economic impact of rapid changes in information and communications technologies; and the consequences of a climate crisis that has been generations in the making.

No one set of policies can realistically address all these crises, and no one essay can hope to cover all of them. The purpose of this essay is to consider a specific set of political-economic arrangements that show promise for (and in many cases have proven effects in) mitigating some of the income, job and educational inequalities that rich democracies are currently confronting as a result of technological change and the growing gap between winners and losers in the new knowledge economy.

A vast literature in comparative political economy has demonstrated the critical role played by the institutional arrangements that characterize different “varieties of capitalism” in mediating shared challenges differently across countries. Indeed, the research of a wide range of scholars has not only demonstrated that institutions are crucially important in channelling the search for solutions to shared challenges into different paths¹; it has also shown that institutional arrangements often refract shared challenges into completely different problems in different national contexts.²

We focus here on institutional interventions that our past research has identified as successful in other countries, and that hold promise in terms of potential transferability to different institutional settings. We emphasise initiatives on the ‘pre-distribution’ side of the market – that is, interventions aimed at increasing the potential of citizens to acquire good jobs, which also guarantee comprehensive social security. Key components of the pre-distribution agenda include an investment friendly macroeconomic policy, good public services, provision of skills and effective worker voice.³ In addition to better education for the young, lifelong learning and upskilling of workers have become of increasing importance given labour and skill shortages in most countries of the OECD.⁴

This essay focuses on reforms in two arenas that have a clear impact on the kinds of inequality that confront the advanced capitalist countries: labour market and educational institutions. Rather than a strict comparative analysis of, say, training or labour market institutions across the same set of countries, we selectively explore case-studies that have shown promising results in the setting in

1 A Hassel & B Palier, *Growth and Welfare in Advanced Capitalist Economies: How Have Growth Regimes Evolved?* Oxford University Press, January 2021.

2 Thelen, *Regulating Uber: The Politics of the Platform Economy in Europe and the United States*, *Perspectives on Politics* 16/4, December 2018. R Locke & K Thelen, *Apples and Oranges Revisited: Contextualized Comparisons and the Study of Comparative Labor Politics*, *Politics and Society*, September 1995.

3 Hacker, *The Institutional Foundations of Middle-Class Democracy, Priorities for a New Political Economy: Memos to the Left*, Policy Network, 2011.

4 Our emphasis on pre-distribution should not be taken to suggest that traditional redistributive measures are unimportant - indeed, pre-and re-distribution are inextricably linked in important ways. Social policy interventions inevitably shape the productive supply of the economy and redistribution has always been and remains critical. That said, our research suggests that measures on the pre-distribution side may be more likely than straight redistribution to be able to garner the political support required in a period such as the current one of high inflation, fiscal stress, and political polarization. Hence the crucial importance of interventions in the pre-distribution side.

which they have been introduced.⁵ Each of the next sections explores these institutional reforms and how they have supported more equitable growth.

Negotiating the future in German firms⁶

Over the last four decades, there has been a shift in collective bargaining to allow for local adjustments and to widen the scope from standard issues of pay to a much broader portfolio of working time, redundancies, training, and investment. Negotiations often focus on the protection of jobs at a particular site and the competitiveness of the firm. The strength of local agreements is supported by government programmes encouraging negotiated change between employers and unions. Moreover, local agreements feed into regional industrial policies on transformation and just transition.

Many important changes were inspired by the deep recession following an initial reunification boom in 1990/91. About 500,000 jobs were lost within a year, prompting a process of local adjustment that continues today. Companies and their workers' representatives (work councils) renegotiated collective agreements at the company level that tied the restructuring of individual plants (via firm investments) to concessions by the workforce (working time, pay). In many cases, firms made commitments to refrain from redundancies.⁷

Agreements reached in 1993 at Volkswagen were the starting point for these new negotiated employment pacts. Since then, all major automotive companies have used this approach to shape the adjustment to technological change. At the heart of the job security strategy is an exchange: on the one hand, jobs are cut or not filled again and, on the other, the company avoids mass redundancies (many large companies can adjust their workforce size over time through "natural fluctuation" in the company due to retirement). Table 1 provides an overview of existing agreements at major German automobile manufacturers.

This "protective shield" does not, however, cover temporary workers and factory workers or employees in supplier companies. For IG Metall, which is responsible for the entire metal and electrical industry, this has meant looking for other ways to protect these groups. Collective bargaining – together with wider industrial policy – is a way of reaching workers outside the individual company.

A collective bargaining response to the uncertainties associated with industrial transformation involves future-oriented agreements setting out contractually fixed goals and security arrangements tied to specific investments, innovations, workplace design and training. Such agreements are intended to give all parties planning security to reduce uncertainty. So far, these contracts have been used at a company level. In view of the challenges associated with the transformation towards a decarbonized industry, however, solutions are also being sought at the wider industry level within wider collective agreements.

⁵ S Avlijas, A Hassel & B Palier, Growth strategies and welfare reforms in Europe, in A Hassel & B Palier, Growth and Welfare in Advanced Capitalist Economies: How Have Growth Regimes Evolved? Oxford University Press, January 2021. K Thelen, Varieties of Liberalization and the New Politics of Social Solidarity, Cambridge University Press, March 2014.

⁶ This section is based on A Hassel & W Schroeder, Auswirkungen der Transformation auf die deutsche Sozialpartnerschaft, In W Lemb, Perspektiven eines Industriemodells der Zukunft, Metropolis Marburg, 2021.

⁷ B Rehder, Betriebliche Bündnisse für Arbeit in Deutschland. Mitbestimmung und Flächentarif im Wandel, Campus, 2003. U Jürgens & M Krzywdzinski, Globalisierungsdruck und Beschäftigungssicherung – Standortsicherungsvereinbarungen in der deutschen Automobilindustrie zwischen 1993 und 2006, WZB Discussion-Paper SP III, 2006. A Hassel, The Paradox of Liberalization – Understanding dualism and the recovery of the German political economy, British Journal of Industrial Relations 52(1), March 2014.

TABLE 1: Recent company agreements in big German car manufacturers

<i>Company</i>	<i>Period</i>	<i>Content</i>
Audi AG	11/2019 – 2029	No redundancies 9500 job losses through early retirement 2000 new jobs Guarantee to keep all plants open Plant agreement
BMW AG	2021	6000 job losses, no redundancies Cut of bonus programme Plant agreement
Daimler-Benz AG	12/2017 – 12/2029	Working time reduction by 2 hours No profit related bonus Additional bonus is turned into additional holidays Support of works council for restructuring Loss of 30000 jobs worldwide (20000 in Germany), no redundancies Plant agreement
Ford (Europe) AG	2018 – 5/2022	4500 job losses, no redundancies 500 jobs were saved through retraining Plant agreement
MAN AG		3500 job losses, no redundancies Collective agreement
Opel AG (zu PSA)	2018 – 2025	3700 job losses no redundancies No annual bonus Plan to cut another 2100 jobs Collective agreement
Porsche AG	2020 – 07/2030	Guarantee to keep all plants open (not in Leipzig) Workers agree to more flexibility Plant agreement
Volkswagen AG	06/2019 – 2029	Job losses through early retirement 10000 new jobs in software includes retraining of staff Plant agreement No higher workload for existing staff 5000 job losses in Hannover without redundancies, relocation to Poland or to Ford

 SOURCE: based on Hassel and Schroeder 2021⁸.

⁸ A Hassel & W Schroeder, Auswirkungen der Transformation auf die deutsche Sozialpartnerschaft, In W Lemb, Perspektiven eines Industriemodells der Zukunft, Metropolis Marburg, 2021.

Training has become an increasingly important topic in plant level negotiations. Since it became apparent that traditional vocational training institutions alone couldn't provide lifelong insurance to cope with technological and work-organizational challenges, the search for innovative training policies has grown. In the metal and engineering industry in Baden-Württemberg, the 2002 wage agreement opened a new chapter for the incorporation of training in collective bargaining, which has been extended since then.

There is a broad consensus that decarbonization and digitization will lead to faster industrial restructuring and that access to training will become even more important if workers are to benefit from this process. Both the quality of work and job security are closely linked to massively expanded training.⁹ Not surprisingly, then, there is growing evidence of worker demand for training to be reflected within collective agreements. A recent survey by IG Metall showed that across all levels of qualification 88 per cent of employees wished to use shorter working hours to prioritise time for training.¹⁰ Similarly, when asked which demand the union should prioritize in the 2020 collective bargaining round more than 9 out of 10 selected training (out of nine potential options).

Despite this salience challenges remain. First, there is often significant uncertainty within companies about the future direction and content of effective training. Given the speed at which technologies are changing, it is difficult to predict with certainty the specific skill sets that workers will need even in the medium-term. Second, there is an implementation challenge: despite the progress made in collective bargaining rounds and through various policy initiatives (For example the Qualification Opportunities Act, Tomorrow's Work Act, and the national further training strategy), a stumbling block has often been the execution of these arrangements at the level of the company.

What is clear is that the wider system of social partnership that underpins so much of the German model will continue to guide this agenda. Given that training is not only about gaining firm-specific qualifications and skills, but also about overarching competencies that can also be used in other firms, professions, and sectors, there is a clear case for a social partnership agenda. The public policy framework plays a key role in underwriting negotiations about training (as it does future investments and jobs more widely) at large firms which, in turn, maintains the capacity of social partners – workers' representatives at the plant level – to engage in these negotiations. Recent reforms have also been supportive. Some have improved co-decision rights of works councils when it comes to assessing the impact of new technologies at work (AI), as well as modernizing workplace representation through facilitating remote meetings and ensuring online access of trade unions to firms. Others have increased access to lifelong learning and encouraged job centres to give priority to training opportunities over a 'work-first' approach favouring immediate job placements. Meanwhile, the government continues to involve unions and workers' representatives when it comes to industrial and regional policies, innovation and initiatives aimed at improving the quality of work. In this and other ways the German model is negotiating its future.

9 W Bauer, O Riedel & F Herrmann, *Beschäftigung 2030 Auswirkungen von Elektromobilität und Digitalisierung auf die Qualität und Quantität der Beschäftigung bei Volkswagen*, Fraunhofer-Institut für Arbeitswirtschaft und Organisation IAO, 2020.

10 J Allmendinger & W Schroeder, *Die Situation der Beschäftigten in der Metall- und Elektroindustrie während der Corona-Pandemie, Ergebnisse der Beschäftigtenbefragung 2020 der IG Metall*, WZB & Universität Kassel, 2021.

Reforming advanced vocational training in Germany: Dual Study¹¹

Training opportunities play a central role in any strategy for inclusive growth. In the past, the most widely admired systems of initial vocational education and training (i.e. for young people just out of secondary school) were often those, as in Germany, financed by employers that emphasize high quality, standardized training. Employer sponsorship relieves young people of the need to finance the acquisition of skills, and the fact that employers are obligated to train in a limited number of standardized occupations means that even if the trainee is not subsequently hired by the training firm, the skills he or she acquired will be portable across the labour market. The great strength of these systems has been their ability not just to furnish firms with a steady and plentiful supply of skilled workers, but also to open a pathway for lower-income and non-academically inclined youth to acquire the training they needed to find stable, well-paid employment, especially in manufacturing.¹²

Changing markets and technologies associated with the new “knowledge economy” have posed two novel challenges for vocational systems. First, technological change now puts a premium on theoretical skills that traditional vocational training firms – with their emphasis on practical skills – are not well equipped to deliver. Second, partly cause and partly consequence, traditional training of the sort the Vocational Educational and Training (VET) system provided in the past is an increasingly less attractive option for a growing share of young people who prefer a more academic track that provides them with general theoretical (rather than occupation-specific) skills that are viewed as opening more opportunities within the job market.

In the face of these challenges, Germany has developed new hybrid arrangements at the intersection of higher education and traditional firm-based vocational training.¹³ So called ‘dual study’ programs provide participants with theoretical training in a university setting and combines this with extensive firm-based practical training. Such programs come in several varieties, but the most popular and demanding programs result in participants receiving both a university degree (typically a BS) and a recognized vocational certificate.

Today’s dual study programs have their origins in the 1970s in Baden Württemberg, where several prominent manufacturing companies (among others, Daimler Benz and Bosch) began co-sponsoring ‘vocational academies’ that combined post-secondary training with practical training in the firm. Over time these academies spread across Germany, expanding especially rapidly in recent years (Table 1).¹⁴ In 1996, there were only 44 dual study programs in the entire country¹⁵ but by 2004 there were around 500 - more than a ten-fold increase - rising steeply to nearly 1,700 by 2019. These courses represent collaborations between more than 51,000 employers and institutions of higher learning (up from

¹¹ This section draws heavily on M Busemeyer & K Thelen, *Employer Influence in Vocational Education and Training: Germany and Sweden Compared*, in G Bonoli & P Emmenegger, *Collective Skill Formation in the Knowledge Economy*, Oxford University Press, September 2022.

¹² G Bonoli & P Emmenegger, *The Limits of Decentralized Cooperation: Promoting Inclusiveness in Collective Skill Formation Systems?* *Journal of European Public Policy*, January 2020. M Carstensen & C Ibsen, *Three dimensions of institutional contention: Efficiency, equality and governance in Danish vocational education and training reform*, *Socio-Economic Review*, March 2019. K Thelen, *Varieties of Liberalization and the New Politics of Social Solidarity*, Cambridge University Press, March 2014.

¹³ L Graf, *The hybridization of vocational training and higher education in Austria, Germany, and Switzerland*, Budrich UniPress, 2013. N Durazzi & C Benassi, *Going Up-Skill: Exploring the Transformation of the German Skill Formation System*, *German Politics* 29(3), September 2018.

¹⁴ An online database (“AusbildungPlus”) documents the number of dual study programs and the participants therein (<https://www.bibb.de/ausbildungplus/de/index.php>).

¹⁵ F Kupfer, C Kolter & C Köhlmann-Eckel, *Analyse und Systematisierung dualer Studiengänge an Hochschulen*, Abschlussbericht, Bundesinstitut für Berufsbildung, 2014.

around 18,000 employers in 2004).¹⁶ The number of students also increased strongly from about 40,000 in 2004 to around 108,000 in 2019.

TABLE 2: Expansion of dual study programs, 2004–2019

Year	Number of dual study programs	Number of cooperating firms	Number of students
2004	512	18,168	40,982
2005	545	18,911	42,467
2006	608	22,003	43,536
2007	666	24,246	43,220
2008	687	24,572	43,991
2009	712	26,121	48,796
2010	776	27,900	50,764
2011	929	40,874	61,195
2011*	879	40,555	59,628
2012*	910	45,630	64,093
2013*	1,014	39,622	64,358
2014*	1,505	41,466	94,723
2015*	1,553	42,951	95,240
2016*	1,592	47,458	100,739
2019*	1,662	51,060	108,202

Note: * indicates that these values only refer to study programs for initial education and training (study programs for further education might be included in previous years).

SOURCE: BIBB 2020¹⁷

Competition for these training opportunities is intense with an average of 33 applications for each training position.¹⁸ Studies show that the educational background of students in dual study programs is broadly similar to those of students attending university.¹⁹ Indeed, one study of the vocational academies in Baden-Württemberg revealed that students entering dual study programs have completed the higher education qualifying exam (Abitur) with grades that are as good or better than those of students enrolled in traditional university programs.²⁰ These programs are designed to allow (and apparently succeed in allowing) Germany's largest and most advanced firms to attract especially promising high school graduates who would otherwise be bound for a conventional university course rather than seek a vocational route.

16 The number of firms may be inflated because some of them participate in more than one dual study program.

17 Bundesinstitut für Berufsbildung (BIBB), *AusbildungPlus Duales Studium in Zahlen 2019: Trends und Analysen*. BIBB, 2020.

18 F Kupfer, *Duale Studiengänge aus Sicht der Betriebe - Praxisnahes Erfolgsmodell durch Bestenauslese*, BWP 4, 2013.

19 K Hähn, *Das duale Studium – Stand der Forschung*, in S Krone, *Dual Studieren im Blick. Entstehungsbedingungen, Interessenlagen und Umsetzungserfahrungen in dualen Studiengängen*, 2015. K Gensch, [Dual Studierende in Bayern-sozioökonomische Merkmale, Zufriedenheit, Perspektiven](#), Bayerisches Staatsinst. für Hochschulforschung und Hochschulplanung, 2014, p. 2. L Graf, *The hybridization of vocational training and higher education in Austria, Germany, and Switzerland*, Budrich UniPress, 2013.

20 L Graf, *The hybridization of vocational training and higher education in Austria, Germany, and Switzerland*, Budrich UniPress, 2013.

Not surprisingly, therefore, dual study programs figure most prominently in Germany's most dynamic sectors. In 2019, 36 per cent offered training in engineering; 35 per cent in business studies, finance, management, and economics; followed by IT (13 per cent); as well as social work, health and therapy, and education sciences (9 per cent); and others (6 per cent).²¹ Most such programs are based in the country's most prosperous states, and particularly those that lie at the heart of the German export economy (Bavaria hosts 22 per cent; North Rhine-Westphalia 18 per cent, and Baden-Württemberg 17 per cent²²).

Employers – and Germany's largest and most technically sophisticated export firms - have been the driving forces in the expansion of these programs. Such programs are expensive (the firms bear the costs of training and pay participants regular apprentice wages during their university studies), but employers not only control the firm-based components of training, they also exercise some influence over the content of the theoretical training the participants receive. Because most of the sponsoring firms use dual study programs to recruit future employees (according to a survey among participating firms conducted in 2012, 89 per cent of graduates from dual study programs continue to be employed with their training firm²³), firms screen applicants to these programs intensively.²⁴

Another driving force behind this expansion is the changing preferences of young people (and their parents). Most dual study students can look forward to being hired by the firm that has trained them and, unlike traditional university students, they usually receive some kind of wage while studying. In a context in which students are also increasingly drawn to university in the belief that this offers a flexible form of credential, these programs are often viewed as offering the best of both worlds.²⁵

Partly because of their popularity among students, parents and employers, dual study programs are also popular with institutions of higher education (especially universities of applied science, or Fachhochschulen) as well as policymakers.²⁶ Cooperation with prestigious local employers carries the advantage of increasing the attractiveness of the Fachhochschulen that host them, particularly if they can demonstrate that completing these programmes leads to stable and well-paid employment.²⁷ In addition, these programs generate significant pecuniary benefits to universities as the cooperating firms often contribute by financing personnel or providing equipment.²⁸

While dual study programs have been developed by the most dynamic firms and attract high achieving students, their proliferation into other segments of the economy has opened new career opportunities for students without the equivalent of A-level (or level 3) qualifications. Universities of applied sciences have set up dual study programs for those with a completed apprenticeship (plus 3 years of professional experience) offering tertiary education for those with lower levels of formal education. More widely, Germany's dual study program is strategically important as it helps to renew

21 Bundesinstitut für Berufsbildung (BIBB), *AusbildungPlus Duales Studium in Zahlen 2019: Trends und Analysen*. BIBB, 2020..

22 Bundesinstitut für Berufsbildung (BIBB), *AusbildungPlus Duales Studium in Zahlen 2019: Trends und Analysen*. BIBB, 2020.

23 F Kupfer, *Duale Studiengänge aus Sicht der Betriebe - Praxisnahes Erfolgsmodell durch Bestenauslese*, BWP 4, 2013.

24 F Kupfer, C Kolter & C Köhlmann-Eckel, *Analyse und Systematisierung dualer Studiengänge an Hochschulen*, Abschlussbericht, Bundesinstitut für Berufsbildung, 2014. Meyer-Guckel, Volker, Sigrun Nickel, Vitus Püttmann, and Ann-Katrin Schröder-Kralemann (eds.). 2015. *Qualitätsentwicklung im dualen Studium. Ein Handbuch für die Praxis*, Essen: Stifterverband für die Deutsche Wissenschaft.

25 Dual study programs do not necessarily open up new access routes to academic higher education for individuals with a vocational training background because a requirement for participating is a university entrance qualification—i.e., dual study participants would also anyway be eligible to enrol in regular university programs.

26 L Graf, *The hybridization of vocational training and higher education in Austria, Germany, and Switzerland*, Budrich UniPress, 2013.

27 F Kupfer, C Kolter & C Köhlmann-Eckel, *Analyse und Systematisierung dualer Studiengänge an Hochschulen*, Abschlussbericht, Bundesinstitut für Berufsbildung, 2014, p. 16.

28 A Becker, [Duale Studiengänge. Eine Übersichtsstudie im Auftrag der IG Metall-Jugend](#), Frankfurt am Main, 2006.

the overall attractiveness and status of vocational training across leading sectors of the economy. In other parts of Europe - including Denmark - the largest and most advanced firms have retreated from offering apprenticeships, and the attractiveness of such training has declined among young people (and their parents) leading to an increasing marginalisation of VET that Danish policy makers have struggled to reverse.²⁹

From the perspective of German trade unions, the expansion of dual study programs involves a combination of advantages and risks. In general, unions welcome the fact that higher education institutions are developing more practical and vocationally-oriented study programs. However, unlike in the traditional VET system, organized labour has no institutional role in determining the theoretical content of dual study programs – this being up to universities.³⁰ And while dual study programs mainly target young people who otherwise would be bound for university, and thus less likely than traditional VET apprentices to develop strong union connections, it remains the case that the steady expansion of this training route increases the share of harder to recruit ‘student-apprentices’ compared to the more traditional - and union-friendly - model.

Overall, though, the rise of dual study programs seems to be an example of a successful and broadly-backed educational reform made in response to the challenges posed by new technologies. It responds to demands from leading employers as well as young people – and does so in ways that builds on the strengths of the German model.

Second-chance training for all: Swedish Yrkeshögskolor

Our third example of an inclusive growth strategy concerns training institutions that offer second-chance opportunities to adults who either wish to upgrade their skills in response to technological or other changes, or are forced to do so in the face of unemployment. Sweden offers an interesting example of targeted programs that fill this re-training need.

Although renowned for its active labour market policies, Sweden was long considered a laggard in terms of vocational training institutions. In contrast to employer financed systems such as Germany’s, Sweden has traditionally relied heavily on school-based vocational training—which often produced skills that were distant from the rapidly evolving demands of the market and which therefore also resulted in far rockier school-to-work transitions for young people.³¹ In part to address this gap in the 1990s Sweden began to support the creation and growth of so-called occupational colleges (Yrkeshögskolor, hereafter YH). YH involve collaborations between education producers (public or private) and employers to address specific regional skill bottlenecks through post-secondary training. YH offer training that “combines theoretical and practical studies in close collaboration with employers and industry.”³² Such programs are open to applicants of different backgrounds and ages. Applicants are typically expected to have the equivalent of an upper-secondary education but “the rules are generous, and applicants of varying backgrounds are given an opportunity to demonstrate fulfilment of entry requirements.”³³

29 C Ibsen & K Thelen, *Growing Apart: Efficiency and Equality in the German and Danish VET Systems*, MIT Work of the Future Research Brief, August 2020.

30 L Graf, *The hybridization of vocational training and higher education in Austria, Germany, and Switzerland*, Budrich UniPress, 2013.

31 C Crouch, D Finegold & M Sako, *Are Skills the Answer?* Oxford University Press, 2004.

32 A complete description of the program and further information can be found at <https://www.yrkeshogskolan.se/in-english/>

33 <https://www.yrkeshogskolan.se/in-english/>

The average age of participating students is about 30 (steadily rising, from 26 in 2005), a sign that this training is increasingly used as a kind of “second chance” opportunity to make career shifts.³⁴ There are no statistics on why students choose to participate, but program administrators suggest that the main reasons are the desire to change careers; take on more responsibility in a current job; or to strengthen their position on the labour market generally.³⁵ The Swedish National Agency for Higher Vocational Education (Myndigheten för Yrkeshögskolan, MYH) does gather statistics on what participants were doing just prior to entering the program which reveals that the vast majority are already in work (72 per cent), with smaller numbers entering directly from school (11 per cent), or from unemployment (9 per cent).³⁶

The YH program stems from 2009 legislation passed by the then centre-right government, but it also builds directly on a social-democratic initiative from the mid-1990s, the Qualified Vocational Training program (Kvalificerad Yrkesutbildning, or KY). Both programs were inspired by the goal of enhancing employment and training opportunities by generously funding targeted post-secondary training that combines theoretical and practical studies in close cooperation with employers. While German dual study programs involve long (typically 4 year) commitments and provide broad theoretical and occupational skills for young learners, YH involve shorter training courses for adults (lasting typically 1-2 years; the average program length is 1.7 years³⁷) that address specific local skill needs.

The program is designed to maximize both flexibility and proximity to the labour market. Training involves a combination of classroom-based instruction and workplace experience in one or more firms. Public or private educational institutions that wish to initiate a program for a particular type of training may submit a proposal to the MYH. Just under half of all YH providers are public entities (mostly municipalities), the rest are private education providers, and the latter account for a larger share (over 60 per cent) of YH students.³⁸

Applications by potential training providers are vetted at the national level by the MYH, which employs a staff of about 100 and whose own work is overseen by a labour market council including representation from both trade union and employer associations. MYH decisions are guided by the likelihood that the training will meet the specific skill needs of employers within the proposed locality and therefore whether it will lead to learners accessing well-paid jobs. The entire point of the program is to get people into jobs upon completion of the program.

Local employers play a major role in the planning and implementation of Yrkeshögskola programs, including in determining how many and which students are accepted. As members of the steering committee, they influence the content of the training by shaping the curriculum, taking part as lecturers, joining in projects, and offering work placements. Students are not paid as apprentices (as in Denmark or Germany) but instead are supported through government-financed student assistance. Any Yrkeshögskola program for which the education provider receives state funding is free of charge for students. Tuition or course fees are not permitted and participants are eligible for the same level

34 https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_UF_UF0701_UF0701B/YHStudT3b/table/tableViewLayout1/

35 Email communication between authors and programme administrator, Jan 23, 2021.

36 <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/education-and-research/education-of-the-population/entry-into-the-labour-market/>

37 K Eliasson & A Stenberg, Evaluating the Impact on Labor Earnings of Higher Vocational Education, Swedish Agency for Growth Policy Analysis, SOFI Stockholm University and IZA Bonn, December 2021.

38 Statistisk årsrapport, Myndigheten för Yrkeshögskolan 2015

of student support – a combination of grant and low interest loan with a long repayment period – that university students would receive.³⁹ The state compensates training providers according to a standard flat-rate system. As of 2018, the lowest payment per full-time yearly spot was 54,000 SEK (roughly £4,300) for a student in a more theoretical program with at least 21 participants, whereas the highest rate was 450,000 SEK (c. £36,000) per yearly spot for a student in a helicopter pilot program. The costs for the work placement portion of the programs – such as supervision and equipment – are covered by employers.

All programs place heavy emphasis on practical training and early contact with potential employers, and students spend at least 25 per cent of their time at a work placement site. The mandatory in-firm component means that the number of training slots offered is limited by firm capacity and willingness to take trainees. Student spots are coveted, with more than four applicants for each available slot (see Table 3).

TABLE 3: **Overview of Yrkeshögskolor**

Key Figures Yrkeshögskolan	2011	2012	2013	2014	2015	2016	2017	2018
Number of Provider Applications	1 127	1 078	1 185					
Proportion of Approved Applications	29%	28%	32%					
Programs Started during the Year	646	584	665	698	702	739	768	855
Spots in Programs Started	17,300	15,800	17,800	18,906	19,132	20,800	21,600	24,400
Number of Student Applicants	64,600	67,000	78,800	88,594	90,827	92,216	93,425	112,700
Number of Student Applicants per Spot	3.7	4.2	4.4	4.7	4.7	4.4	4.3	4.6
Ongoing Programs (Any Start Date)	1688	1,611	1,668	1,751	1,845	1,900	1,965	1,121
Number of Students in Ongoing Programs	42,500	40,700	42,500	44,704	46,407	47,800	50,300	54,400

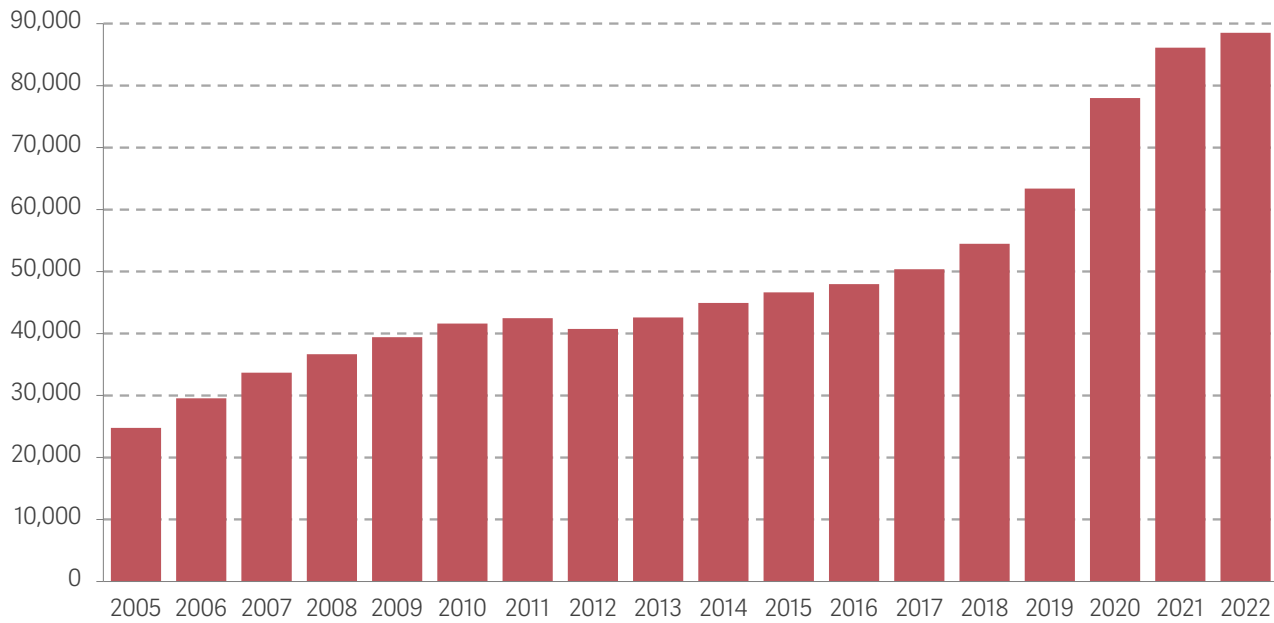
SOURCE: Data from Myndigheten för Yrkeshögskolan, 2015-2019⁴⁰

39 K Eliasson & A Stenberg, Evaluating the Impact on Labor Earnings of Higher Vocational Education, Swedish Agency for Growth Policy Analysis, SOFI Stockholm University and IZA Bonn, December 2021. Currently, students receive approximately 9000 SEK (approximately £720) per month, with the possibility of an additional 30 per cent allowance for children, alongside supplementary loans <https://www.yrkeshogskolan.se/in-english/#stycke4>.

40 Statistisk årsrapport, Myndigheten för Yrkeshögskolan 2020

The program has proved enormously popular among all stakeholders as an efficient and flexible way to address local skill needs and smooth the transition into better work. The program has grown rapidly since its inception, as Figure 1 shows. Considering the continued high demand – both on the part of firms and young adults – the government has increased the budget over time, to 1.8bn SEK by 2018, and the MYH still receives far more proposals than it can fund. In 2016, 445 out of a total of 1,420 proposals (31%) were approved, up from the previous year’s acceptance rate of 25 per cent as a result of additional funding.

FIGURE 1: Total students in ongoing programs



SOURCE: Data from Myndigheten för Yrkehögskolan, 2011-2018⁴¹

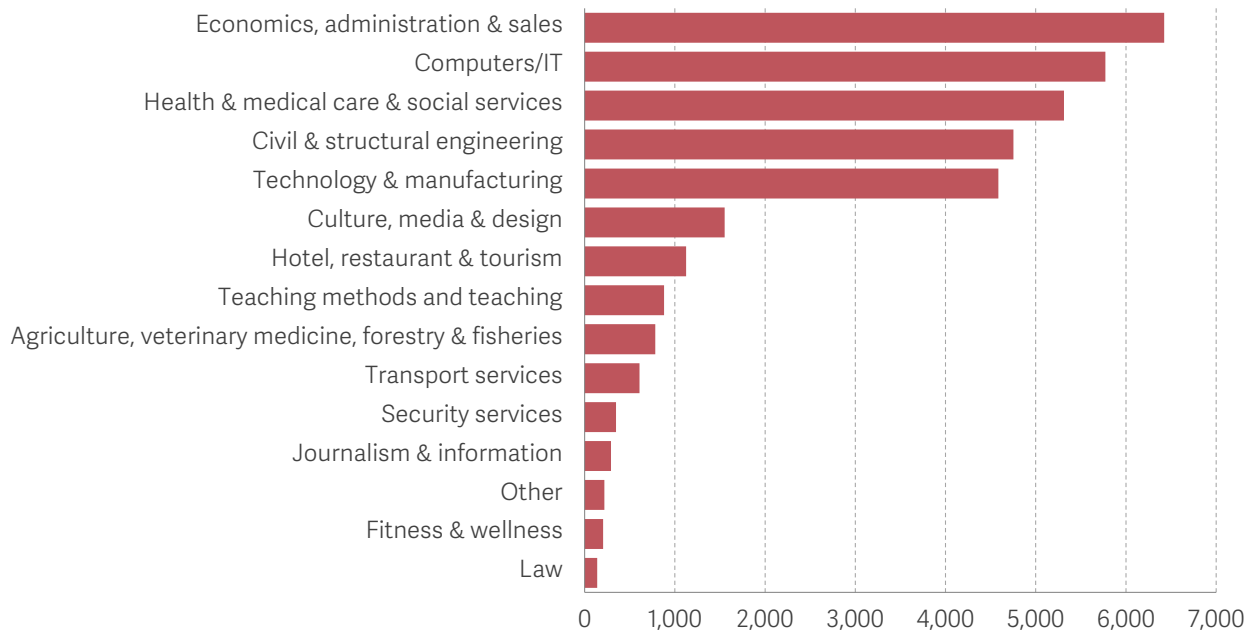
Most YH programs are agreed for an initial two-year period only which can be renewed if the provider demonstrates sufficient continued demand. Total enrolment across all YH in 2021 was over 86,000 (Figure 1). Each program is very specialised and targeted, typically accepting only 30 or so students. The most popular training courses are in the areas of health, economics and administration, computing and technology, and manufacturing (see Figure 2). Students receive a certificate upon completion of the program and approximately 70 per cent of participants complete their training⁴² - which, for context, compares to completion rates of under 40% at American community colleges.⁴³

⁴¹ Statistisk årsrapport, Myndigheten för Yrkehögskolan 2019

⁴² K Eliasson & A Stenberg, Evaluating the Impact on Labor Earnings of Higher Vocational Education, Swedish Agency for Growth Policy Analysis, SOFI Stockholm University and IZA Bonn, December 2021.

⁴³ E Levesque, [Improving Community College Completion Rates by Addressing Structural and Motivational Barriers](#), Brookings Institution, October 2018.

FIGURE 2: **Admitted Students in 2018, by field**



SOURCE: Myndigheten for Yrkeshögskolan.⁴⁴

This flexibility is both a strength and a weakness. Because of the short-term nature of the funding, providers have few incentives to invest heavily – for instance in equipment – giving rise to the concern that provision will tend towards being cheap and easy. However, from the government’s point of view the flexibility is a virtue: they specifically want to avoid creating permanent local institutions in favour of an agile system of training providers. The belief is that this approach is better placed to react quickly to changing skill requirements, while the need to apply and reapply for funding gives the national agency a mechanism to monitor the success of specific programs and providers.

The MYH maintains statistics on completion rates and job destinations to monitor whether participants progress into employment including a role in their selected field of training. This data shows a significant jump in employment rates following training (typically from around 7 out of 10 to around 9 out of 10) which is positive but clearly only suggestive evidence - the precise effect cannot be determined causally. But it is also telling that more than half of participants found employment in the company in which their workplace training took place.⁴⁵

Recent evidence on the earnings effects of this training system also show positive results.⁴⁶ Based on a longitudinal study covering the period 2000-2019 of over 100,000 first-time entrants to the program between 2005 and 2016 (from Swedish register data) and a strong strategy for causal identification (difference-in-difference matching), the study found positive effects on earnings. For younger workers (age 19-29), “short-term returns [to completion of the training] peak at 17 percent for men and 30 percent for women,” though later (11 years after the entry decision) the returns drop to about 9 percent for men and just under 3 percent for women (a difference the authors conjecture is due to

⁴⁴ Statistisk årsrapport, Myndigheten för Yrkeshögskolan 2019: 20

⁴⁵ Statistisk årsrapport, Myndigheten för Yrkeshögskolan 2018: 17

⁴⁶ K Eliasson & A Stenberg, Evaluating the Impact on Labor Earnings of Higher Vocational Education, Swedish Agency for Growth Policy Analysis, SOFI Stockholm University and IZA Bonn, December 2021.

postponed childbearing). Older workers (age 30-54) also seem to benefit, though at lower levels: 4-6 percent for men and 6 percent for women.⁴⁷

Unions generally approve of these programs and serve on the national oversight boards. Despite the heavy influence of local firms in the design of programs and the selection of trainees, such programs are seen by unions as being helpful in correcting local skill mismatches, offering workers opportunities for additional training, and creating smooth transitions into work. Given the strong drift of Swedish youth into university studies (partly a function of the relative lack of vocationally oriented higher-level educational provision), the YH do not directly compete with other educational institutions – but instead complement them in important ways.

Given the rapid pace of technological change, and the resulting shifts in jobs and occupational structures, opportunities for skill upgrading need to play a critical role in inclusive growth strategies. The Swedish Yrkeshögskolor program provides one promising model.

Conclusion

The examples presented in this essay concern institutional reforms that address specific challenges of adjustment and transition towards a knowledge-based economy in the context of technological change and high levels of inequality. They are part of wider changes in the arenas of education systems, collective bargaining, and regional policies. The reforms considered are situated in Germany and Sweden, which both have very different institutional and policy environments compared to the UK. In both countries, employers' coordination has played a strong role, either in employers' associations or in regional or local policy networks and chambers of commerce. Firms have had an active role in policymaking: not just as lobbyists but also as co-producers of policies. They have taken on responsibilities in local educational boards, they are vital to systems of collective bargaining and are active stakeholders in local systems of economic governance.

The first example of plant level agreements in Germany is about securing the employment position of existing skilled labour working in high value export-oriented sectors. It tells a story of social compromise: today's workers are protected from redundancies in return for concessions on wages and benefits, support for technological upgrades and workplace restructuring.

The second example concerns adapting the successful German system of vocational training to higher education. It creates a tailored higher education segment making sure that key firms have access to a supply of highly skilled labour. More broadly it contributes to the overall continued attractiveness and status of the VET system and helps avoid the residualisation that has occurred in many other countries.

The third example -Swedish adult retraining - shows how the wider workforce can be provided with access to training that helps them transition into new occupations. Those receiving training appear to command decent wage-returns that persist over time.

Though the latter two human capital reforms are in some ways new and happen outside of traditional social partnership arrangements, the wider system of economic governance has ensured a role for organised labour in influencing these arrangements which, in turn, has helped ensure they are broadly

⁴⁷ K Eliasson & A Stenberg, Evaluating the Impact on Labor Earnings of Higher Vocational Education, Swedish Agency for Growth Policy Analysis, SOFI Stockholm University and IZA Bonn, December 2021.

supported. Equally, the dual study program in Germany and the 'second chance' training program in Sweden highlight the importance of the active participation of employers in successful educational reforms.

These examples all highlight the importance of effective systems of economic governance that government plays a unique role in creating and sustaining. Government can encourage the formation of local networks of businesses, unions, and other stakeholders. Public agencies or regional bodies can develop incentives for businesses to join in networks by providing funding and access to support structures. And government can take the initiative in delegating policy-making responsibilities to local networks to foster reliability and secure the stability of employer and union participation.

An overarching lesson of these case studies is that human capital strategies need to respond to shifts in the productive economy if inclusive growth models – like those in Germany and Sweden - are to successfully adapt to economic change. It is our strong sense that this wider lesson – as well as some of those arising from the specific reforms considered – will have read-across to other nations with their different institutional arrangements.

Navigating economic change: lessons from abroad and history

As the UK is buffeted by the economic shocks and challenges of the 2020s, The Economy 2030 Inquiry, a collaboration between the Resolution Foundation and the Centre for Economic Performance at the London School of Economics (LSE), funded by the Nuffield Foundation, is publishing a series of essays examining how policy makers from a range of advanced economies, including the UK in the recent past, have managed periods of disruptive economic change. As we seek to reformulate the UK's economic strategy for new times it is vital that we learn the lessons of these comparative and historic perspectives.

Some consider the trajectory of a national economy following a major shock – for instance, Germany after unification, New Zealand after the UK joined the European Community, Estonia post-USSR and the UK during the tumultuous 1980s. Others examine the experience of particular cities – for instance a group of post-industrial ‘turn-around cities’ - or the adjustment of key features of a national economic system, such as Danish ‘flexicurity’. Together they offer a powerful and timely set of insights on the successes and failures of economic policy makers in the face of economic shocks and structural change.

The essays are written by a range of leading economists and national experts and reflect the views of the authors rather than those of the Resolution Foundation, the LSE or The Economy 2030 Inquiry.

They have been commissioned and edited by Gavin Kelly (Chair of the Resolution Foundation and member of the Economy 2030 steering group) and Richard Davies (Professor at University of Bristol and fellow at the LSE's Centre for Economic Performance).