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CONSPIRACY AGAINST THE PUBLIC?

Occupational regulation in the UK
economy

By Prof. J R Shackleton
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Summary

- Around one in five UK employees requires a licence from government to practice their chosen occupation. This proportion has probably doubled in the last fifteen years. A further fifth of workers are certified by government agencies, and such certification is often necessary for employment.
- Occupational regulation is usually justified by the need to protect an uninformed public from harm caused by incompetent or unscrupulous practitioners. However regulation has increased at a time when consumer information has been expanding rapidly and there are new ways of ensuring quality and value for money.
- Another argument for government involvement is that there is a market failure in the provision of skills, and this is a cause of lower productivity. But increased regulation has not achieved very much, and there are other ways to promote skill acquisition. Productivity growth may actually be reduced by excessing occupational regulation.
- Regulation and licensing is sometimes a knee-jerk response to a sudden problem rather than a thought-through policy. And often occupational organisations themselves are the driving force for regulation as a means of keeping out competition.
- The case for occupational regulation has traditionally been held to be strongest for professions such as medicine and the law which currently require many years of study. However new technology is undermining the traditional arguments for exclusivity for professional practitioners.
- Evidence from various countries suggests that occupational licensing raises pay levels for most regulated occupations, reduces employment and does little to raise quality.
- Differences in occupational regulation between countries seems to have little impact on the quality of services provided. However it reduces mobility between countries and has been one of the factors preventing an effective single market for services within the European Union.

- Restrictive barriers to entry to occupations block off better-paid work from some disadvantaged groups and reduce social mobility.
- A thorough review of the effectiveness of occupational licensing is needed. Such a review should reduce government intervention generally, but where some intervention is still required, registration is often preferable to licensing, certification to registration, and private accreditation to state certification.
- More onus should be placed on employers and consumers to decide on suitable qualifications for a job, and less on external regulatory bodies which have agendas of their own.

Introduction

Around one in five of those in employment in the UK now requires government permission to pursue their occupation. While many professions have been regulated for a century or more, there has been a marked increase in government involvement in setting occupational standards which limit entry in recent years. The trend appears to be continuing. Is it justified?

The economist's rationale for occupational licensing is that it is a remedy for some form of market failure. This may arise from asymmetric information, where consumers know less than producers and, it is argued, are therefore likely to make wrong choices without government intervention. Or it may arise from negative externality, where services provided to consumers by incompetent practitioner impose costs – sometimes catastrophic costs – on third parties. A further possibility is that 'free rider' problems have produced a low-skill equilibrium in some areas of the economy, and government-mandated qualifications can raise productivity and the quality of service to the public.

However the extent and seriousness of these concerns are disputed. And where there are problems, there may be private solutions. If the government must be involved, it may do better by assisting indirectly rather than by imposing regulation.

For there is a concern dating back at least to Adam Smith that government-backed restrictions on entry are in reality foisted on us by special interests – in particular, members of the occupation who will gain from the restrictions and therefore exaggerate the potential for market failure. Regulatory bodies in any case inevitably come to be strongly influenced by practitioners with their specialist knowledge base.

Such a ‘conspiracy against the public’, as Smith called it, often seems to lead to higher prices and reduced supply of goods and services, while members of the protected occupation obtain rents in the form of higher earnings. Excessive or unnecessary regulation also prevents competent people taking up occupations which they would otherwise wish, to enter, while protecting incumbents from competition. It is likely to inhibit technical change which would benefit consumers.

This Discussion Paper examines the arguments and makes a case for opening up many occupations to easier entry and greater competition.

It begins by outlining the theoretical arguments for and against occupational licensing. It then moves on to describe the type and scale of occupational regulation in the UK. The arguments for regulation are often held to be most powerful in the traditional professions, such as medicine and law, but they can be disputed. It is suggested that technological developments are altering the picture and that occupational licensing may inhibit changes which could boost productivity. A number of examples of regulation outside the professions, where there does not seem to be a strong case for licensing, are discussed. A section summarises empirical evidence of the effects of regulation on such indicators as price, employment and occupational mobility. The final section discusses the implications for future policy.

Economics and occupational regulation

Protecting the public and improving quality?

In the UK, as elsewhere, there is a great deal of employment regulation which applies across the board, to all employees and, to an increasing degree, the self-employed (Shackleton 2017). The bulk of this general regulation is intended to protect workers and improve their working conditions and terms of service. The focus in this paper, however, is on occupational regulation – rules applying to specific occupations. These relate to such things as necessary qualifications and work experience, tests of competence, commitment to continuing professional development, and codes of practice. These rules are ostensibly intended to protect or otherwise benefit consumers and the general public, not primarily to benefit the employee.

The economic rationale put forward for occupational regulation is that in some areas of employment there are market failures requiring government intervention.

The first of these may arise from asymmetric information. Consumers often know less than producers and this may lead to their making wrong choices – that is, choices that they wouldn't make given fuller information. In this view, consumers who know little about the service offered by practitioners, be they lawyers, doctors or installers of gas central heating, are at the mercy of unscrupulous providers. This may lead to them being overcharged or provided with inferior services. Alternately, the fear of such outcomes may lead people to avoid the market altogether, either doing without the service or attempting to provide it for themselves.

These problems are often exaggerated. Unscrupulous providers of services are already constrained by general civil and criminal law, for example that

covering fraud and various forms of misrepresentation. The government can obviously influence the degree to which such protections are available in practice, for instance by adequately staffing enforcement agencies and facilitating small claims against delinquent service suppliers. But it doesn't necessarily have to determine in detail who is permitted to offer services.

The risks which consumers may face can be further mitigated in various ways without the involvement of government. In the case of larger businesses, the market itself provides a degree of protection because of the importance of reputation. Nowadays brands are destroyed very quickly by adverse publicity from either conventional or social media. In competitive markets businesses which ignore complaints about incompetent service from their staff can quickly be in trouble. Moreover, technical developments such as rating systems (for example, that used by Uber for its taxi drivers) enable businesses to spot problems quickly and take remedial action.

Should asymmetric information about quality be a problem for consumers, it is not necessarily resolved by regulators setting an arbitrary quality level to which providers must conform¹. The price associated with this quality level may be too high for some potential consumers, who will either do without the service, seek out unlicensed providers or resort to do-it-yourself². A better solution involves encouraging the dissemination of reliable information about quality so that people make their own choice about the quality/price combination they want or can afford. There may be some role for government in helping to provide this information, but many privately-provided rating systems already do just this³.

Another danger held to justify intervention is negative externality, where services provided to consumers by incompetent practitioners create problems for third parties. Incompetent doctors may inadvertently facilitate the spread of disease to others who are not their patients. Useless solicitors may create problems for relatives of those whose wills they wrote. Untrained people fitting a gas fire may blow up half a street.

1 Experience with most goods and services, incidentally, is that consumer tastes and spending power vary considerably. Restaurant meals, for example, can be high-quality and expensive, or more basic but cheaper. A gourmet meal at a Michelin Star restaurant and a chicken balti at a local Indian are both acceptable in different circumstances or to different consumers. Setting a common quality level would restrict consumer choice and penalise poorer consumers.

2 This is a generalised version of the 'market for lemons' problem first analysed by Akerlof (1970).

3 See examples for regulated occupations such as these: <https://www.ratemds.com/best-doctors/eng/>, <https://uk.ratemyteachers.com/>, <https://www.solicitor.info/> (all accessed 11 December 2017).

Again, the private sector already has mechanisms to minimise these dangers. For example, service providers can take out professional indemnity insurance, as many unregulated occupational groups from IT consultants to dance teachers do. Those who advertise that they are protected in this way are likely to attract more clients than those who are not. And the suppliers of the insurance may insist that the insured provider meets certain standards. In some cases the law can insist on such insurance as an alternative to determining who is permitted to provide the service.

A further 'market failure' argument, pushed for example by the now-defunct UK Commission for Employment and Skills (Forth et al. 2011), is based on the view that the UK's skills base, and therefore its productivity, are inadequate and have settled at a 'low-skill equilibrium'. This is because of the free rider problem allegedly associated with the provision of training. In this analysis, any business providing a high level of training to its staff may risk seeing them poached by rivals. Businesses avoid the risk by under-providing training. The answer, interventionists claim, is to insist that anybody employed in a particular occupation must reach a standard laid down by government. This will improve the quality of service provided and boost productivity.

This analysis is debatable. Poor service quality and low productivity are often the result not of workers with low skills, but of poor market incentives and inadequate management. Neither are necessarily improved by occupational regulation. Indeed, by protecting 'qualified' practitioners from competition and shifting responsibility from business managers to regulators, occupational licensing can exacerbate these problems.

But regulation is often producer-led

If regulation is commonly advocated on grounds of market failure, it can also be motivated by rent-seeking, meaning that it serves the interests of members of the occupation. Occupations have organised themselves for thousands of years, and for most of that time they have attempted to use government support to further their interests.

Historically, the most persistent occupational organisations were the craft guilds. While having antecedents in the ancient world and contemporary equivalents in Japan, India and Persia, guilds were at their height of power

and influence in mediaeval and early modern Europe (Ogilvie 2014). In some cases, notably medicine, guild influence can be traced directly down to modern occupational and regulatory bodies.

Adam Smith was a fierce critic of the restrictions which were placed on the exercise of craft skills, particularly unnecessarily lengthy apprenticeships and the confinement of even fully qualified craftsmen to particular towns and cities. A case in point from Smith's day was the famous inventor, James Watt. He was forbidden by the instrument makers' guild to work in the city of Glasgow because he had been apprenticed 25 miles away in Greenock. Fortunately, Glasgow University was outside the old city limits and so Watt could be employed as the university's instrument maker.

In a strikingly modern discussion in Book I, Chapter 10, Part II of the *Wealth of Nations*, Smith was scathing about the restrictions guilds placed on employment. These restrictions hit other workers who might like to enter the trade:

The patrimony of a poor man lies in the strength and dexterity of his hands; and to hinder him from employing this strength and dexterity in what manner he thinks proper without injury to his neighbour, is a plain violation of this most sacred property. It is a manifest encroachment upon the just liberty both of the workman, and of those who might be disposed to employ him.

Note that restrictions also hit employers: Smith argued that decisions about who may be employed should be the prerogative of those who pay them: 'the affected anxiety of the law-giver is ... as impertinent as it is oppressive' to employers.

But perhaps most importantly, they hit consumers:

The real and effectual discipline which is exercised over a workman, is not that of his corporation, but that of his customers. It is the fear of losing their employment which restrains his frauds and corrects his negligence. An exclusive corporation necessarily weakens the force of this discipline. A particular set of workmen must then be employed, let them behave well or ill.

It is in this chapter where Smith famously asserted that

People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices. It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice. But though the law cannot hinder people of the same trade from sometimes assembling together, it ought to do nothing to facilitate such assemblies; much less to render them necessary.

In her review of historical findings, Sheila Ogilvie shows that the guilds raised prices, reduced competition, restricted mobility and resisted technological innovation. She claims that guild-like institutions have survived so long 'not mainly because they address market failures, but because they serve the distributional interests of powerful groups' (Ogilvie p.187).

In modern times, Milton Friedman was as strongly critical of government occupational licensing as Adam Smith had been of the guilds. Friedman's PhD thesis of 1946 was on the determination of income from independent professional practice, and in it he argued that the high returns to medical doctors' training compared with that of dentists was largely the result of much tighter entrance requirements and unnecessarily long college education for medics. These restrictions were largely determined by the American Medical Association, which Friedman described as essentially a trade union (Friedman 1963 p.150). He pointed out that the exclusivity of the medical profession drove up costs to the public. Although many might regard it as obvious that the case for regulation was greater in medicine than in any other field, Friedman was far from convinced. He argued that government licensing allowed the profession 'to restrict technological and organizational changes in the way in which medicine is conducted' (ibid. p.154).

And when he looked at other areas where occupational regulation was springing up, Friedman believed that it had little to do with the need to protect the public:

the pressure on the legislature to license an occupation rarely comes from the members of the public who have been ... abused by members of the occupation. On the contrary, the pressure invariably comes from members of the occupation itself (ibid. p.140).

Private occupational organisations have a clear incentive to limit entry, for example by setting their own examinations and demanding an artificially high standard, thus forcing up pay and raising costs to the consumer. To assist in this, many practitioner bodies solicit support from governments. Concentrated producer interests are usually much better able to organise to push for such support than are diverse consumers to resist it, since each consumer has only a limited concern with the service provided (Stigler 1971 p.14).

Moreover 'the arrangements made for licensure almost invariably involve control by members of the occupation which is to be licensed' (Friedman 1963 p.140). Governments are short of in-house expertise and, having decided to regulate, come to rely on licensed members of the occupation to staff key posts in regulatory bodies. A medical licensing body without doctors, or a body licensing lawyers without lawyers being involved, is difficult to imagine. This is a straightforward example of the familiar problem of 'regulatory capture'.

Occupational licensing in the United States, and elsewhere, has expanded enormously since Friedman was writing (Kleiner and Krueger 2010, Carpenter et al. 2015). An additional driver is that governments today are under much greater pressure than in the 1960s to react to a scandal or tragedy by taking almost any action so long as it shows they are doing something to assuage a febrile public, whose concerns are amplified by social media which interest groups have learned to manipulate. One recent UK example followed the newspaper phone hacking trials, which involved a private investigator being jailed. Theresa May, then Home Secretary, announced in 2013 that private investigators would in future have to be licensed by the Security Industry Authority, undergo compulsory training and adhere to a Code of Conduct. The news was unsurprisingly welcomed by the relevant membership body, the Association of British Investigators, although it wanted regulation to go further.

Occupational Regulation in the UK

Occupational regulation takes several forms. We need to understand precisely what we are talking about. In this section I outline the nature and extent of occupational regulation in the UK.

Typology

The main categories of regulation are sketched in Table 1. The most comprehensive form of regulation is licensing: to work in a licensed occupation you must typically have formal qualifications and work experience and pass tests of various kinds (often including non-cognitive tests such as health, solvency and criminal history)⁴. Codes of conduct lay down things which you must do, what you can do and what you can't do in the exercise of the occupation. You are usually required to pay a significant annual fee to retain your license. Nowadays you are usually required to undergo continuing professional development (CPD) and you may have to undergo periodic retesting of your fitness to practice. Failure to maintain required performance standards, or breaches of codes of conduct, can lead to your license being revoked, so that you can no longer practise the occupation.

The paradigm case is the medical profession: doctors have been regulated in one form or another since the 16th century. The 1858 Medical Act began regulation in recognisably modern form with the institution of what is now known as the General Medical Council. Almost all countries have some comparable form of regulation of the medical professions, nowadays often extended to nursing and para-medical functions which were formerly unregulated. But this model has been extended to a huge range of occupations, from solicitors to school teachers and social workers at the 'professional' end, through skilled trades such as gas engineers to less

⁴ Although when an occupation is first regulated, incumbent practitioners may be excused some of the new formal requirements – a practice known as 'grandfathering' (or, better these days, 'grandparenting').

skilled roles as security guards and childminders. Although the requirements of these occupations vary enormously, they have the common feature that is illegal for unlicensed individuals to work in them. There are considerable sanctions, including heavy fines and, in some cases, imprisonment, for individuals (and their employers) who do so.

Table 1: Main categories of occupational regulation⁵

	Privileges	Typical Requirements	UK Examples
Licensing	Legal necessity in order to practise occupation; protected titles	Formal qualifications, demonstrated competence, adherence to code of conduct, continuing professional development and/or inspection	Doctors, nurses, bus drivers, childminders, gas engineers, security guards
Registration	Must be registered to practise	Good character, financial probity	Estate agents, casino croupiers, childminders
Certification	Government-approved body certifies competence and gives right to perform some specified tasks. Title protected but no general legal exclusivity	Demonstrated competence and/or qualifications	Hairdressing, construction skills, fitness instructors, play therapists, architects
Private accreditation: self-regulation	No statutory recognition, but conveys advantage in labour market	Possession of approved qualifications and/or indicators of occupational competence	Accountants, acupuncturists, sport rehabilitators, librarians, occupational safety and health consultants
Unregulated	None	Generic or employer-determined	Economists, analytical chemists, general managers and administrators, retail workers, chefs, rubbish collectors, nannies

⁵ Hemphill and Carpenter (2016) suggest some further categorisations and sub-divisions.

Regulators issuing licences to practise take many forms in the UK – government departments, local authorities, QUANGOs and professional bodies. They all have formal complaints procedures through which the public can report unsatisfactory practitioners.

A related form of regulation is registration. Here also you need government permission to pursue an occupation, but the condition for granting this permission is not related to qualifications or occupational standards. Instead the criteria relate to personal and financial probity. Working as a croupier or cashier in a casino, for example, you require a Personal Functional Licence from the Gambling Commission.

Registration and licensing are conceptually different, as registration is open in principle to virtually anyone except criminals, while licensing in the sense discussed here imposes in most cases significant and often extremely costly barriers to entry. Confusingly, however, many licensing bodies refer to registration – the Medical Register is one obvious example, the Gas Safe Register (for gas engineers) is another.

Another way in which government can intervene in an occupation is through certification. Here a government-mandated body can certify an individual as competent to perform certain tasks. Somebody who is not certified in this way may still be able to enter the occupation, though they cannot use the certificate title, which is legally protected. Possession of such certification therefore gives some advantage in the job market.

Government certification is, however, fundamentally no different in its impact from accreditation through independent, self-regulating bodies⁶. Several such bodies accredit accountants. They offer membership through examinations, require CPD, have codes of practice, discipline errant members and so forth. Their titles are legally protected, are often widely understood by outsiders – especially businesses, which are the main users of their services - and offer considerable labour market advantage to their members.

Milton Friedman (1963 p.149) argued that private accreditation was a good 'half-way house', offering users a degree of protection against unscrupulous service providers without any need for government regulation.

6 Some, like the Institute of Chartered Accountants in England and Wales (ICAEW), have what amounts to government certification through possessing a Royal Charter – which in the case of ICAEW dates back to 1880.

However, as Bryson and Kleiner (2010) point out, private organisations have an incentive to limit entry and behave as quasi-monopolists – for example, by setting their own examinations and demanding an unnecessarily high standard – thus forcing up pay and raising costs to consumers. To assist in this, as suggested earlier, many practitioner bodies are only too happy to solicit support from governments when the opportunity arises. So a self-regulating body may be a half-way house in another sense – simply a staging point on the way to full-blown government licensing.

It's important to note that all four of these categories embrace both highly-skilled and less-skilled occupations. A common stereotype, that occupational regulation is confined largely to highly-skilled fields, while less-skilled jobs are unregulated, is not borne out, as we shall see again later. As the examples of 'unregulated' jobs in Table 1 show, there are certainly plenty of unregulated low-skill occupations with no government-imposed barriers to entry. But for many highly paid and important jobs it is also up to the employer or (in the case of self-employed people) the consumer to decide what qualifications they require.

Until relatively recently many so-called 'graduate' jobs were held by non-graduates whose prior work experience and on-the-job training compensated for their lack of degree qualifications (Alpin et al. 1998). Such opportunities for competent non-graduates are now much reduced, and this is in considerable part a result of occupational licensing. For example, in social work and nursing regulators now insist on graduate-level entry.

The extent of government occupational regulation in the UK

For a long time, the extent of occupational regulation in this country was unclear as there was no unambiguous data source. Questions about licensed status do not appear in the Labour Force Survey⁷, while regulatory and professional bodies' records may not distinguish between active and inactive individuals, or those in training and those with full qualification status. Writing in 2010, Humphris et al. estimated that over 13% of the UK workforce then required a government licence to practice their occupation.

⁷ The LFS is the primary source of UK labour market data – and surveys on a similar basis throughout the EU often enable interesting comparisons. A question on occupational licensing could usefully be included.

This was more than double the percentage estimated for 12 years previously (Bryson and Kleiner 2010). In the following year an estimate by Forth et al (2011) put this figure slightly higher, at 14%⁸.

Amongst researchers there was a strong impression that the extent of occupational licensing was growing. It was known that between 2001 and 2015 twelve significant occupations became subject to licensing for the first time, while it was understood that many existing areas of licensed employment were growing faster than overall employment⁹.

The position has been clarified by work commissioned for the European Commission. In March/April 2015 a Survey of Occupational Regulation was undertaken across the EU (Koumenta and Pagliero 2016). The survey asked respondents if they had some form of professional certification, and whether they could legally practise their occupation without it. Those answering 'yes' to both questions were classified as 'certified', while those answering 'yes' to the first and 'no' to the second were classified as 'licensed'¹⁰.

On this basis, 19% of UK workers were classified as 'licensed' and a further 20% as 'certified'. These are higher figures than had been anticipated, only marginally lower than the EU average. In Germany 33% of all workers are licensed, with 36% certified – a level which seems comparable with the United States, where in 2006 at least 29% were thought to be subject to licensing (Kleiner and Krueger 2010). However countries such as Denmark (14%), Sweden (15%), and (perhaps surprisingly) France (17%) have rather lower levels of licensing than in the UK, although this partly reflects their different industrial and occupational structures.

Table 2 shows licensing by broad occupational category. The most heavily regulated occupational group is professionals. This is unsurprising, as

8 Essentially the methodology in these studies involved looking at occupations where there was known to be occupational regulation and guesstimating what proportion of those employed would be covered by the licensing arrangement.

9 The trend continues, with increasing numbers of occupational roles in financial services being subject to licensing, while there is pressure to require teachers in academies and even private tutors to be regulated, while nursing assistants are also said to be in need of licensing. <http://www.telegraph.co.uk/education/educationnews/10071515/New-plan-to-crack-down-on-poorly-qualified-private-tutors.html> <https://www.nursinginpractice.com/article/nmc-begging-regulate-healthcare-assistants> (Both accessed 11 December 2017).

10 So the definition of 'licensing' in this survey would also probably cover the category of 'registration' in Table 1.

this group contains doctors, lawyers and teachers. However, with the exception of 'clerical support', all categories include significant proportions of licensed workers – dental hygienists, driving instructors and security guards are licensed as well as more obvious groups.

Table 2: Percentage of workers licensed by occupation, 2015

	UK	EU 28
Managers	11	13
Professionals	30	26
Technicians/associated professionals	18	27
Clerical support	3	15
Service and sales	21	22
Skilled agricultural	12	16
Craft and related trades	28	20
Plant and machine operators	14	35
Elementary occupations	10	11
Total	19	22

Source: Koumenta and Pagliero (2016).

There are large discrepancies in licensing between the UK and other European Union countries at this broad occupational level. Moreover there is little consistency between countries in regulation at the level of more specific occupations. A limited number of what euro-jargon terms 'sectoral professionals' (such as doctors, dentists, nurses and midwives, pharmacists and vets) have broadly common regulations across the EU28 as a result of a 2005 Directive. But in many other areas national regulation is idiosyncratic. For example, dental hygienists are licensed in 17 countries, tour guides are licensed in 9, while farriers (who shoe horses) are licensed only in the UK.

In all, according to the European Commission's Regulated Professions Database, 600 distinct occupations are regulated in one or more countries. Table 3 therefore gives another indication of the extent of regulatory reach in different EU states¹¹. In this picture, the UK appears at the more highly

¹¹ Although Table 3 uses a wider definition of regulation than Table 2, which just covers licensing/registration.

regulated end of the spectrum. While UK regulators don't have fingers in quite so many occupational pies as their equivalents in Poland and the Czech Republic¹², they are not far off. There may be special factors, such as the proliferation of financial regulation in the UK in the last few years, but it is strange to see that far more occupations are regulated in the UK than in economies such as France, Italy and Belgium which are usually thought of as having much more employment regulation.

Table 3: Regulated occupations in the EU27*

Country	Number of regulated professions*	Country	Number of regulated professions*
Estonia	14	Germany	86
Latvia	16	Italy	86
Lithuania	27	Netherlands	87
Sweden	38	Denmark	90
Bulgaria	39	France	90
Luxembourg	48	Greece	98
Romania	48	Slovak Republic	109
Ireland	57	Spain	112
Cyprus	62	United Kingdom	131
Finland	63	Slovenia	135
Hungary	75	Austria	151
Malta	75	Poland	162
Belgium	78	Czech Republic	215
Portugal	85		

*Using EU Single Market Regulated Professions Database, including licensing, accreditation and certification. No data for Croatia. Source: Koumenta et al. (2014).

The European Commission has become concerned about the implications of such disparate regulation for competition and mobility within Europe. For

12
UK.

Both these countries are however deregulating several occupations, unlike the

once, its impulse is towards less, rather than more, regulation: in early 2017 it put forward a proposal for a new Directive to bring in a 'proportionality test' for occupational rules. As the German thinktank Centrum für Europäische Politik has observed, in explaining the Commission's rationale:

Disproportionate qualification requirements, an excessive number of reserved activities or other measures, on the one hand, sometimes have expressly protectionist objectives and impede members of professions - and the companies that employ them - from pursuing their profession across borders. As a result, members of a profession are either unable to work at all in certain Member States or first have to undergo time-consuming and costly procedures in order to be able to offer their services on the market. For consumers, this may mean that prices for services in regulated professions are unnecessarily high due to a low level of competition and that the choice of available services is unnecessarily low (Dauner and Pötzsch 2017 p. 3).

In raising this issue, the European Commission is closely following the line of President Obama's White House. Although the institutional context is different, similar concerns about the impact of excessive regulation in the USA were expressed in a July 2015 report Occupational Licensing: A Framework for Policymakers¹³. This report, which was prepared by the Department of the Treasury Office of Economic Policy, the Council of Economic Advisers, and the Department of Labor, noted (p3) that:

There is evidence that licensing requirements raise the price of goods and services, restrict employment opportunities, and make it more difficult for workers to take their skills across State lines. Too often, policymakers do not carefully weigh these costs and benefits when making decisions about whether or how to regulate a profession through licensing. In some cases, alternative forms of occupational regulation, such as State certification, may offer a better balance between consumer protections and flexibility for workers.

In view of these international expressions of concern, it is surprising how little discussion there has been in the UK of the potential downside of the marked increase in this country's occupational regulation in recent years.

¹³ https://obamawhitehouse.archives.gov/sites/default/files/docs/licensing_report_final_nonembargo.pdf (accessed 11 December 2017).

The Professions - the strongest case for regulation

It is in the professions that the arguments for occupational regulation are usually considered strongest. Yet even here the case is far from unassailable – and there are reasons to suppose that it is being increasingly undermined by technical change which is deconstructing traditional professional roles in areas such as medicine and the law. To the extent that this is true, strict occupational licensing may inhibit the early adoption of new technical advances and accompanying productivity gains.

Over six and a half million people in the UK are currently employed in ‘professional’ occupations. According to the Office for National Statistics¹⁴, this description

covers occupations whose main tasks require a high level of knowledge and experience in the natural sciences, engineering, life sciences, social sciences, humanities and related fields. The main tasks consist of the practical application of an extensive body of theoretical knowledge, increasing the stock of knowledge by means of research and communicating such knowledge by teaching methods and other means.

Professionals are the most highly regulated occupational grouping in the UK. According to the EU Survey, 30% of those in this category are subject to licensing by government, with a roughly similar proportion certified or accredited in various ways. This seems to be a relatively high proportion by European Union standards: it is higher than Germany, France, Denmark, Spain and the Netherlands, for example, though lower than Italy.

¹⁴ See Standard Occupational Classification 2010 Volume 1 <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2010> (accessed 11 December 2017).

Becoming a regulated professional involves long periods of preparation, achievement of qualifications, adherence to quality and ethical standards (on pain of being 'struck off' for serious misdemeanour), and usually a commitment to regular updating and development.

Richard and Daniel Susskind (2015) have written that professionals benefit from what they term a 'Grand Bargain'. In return for a role as gatekeeper to specialist knowledge they obtain a very reasonable standard of living coupled with prestige and a considerable degree of trust, responsibility and autonomy.

However this comes at a real cost to society. Professional bodies, which are usually given considerable regulatory powers, act as monopoly providers. As a result, they act to raise prices – whether consciously or not - and thus restrict access for many consumers.

This drives many potential clients and consumers into using unlicensed, poorer quality services - or reliance on pro bono practitioners (the supply of which can rarely equate to the demand). In the UK we can see many cases – dentists¹⁵ and lawyers¹⁶ for example – where the public often gets poor service from practitioners, largely because occupational licensing forces up costs beyond what many individuals can afford, or governments are willing to finance.

Licensing that requires unnecessarily long periods of education, training and work experience has also tended to make many fields socially exclusive, as the costs of entry have deterred those from poorer backgrounds¹⁷.

Susskind and Susskind argue, however, that the monopoly position of professionals is being undermined by technological developments. Expert systems, algorithms founded on the analysis of big data, and artificial intelligence are likely in the future to reduce the need for much well-paid professional expertise.

Carl Frey and Michael Osborne of the Oxford Martin School point out that in medicine many diagnostic tasks are already being computerised. In

15 See <http://www.poverty.org.uk/22/index.shtml> (accessed 11 December 2017)

16 See <http://www.telegraph.co.uk/news/uknews/law-and-order/10770324/Why-should-the-innocent-pay-for-justice.html> (accessed 11 December 2017)

17 <http://webarchive.nationalarchives.gov.uk/+http://www.cabinetoffice.gov.uk/media/227102/fair-access.pdf> (accessed 11 December 2017)

the United States, cancer specialists at Memorial Sloan-Kettering Cancer Center are using big data and advanced computing facilities to determine chronic care and cancer treatment diagnostics:

Knowledge from 600,000 medical evidence reports, 1.5 million patient records and clinical trials, and two million pages of text from medical journals, are used for benchmarking and pattern recognition purposes. This allows the computer to compare each patient's individual symptoms, genetics, family and medication history, etc., to diagnose and develop a treatment plan with the highest probability of success (Frey and Osborne 2013 p. 19).

Such diagnostics are faster than human processes, and often more accurate. According to one source¹⁸, radiologists miss 15% of breast cancers, often through tiredness and insufficient scrutiny of images. Machines maintain a consistent performance and don't daydream (Meddings 2017).

Similarly, complex algorithms are gradually taking on many tasks previously performed by junior legal staff. Law firms increasingly use computers to scan thousands of legal briefs and precedents to assist in case preparation (Markoff 2011, Ames 2017).

Much work is being routinised and could be done either by online systems or by para-professionals operating in teams rather than as isolated (and expensive) 'experts'. End-users are likely to be able to do more and more for themselves following online procedures: we are already beginning to see disintermediation and demystification of professionals and the breakup of traditional roles into component parts. Many fewer highly qualified experts are going to be needed in the future, the Susskinds argue. Indeed in some fields¹⁹, no accredited experts at all may be needed, as technical knowledge evolves into a 'commons', where all can be involved as producers and consumers (rather like Wikipedia) and nobody owns special expertise.

What of the importance of human interaction (such as giving life-changing diagnoses, or advising on careers)? Could this all be done effectively

¹⁸ <http://www.diagnosticimaging.com/pacs-and-informatics/radiology-man-versus-machine> (accessed 11 October 2017)

¹⁹ There are big variations between occupations: Frey and Osborne (2103, Appendix) put the probability of automating accountants and auditors at over 90%, but surgeons and psychologists at less than half a per cent.

online? Possibly, say the Susskinds, who point to experiments which suggest people may sometimes be more comfortable communicating with a machine when discussing embarrassing medical symptoms or talking about personal relationships. Clever programs may be able to mimic a high degree of empathy towards clients or users. More problematic might be decisions involving moral choices – switching off life support, risking a medical intervention, evaluating a PhD submission, judging how to assess mitigating circumstances in a criminal trial and so on.

Then there is the question of legal responsibility - for signing off work, for auditing company accounts, for completing property transfers. Currently a qualified person takes on responsibility and is accountable when things go wrong, as they probably always will to some degree²⁰.

The Susskinds' ideas may be go too far. If the role of professionals as gatekeepers disappears, what counts as knowledge and peer review, and what prevents descent into chaotic nonsense as fads and fancies spread through networks of users? Their book is highly optimistic about the online world; it was largely written before the recent moral panic about bad behaviour online.

The Susskinds and other techno-optimists may be exaggerating the likely impact of technological change on the professions, but they are surely right to point out that many tasks currently undertaken by expensive professionals can potentially be provided much more cheaply and effectively by para-professionals or by consumers directly online.

This offers the UK economy the prospect of major productivity gains and the general public greater choice and a boost to their real incomes. However it threatens the livelihoods of many professionals. And it will inevitably be resisted in much the same way as railway staff oppose innovations which reduce the demand for guards or ticket office staff, or even drivers who are technically unnecessary on some modern trains.

Highly regulated professions, where the state effectively enforces a monopoly and allows regulators to set detailed requirements for the

20 However, Matt Ridley argues that blockchain technology may solve some of the trust issues which currently justify many professional roles. This technology thus represents a 'far greater threat to the jobs of middle men — lawyers, accountants, Facebook employees, civil servants — than artificial intelligence does' <https://www.thetimes.co.uk/article/the-bitcoin-revolution-is-only-justbeginning-k9zj8cxnx> (accessed 11 December 2017).

provision of services, will work to impede rapid technical innovation. This is certainly something we ought to be much more worried about than we are. Most concerns about the traditional professions are about getting more women, more members of minority ethnic groups or other disadvantaged sections of the community into existing positions of privilege – rather than looking to dismantle that privilege to the benefit of the consumer.

Some examples of occupational exclusivity

In this section I move from the traditional professions to give examples of occupations which are less established or less revered, and where current licensing gives rise to even more concern.

Health and social care

The Professional Standards Authority for Health and Social Care (PSA) is a 'super regulator'. It oversees nine statutory bodies regulating health professionals and social workers in England. Each of these bodies may in turn be responsible for regulating smaller groups of professionals, ranging in size from the 700,000 or so covered by the Nursing and Midwifery Council to the 2,800 registered by the General Chiropractic Council.

In a review of regulation (2015) and a set of proposals for reform (2016), the PSA has cast a highly critical eye on the occupational regulation for which it is responsible. In general, it argued, 'regulation is asked to do too much, to do things it should not do, things it cannot do and things which do not need doing' (PSA 2015, p.3). There is far too much 'regulatory mission creep' (ibid. p8) and, 'once a health profession has become statutorily regulated, it seems there is no going back' (p12).

The PSA argues that 'each new organisation, and each new regulatory intervention, has been created in response to specific stimuli without the benefit of...a coherent set of principles' (ibid p.5). Yet they all tend to be based on the model of discrete bodies of largely self-managing professionals, which the PSA, like the Susskinds, regards as outdated in a world of team practice between different groups of employees. The emphasis should be much more on minimising harm done by health and

social care systems²¹ rather than on individual membership bodies. But the tendency has been very much in the opposite direction, particularly as historical inspection systems, which the PSA believes to have been reasonably effective, have been merged into regulatory bodies. It is 'not at all clear whether [these bodies] have improved the quality of care in a significant, sustained way, or if the benefit of this approach outweighs the very considerable costs' (ibid. p14).

The PSA essentially agrees with Milton Friedman's view that pressure for regulation often comes from 'aspirant groups' who think that

regulation is a badge of professional status, and something to be achieved, rather than a system to be applied where risks justify its intervention. Whether and how a group is regulated should not be based on how successfully or how determinedly that group aspires to it. (PSA 2015 p.9).

However, despite what might seem to be the logic of its forceful criticisms, the Professional Standards Authority does not go on to argue for substantial deregulation and a reduction in licensing requirements. It still envisages (PSA 2016) a strong regulatory role for bodies which maintain registers of licensed professionals, set standards for education and practice and so forth, but in a rather more streamlined and consistent way. Indeed, it suggests expanding occupational licensing to some groups working in the NHS and in social work environments who are not currently licensed.

Social Work

The PSA should probably have gone further. Take the case of social work, part of the PSA's responsibilities. This occupation, currently employing just under 100,000, was unlicensed until 2001. It is now effectively graduate-only, with graduates lacking a specific degree in social work having to acquire a Masters-level qualification and undergo an extended period of closely-supervised probation.

21 The PSA is critical of recent legislation criminalising individual teachers and social workers who fail to report suspicions of child abuse rather than focusing on employers.

The occupation was originally regulated by the General Social Care Council (GSCC), and from 2005 the title of 'social worker' has been legally protected. Partly as a result of scandals and tragic deaths of children, there has been a succession of reports and enquiries. In 2010 the government decided to abolish the GSCC and transfer its regulatory functions to the Health and Care Professions Council (HCPC) in England: there is devolution of responsibilities to bodies to the other nations of the UK²². In 2016, however, the government announced that it intended to establish a new social work regulator in place of the HCPC (Cromarty 2016).

All this regulatory change involves considerable expense²³. Is it worth it? Not according to Lel Meleyal (2011, 2017), who argues that regulatory bodies mean little to social workers and tend to lead to defensive practice which is not necessarily in the best interest of clients. He believes that employers are in a better position to support and encourage good practice than regulatory bodies, which operate slowly and reactively, and only have the nuclear option of suspension at their disposal.

In Melayel's view, the onus should be on employers to set and maintain standards and there is no need for occupational licensing. He might have added that without occupational licensing, employers (which vary from large local authorities to hospitals, courts and charities) would have the flexibility to offer employment to a wider range of individuals with different skills, qualifications and experience from those mandated by bureaucratic regulators.

Three types of therapists

The PSA is also the umbrella body for various non-medical therapy occupations. The experience of three similar bodies is instructive in light of the PSA's critique of current occupational regulation.

²² Which, incidentally, now means a social worker moving from Glasgow to Birmingham or vice-versa has to reregister at the cost of some time and financial expense.

²³ In addition there was the cost of setting up in 2012 a College of Social Work to improve standards. This lasted just three years. It was closed in 2015 because it failed to generate enough fee-paying interest.

There are three types of quasi-professional therapy roles which appear broadly comparable: each normally requires postgraduate qualifications, leading to work either in the National Health Service or private practice. One is art therapist, the second is play therapist and the third is dance performance therapist. All work with vulnerable adults or children, using a mixture of similar skills. All are placed on the same pay bands if they work in the NHS.

The 4000 art therapists (which embraces drama therapists and music therapists) are licensed and anybody practising without a license is subject to a £5000 fine. The play therapist title is certified, but there are no legal consequences if you practice as a play therapist without the qualification, although of course like other people working with children or other vulnerable groups you will be subject to DBS checks.

There is no official recognition at all of dance performance therapists, though their professional body (the Association for Dance Movement Psychotherapy) accredits practitioners and maintains a members' register which the public can consult. The Association sought governmental regulation in 2004, and this was indeed recommended by the Health Professions Council²⁴, but nothing seems to have come of the initiative.

So we have three apparently very similar professions which occupy three different positions in the regulatory spectrum, for no obvious reason. None of these occupations appears to be regulated in any other EU country, so it is not obvious that a strong case can be made for government regulation of any of them. The current favoured status of just one of them seems anomalous, a historical accident.

Chiropractic and alternative medicine

Another example of similar occupations which are regulated differently comes from alternative or complementary medicine. There is a growing constituency of people who believe in alternative medicine²⁵. This

24 See <http://www.hcpc-uk.org.uk/assets/documents/10002C1A20090105fPOLP-PRThestatutoryregulationofDanceMovementTherapists-ConclusionsdocumentFINAL.pdf> (accessed 10 September 2017).

25 <https://yougov.co.uk/news/2015/03/06/many-believe-alternative-medicine-effective/> (accessed 26 October 2017).

interest is partly in response to the inability of conventional medicine to deal effectively with many chronic but non-life-threatening ailments such as back pain and, amongst children, asthma and behavioural and learning difficulties, and partly a protest against 'Big Pharma' and 'unnatural' drug-related treatments.

In the early 1990s the British Medical Association (BMA) identified five complementary approaches to health care that they said should now be regarded as 'discrete clinical disciplines' employing established methodologies with potential for use alongside orthodox medicine. These were acupuncture, chiropractic, herbalism, homeopathy and osteopathy (Chapman-Smith 1997). The BMA recommended that there should be legislation to license practitioners of all these occupations. However only two of them (osteopathy and chiropractic) are currently regulated.

It is unclear what makes chiropractic (which involves spinal manipulation) the subject of licensing while, say, acupuncture is not. It is true that NICE (the National Institute for Health and Care Excellence) has in the past taken the view that chiropractors can help relieve lower back pain. But the evidence base for this is weak and no scientifically plausible or testable explanation seems to exist for chiropractic's limited successes in this area – let alone for its practitioners' more outlandish claims that it can help with other, non- back-related symptoms such as children's colic, sleeping and feeding problems, frequent ear infections and asthma²⁶. The occupation's origins in the 19th century were rooted in strange quasi-religious beliefs about energy flows. More recently chiropractic continues to be associated with negative attitudes to conventional medicine, including opposition to vaccination (Lawrence 2012).

This seems a classic case of occupational licensing serving the interests of the occupation – with the title protected and practitioners' credibility and earning power accordingly boosted – rather than the public. In most other European countries chiropractic is unregulated.

26 These claims were attacked by the journalist Simon Singh, who was then sued for libel in 2008 by the British Chiropractic Association, ultimately unsuccessfully.

Taxis and private hire vehicles

The taxi and private hire market has been much discussed recently: a useful review is provided by Niemietz and Zuluaga (2016).

It is well known that there is a dichotomy, most marked in London, between licensed taxis and private hire vehicles. From the 17th century onwards there have been legal restrictions on carrying fare-paying passengers (initially aimed at reducing congestion, a negative externality in modern terms). Such restrictions are common in large cities around the world. In some, like New York and Paris, there have been restrictions on the numbers of those who can pick up casual passengers on the street ('plying for hire'). Licenses to operate became a transferable property right, and have changed hands at very high prices (representing the capitalised values of future 'rents' in excess of operating costs). Taxi fares, although controlled by regulators, have remained high as any substantial reduction would lead to a collapse in value of these 'assets'.

In London there are no absolute controls on the numbers of licensed taxis ('black cabs'), but the same effect – reduced supply and high prices – has been achieved since the 1860s by the requirement that licensed drivers must have acquired 'the Knowledge'. They must commit to memory thousands of streets and be able to calculate very quickly the quickest route between them. The process of acquiring the Knowledge takes around four years, involves a bizarre sequence of tests more akin to an initiation ceremony than job training²⁷, and has a high drop-out rate.

As a result there were just 24,000 licensed taxi drivers in London in February 2017. There were, however, 118,000 drivers of 'private hire vehicles' (PHVs) who are not required to possess the Knowledge, but are accordingly not allowed to ply for hire. Until recently, the model for these 'minicabs' has required customers to ring a despatcher, who tries to find a minicab in the area, and lets them know when they can expect to be picked up ('It'll be at least half an hour'). In the past such drivers often had little knowledge of the city and consulted a battered copy of the London 'A to Z' street map or asked customers if they knew the way.

²⁷ <https://tfl.gov.uk/info-for/taxis-and-private-hire/licensing/learn-the-knowledge-of-london> (accessed 11 December 2017)

It was an inferior service to the black cab, but it was cheaper and often the only possibility for travel late at night.

The taxi and private hire market has been shaken up by the advent of Uber, Lyft and other phone apps which offer a much-improved service, allowing potential passengers to avoid the intermediation of the despatcher and to see what cars are nearby, how long it will be till one arrives, agree a route and pay in advance, rate the driver and so on – all at a much cheaper price than a black cab. Drivers do not need the Knowledge as their optimal route is determined by algorithm and GPS technology.

London black cab drivers have reacted furiously to this development. Part of their argument is based on the working conditions of Uber drivers and their self-employed status (although this might also apply to traditional minicab drivers), part on the belief that there have been problems with screening for sex offenders (which is really Transport for London's responsibility). But at bottom this is little other than a defence of an archaic privileged labour market position protected by legislation, as Jeremy Corbyn found out when he suggested that a collective of tax-paying cab drivers using an app of their own, rather than a 'capitalist' one like that offered by Uber, would be acceptable.²⁸

It is worth noting that restrictions on entry into the black cab field are not only associated with high prices and restricted supply for consumers, but they also limit opportunities for other workers. Black cab drivers are extremely atypical of the London workforce. In February 2017 only 2% were female. 89% of drivers were white, whilst amongst the private hire vehicle drivers just 27% were white²⁹. Their median age was ten years older than PHV drivers.

²⁸ <http://taxileaks.blogspot.co.uk/2017/10/jeremy-corbyn-speech-to-young-labour.html> (accessed 11 December 2017)

²⁹ It is possible that these figures underestimate the dominance of white men amongst black cab drivers, as the data include quite high non-response rates to the ethnicity question. <http://content.tfl.gov.uk/taxi-and-phv-demographic-stats.pdf> (accessed 11 December 2017)

Farriers

A much less well-known example of a licensed worker, a farrier is someone who shoes horses. As a result of lobbying by farriers, the Farrier Registration Council³⁰ was set up in 1975 following a private member's bill. Anybody who shoes horses for a living must be an approved member: a blacksmith cannot shoe horses unless he or she is a member, although a vet can.

The only way to become a farrier is to undertake a four-year apprenticeship. Registered farriers pay an annual fee and are required to undergo continuous professional development. The FRC can and does prosecute anybody found shoeing horses illegally, and this includes people using 'flexible hoof wraps', an innovative polyester-based bandage, which did not exist when registration was introduced. It has just under 3000 members and a council of 20 people. It costs £500,000 a year to run.

There is no reason to suppose that farriers do not do an excellent job, but it is unclear why they need to have legal protection and such steep barriers to entry. The occupation does not appear to be regulated in any other European country. Its protected status, therefore, seems to be a classic example of occupational licensing serving producers rather than consumers.

30 <http://www.farrier-reg.gov.uk/news-and-events/publications/annual-report-2015/>
(accessed 11 December 2017)

Evidence on the effects of occupational regulation

The examples in the previous section are suggestive of the ways in which occupational regulation is likely to raise prices, reduce supply and employment, and reduce job opportunities for ‘outsiders’. But they are essentially anecdotal. In this section I sketch some of the findings of more systematic examination of the evidence by economists and others.

Measuring the impact of regulation – wages and employment

Studies have attempted to quantify the effects of regulation in several ways.

US studies can take advantage of the fact that many occupations are licensed in some states, but not in others. A recent study by Timmons and Mills (2016) is fairly typical. It examines the case of dispensing opticians³¹, who are licensed in 21 states and certified in one other (Texas). Their data suggest that in states with licensing, opticians earn up to 16.9% more than in non-licensing states, a result which holds when controlling for relevant variables such as age, gender and education. The effect varies with the licensing requirements in terms of the length of training mandated. Although the magnitude of the effects vary considerably, this study echoes the finding of similar work by Timmons and Thornton, studying Radiologist Technicians (2008) and barbers (2010). In each case states with tighter licensing requirements pay more, and employ less, than those states with lighter regulation.

³¹ This occupation involves fitting glasses and contact lenses. It is a licensed occupation in the UK, but only requires two years full-time training. It should not be confused with the role of ophthalmologist or optometrist, both of which require considerably more training and have greater responsibility as they cover eye examination and treatment.

Other studies adopt different approaches. In the UK, where a sector is either licensed or unlicensed, comparative analysis on these lines is not possible. However it is possible to consider the 'before' and 'after' of new licensing arrangements- a sort of 'natural experiment' - and some work has been done on this. Humphris and Koumenta (2015) looked at the effects of the introduction of licensing for security guards and nursery workers which were licensed from 2003 and 2007 respectively.

To test for the effects of such changes, researchers need to estimate what would have happened if licensing had not been introduced. They need to find a group of workers in similar fields who possess similar labour market characteristics (such as age, education, gender) and see what has happened to the 'treatment group' (the newly-licensed occupation) compared with the 'control group', using difference-in-differences (DiD) analysis³². The control group needs very careful selection so that its earnings are not influenced by what is happening to the treatment group. For example if tight entry requirements force people out of the regulated occupation and into the control group it will depress the control group's wages and exaggerate the true gain in earnings to the regulated group.

In the Humphris and Koumenta paper, the authors find mixed results. In the case of wages, these appear to have risen significantly in the security industry, in line with predictions, although there was no significant effect on employment. This latter result is perhaps unsurprising, as security guards are necessary for businesses but only account for a small proportion of total costs - classic reasons why the demand for a particular type of labour is relatively inelastic. Nursery workers, however, show a different outcome. Their wages appear to have fallen in relation to control groups. This is possibly because a range of costs have increased as a result of increased government intervention in childcare and nurseries find it difficult to pass extra charges on to parents or the taxpayer – if only because much care is now 'price-capped' as a result of government-funded 'free' childcare (Bourne and Shackleton 2017). But the significant effect on nursing workers which Humphris and Koumenta find is that employment fell. They attribute this to many former or potential nursery workers being unable (or unwilling) to meet the new occupational standards (and associated training

32 DiD estimates the effect of a 'treatment' on an outcome by comparing the average change over time in the outcome variable for the treatment group, compared to the average change over time for the control group. It is a technique which has been widely applied in labour economics. The results will depend on the appropriateness of the control group.

costs) required. Whatever the reasons³³, this study shows that the impacts of licensing are likely to differ from group to group in the labour market.

Rather than concentrating on particular occupations or particular licensing episodes, where special factors may intervene, a number of studies attempt to look at the impact of licensing across the economy, using a more broad-brush approach.

Kleiner and Krueger (2009) claimed that, after controlling for education, work experience and other factors, licensing of an occupation was associated with an average 15% wage premium across the US. This is at the high end of estimates and, as Kleiner has subsequently accepted, may in part reflect unmeasured human capital which his control variables do not adequately capture.

This is an important point, which needs emphasis. Although there is strong evidence that occupational licensing raises prices to consumers and boosts earnings, it is wrong to conclude from this that all the measured gain in earnings is a rent to practitioners. If licensing increases the qualifications needed for entry, this means that new entrants have to acquire extra human capital through study, training and work experience. Much of the gain in earnings is compensation for the costs of acquiring this capital – what economists call a ‘compensating differential’. When required qualifications are increased, though, occupational incumbents, who are normally ‘grandparented’ (not required to take the extra qualifications as new entrants are) do gain increased rents without improving their skills. This is one reason why incumbents are a pressure group for higher entry barriers.

A study (Humphris, Kleiner and Koumenta 2009, 2011) employing a similar methodology in the UK found a premium of around 13%. Kleiner (2015 p.69) observes that this is an effect of similar size to that found for the unreformed ‘closed shop’ imposed by trade unions in the 1970s.

³³ These examples do not conform closely to the Friedman assumption that licensing is almost always the result of producer pressure. As the authors note, ‘licensing was state-led...public perceptions of both professions were poor resulting in considerable public support to increase the quality of the services by restricting who could enter the occupations’ Humphris and Koumenta (2015, p.36).

The same approach has also been applied to the survey of occupational licensing in the European Union. Koumenta and Pagliero (2016) find that having a license is associated with approximately 4% higher hourly wages across all countries and occupations, after accounting for observable characteristics of employees and other relevant controls³⁴.

They find, however, that the premium varies considerably by occupation. For some groups, such as crafts, it can be as high as 19.2%. They argue that licensing 'may significantly distort relative wages' and that, from a policy-making perspective 'these results are clearly alarming' (ibid. p 57). They also express concern at their finding that occupational licensing contributes to wage inequality in the European Union:

... licensing benefits those at the top of the income distribution, as it increases the dispersion of wages at the top and the bottom... occupational licensing seems to be quite different from unionization, which has been shown to reduce wage dispersion (p 59).

Many of these studies are all cross-sectional. Other studies look at the dynamic effects of licensing: Kleiner (2006) examined employment growth from 1990-2000 of occupations licensed in some American states. He found that states licensing an occupation experienced 20% slower employment growth in that occupation than in states that did not require a license.

Another way to look at this comes from experience in Germany of limited deregulation of occupational standards. Those who set up their own craft businesses used to be subject to very tight regulation (Prantl and Spitz-Oener 2009). But with effect from 2004 these rules were made less stringent in some occupations. Partly as a result, the number of new entrants into these crafts doubled between 2002 and 2008. Five years later the number of new start-ups still exceeded the number going out of business. These occupations were opened up to a wider range of people, with a smaller proportion now holding a degree. (Rostam-Afschar 2015).

34 This figure cannot be directly compared with the US and UK studies as a different wage variable is used for the calculation..

Quality

Defenders of occupational licensing argue that restricting entry by imposing higher educational and other qualifications, and requiring continuing professional development, raises the standards of service. This is difficult to judge, as quality is an ambiguous concept. The literature distinguishes between 'input quality', which is relatively easy to judge in terms of qualifications, turnover and similar measures, and 'output quality' in terms of consumer outcomes, for instance in health care.

Some studies show improvement in quality on output indicators when licensing is introduced. For example perceived quality seems to have improved when nursery workers and security guards became licensed in the UK (Humphris and Koumenta 2015). However, the effect on the security industry may have been largely the effect of reduced criminality resulting from the CRB checks required by the licensing scheme. There does not appear to have been any significant improvement in skill levels (ibid. pp 38-39).

Moreover, an important consideration is that, if supply is restricted by licensing, the evaluation of the quality of services is biased by the non-inclusion of those unable to access them. A high-cost legal profession may offer a very good service for those who can afford it, but nothing for those who cannot.

This point is brought home by a report on dental care in the USA. Regulations protecting dentists by restricting the role of dental hygienists in some states, requiring them to be directly supervised by dentists, may have had an adverse effect on the oral health of disadvantaged children by preventing the implementation of low-cost dental programmes. (Nolan et al. 2003).

Indirect tests of quality are used in the study of US opticians referred to earlier (Timmons and Mills 2016). They reason that if licensing improves quality, vision insurance and malpractice insurance premia should be lower in states where opticians have to be licensed than in those where they do not. But the evidence does not bear this out.

An indication of quality used by Koumenta and Pagliero (2016) in their cross-Europe study is days spent in training. They find (with perhaps spurious accuracy) that

Licensed workers without any training requirements undertake 0.851 days more training and certified workers take on average 1.287 days more training than unregulated workers. We conclude that licensing is not the only way to induce workers to invest in training. Certified workers seem able to invest more in training than licensed workers without any obligation to do so (ibid. p 88).

Their conclusion is that licensing is not always associated with a greater acquisition of skills than is achieved by certification, 'thus demonstrating that upskilling can be achieved via alternative routes' (ibid, p 130). Together with their finding that the extent of information asymmetries in an occupation is unrelated to its likelihood of being subject to licensing, this leads them to question the rationale for the widespread adoption of licensing regulations in Europe.

Another quality issue touched on in some of the literature is the possible distributional effects on quality. While licensing might raise average quality, it may also lead to a change in the distribution of outcomes. For example, a study of teacher licensing in the United States (Larsen 2013) shows that it is associated with higher average input quality (teachers are better qualified) and higher average output quality, measured by student test scores. But the effect on test scores is more marked for higher income districts than for lower income districts, so that the difference between highest and lowest achievement increases. This may be because better-qualified teachers gravitate to teaching in schools with students from higher-income families, while poorer areas find difficulty recruiting and have to use temporary staff. It is suggested that quality distributional changes may occur in other licensed occupations as entry standards become tighter.

Access to Jobs and Mobility

As indicated earlier, tight occupational licensing reduces access to jobs and mobility. There is some evidence that lengthy periods of training deter females from entering occupations. An unusual study of US funeral directors (Cathles et al. 2010) provides evidence of the effects of regulation on the gender make-up of the occupation. The most demanding training requirements exist in the 27 states with 'ready-to-embalm' laws, which require funeral directors also to be embalmers. Nationwide, 18.6% of the occupation was female in 2006, but the study finds the proportion of female

funeral directors to be significantly lower in states with ready-to-embalm laws.

Nearer home, growing regulation has dramatically reduced the numbers of registered childminders, who now have to adhere to a demanding set of requirements³⁵ associated with the Early Years Foundation Stage. This has made the occupation less accessible to women with weak academic backgrounds or English language skills, and may have increased the numbers of unlicensed childminders (Bourne and Shackleton 2017).

The European Commission has also pointed out that licensing also seems to reduce mobility between countries. Koumenta and Paglio (2016 p.76) find that 'licensing imposes a significant cost to foreign workers...the proportion of foreign-workers is about one third lower amongst licensed workers' than amongst unregulated workers. They find that this effect is stronger amongst lower-skilled occupations, suggesting that licensing of such occupations disproportionately disadvantages foreign-born workers. However, no such effect is discernible for certified workers. This supports these researchers' view that certification is in many cases preferable to licensing.

35 In another example of the inconsistencies between similar occupations, nursery workers are regulated differently from childminders, while nannies who look after children in their homes are exempt from regulation.

Conclusions

This paper has documented the continuing growth of occupational regulation in the UK. The rationale for government regulation, based on perceived market failures, has been shown in many cases to be unconvincing. Often such regulation reduces competition, raises prices and excludes many competent people from entering occupations, without significantly improving quality of delivery. In areas where rapid technological change promises to raise productivity and bring improved service and lower prices to consumers, rigid occupational licensing threatens to inhibit this process.

Often licensing seems mainly to serve the interest of the members of the occupation. Even where a 'public interest' concern has been the proximate cause of the introduction of licensing, this has sometimes been the consequence of an over-reaction to particular events. Producer interests have had a disproportionate influence on the regulatory process, leading to the creation of substantial 'rents' – pay which is excessive in relation to other similarly skilled jobs where a licence is not required to work. This distorts the labour market and the distribution of earnings.

Licensing makes it more difficult and expensive to enter many occupations. This means that some groups who have problems financing long periods of training tend to be excluded, and thus reduces the diversity of the occupational workforce. Older workers and labour market returners find it difficult to join a new career path. Social mobility may be reduced. Movement between countries is discouraged as over-prescriptive systems of regulation make qualifications difficult to transfer.

By setting very specific job requirements, occupational licensing discourages innovation and competition. It makes it much more difficult to switch between jobs in mid-career. Relaxing occupational requirements offers the opportunity for substantial productivity gains from the more effective use of the workforce.

We should resist further attempts to regulate. Where a new problem is perceived – for example with the quality of nursing assistants – we should look to place more emphasis on the responsibility of the employer rather than setting up some new regulatory body to vet individuals.

With the existing body of regulation we should look carefully at what is really needed. A comprehensive review of today's occupational licensing should be undertaken. As most licensing is domestically generated, any continuing post-Brexit commitments to EU rules are largely irrelevant.

The need for licensing in so many areas needs to be radically re-examined. Where some intervention is thought to be justified, we should look at the most appropriate form of regulation. In many cases it should be possible without safety or quality concerns to substitute registration for licensing, and certification for registration. Public certification can be replaced by private accreditation.

More generally, we should recognise that free choice by consumers and experimentation by providers offers the best hope for productivity and real income gains. Occupational licensing is too often the result of government over-reach and lack of faith in, and understanding of, the way in which a free economy operates and a free society ought to allow individuals to make appropriate decisions for themselves – both as consumers of services and potential providers of these services.

References

- Akerlof, G. (1970). 'The Market for 'Lemons': Quality Uncertainty and the Market Mechanism' *Quarterly Journal of Economics* 84 (3): 488–500.
- Alpin, C., J. R. Shackleton and S. Walsh (1998) 'Over- and undereducation in the UK graduate labour market' *Studies in Higher Education* 23, 1, 17-34.
- Ames, J. (2017) 'Robot lays down law in chambers' *The Times*, 15 November.
- Bourne, R. and J. R. Shackleton (2017) *Getting the State out of Childcare* Institute of Economic Affairs Discussion Paper 81.
- Bryson, A. and M. Kleiner (2010) 'The Prevalence and Effects of Occupational Licensing' *British Journal of Industrial Relations* 48, 4, 676-687.
- Cathles, A. , D. Carrington and K. Krynski (2010) 'The Gender Gap in Funeral Directors: Burying Women with Ready-to-Embalm Laws?' *British Journal of Industrial Relations* 48, 4, 688-705.
- Chapman-Smith, D. A. (1997) 'Legislative approaches to the regulation of the chiropractic profession' *Medicine and Law* 16(3):437-49.
- Cromarty, H. (2016) 'Social Work Regulation (England)' House of Commons Library Briefing Paper CBP07802, December. <http://researchbriefings.files.parliament.uk/documents/CBP-7802/CBP-7802.pdf>(accessed 11 December 2017)
- Dauner, M. and U. Pöttsch (2017) EU Directive: Professional Regulation CEP Policy Brief 2017-21. http://www.cep.eu/fileadmin/user_upload/cep.eu/Analysen/COM_2016_822_Berufsregulierung/cepPolicyBrief_COM_2016_822_Professional_Regulation.pdf(accessed 11 December 2017)

Forth, J., A. Bryson, A. Humphris, M. Koumenta and M. Kleiner (2011) A Review of Occupational Regulation and its Impact UK Commission for Employment and Skills Evidence Report 40.

Frey, C. B. and M. Osborne (2013) 'The Future of Employment: How susceptible are jobs to computerisation?' Oxford Martin School Working Paper <http://www.oxfordmartin.ox.ac.uk/downloads/academic/future-of-employment.pdf> (accessed 10 September 2017).

Friedman, M. (1963) 'Occupational Licensure' in M. Friedman Capitalism and Freedom Chicago: Phoenix.

Hemphill, T. A. and D. M. Carpenter II (2016) 'Occupations: A Hierarchy of Regulatory Options' Regulation Fall, 20-24.

Humphris, A., M. Kleiner and M. Koumenta (2009) 'Analysing Policies Regulating Occupations in Britain and the US'. http://cep.lse.ac.uk/conference_papers/14_12_2009/kleiner.pdf (accessed 31 August 2017).

Humphris, A., M. Kleiner, and M. Koumenta (2011). 'How Does Government Regulate Occupations in the United Kingdom and the United States? Issues and Policy Implications.' In Marsden, D. (ed) Employment in the Lean Years: Policy and Prospects for the Next Decade, New York: Oxford University Press.

Humphris, A. and M. Koumenta (2015) 'The Effects of Occupational Licensing on Employment, Skills and Quality: A Case Study of Two Occupations in the UK' <http://www.busman.qmul.ac.uk/media/sbm/research/researchcentres/cred/impact-reports/Effects-of-Occupational-Licensing-Koumenta.pdf> (accessed 28 September 2017)

Kleiner, M. (2000) 'Occupational Licensing' Journal of Economic Perspectives 14, 4, 189-202.

Kleiner, M. (2006) Licensing Occupations: Ensuring Quality of Restricting Competition? Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Kleiner, M. (2011) 'Occupational Licensing: Protecting the Public Interest or Protectionism?' Policy Paper No. 2011-009. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/pol2015-00> (accessed 28 September 2017).

- Kleiner, M. M. (2015) Guild-Ridden Labor Markets Kalamazoo, Michigan: W E Upjohn Institute for Employment Research.
- Kleiner, M. and A. Krueger (2010) 'The Prevalence and Effects of Occupational Licensing' *British Journal of Industrial Relations* 48 (4) 676-87.
- Koumenta, M., A. Humphris, M. Kleiner and M. Pagliero (2014) Occupational regulation in the EU and the UK: Prevalence and labour market impacts https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/343554/bis-14-999-occupational-regulation-in-the-EU-and-UK.pdf (accessed 11 December 2017).
- Koumenta, M. and M. Paglio (2016) Measuring Prevalence and Labour Market Impacts of Occupational Regulation in the EU Report to the European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. https://ec.europa.eu/growth/content/measuring-prevalence-and-labour-market-impacts-occupational-regulation-eu_fr (accessed 11 December 2017)
- Lawrence, D. J. (2012) 'Anti-Vaccination within the Chiropractic Profession: Implications for Public Health Ethics' *Topics in Integrative Health Care* 3(4) ID: 3.4002
- Markoff, J. (2011) 'Armies of Expensive Lawyers, Replaced by Cheaper Software' *New York Times* March 4. <http://www.nytimes.com/2011/03/05/science/05legal.html> (accessed 11 December 2017).
- Meddings, S. (2017) 'Is there a robot in the house?' *The Sunday Times* 29 October.
- Meleyal, L. (2011) Reframing conduct: A critical analysis of the statutory requirement for registration of the social work workforce Doctoral dissertation, University of Sussex. http://sro.sussex.ac.uk/7665/1/Meleyal%2C_Lel_Francis.pdf (accessed 11 December 2017)
- Meleyal, L. (2017) 'It's time to put social work regulation where it belongs – with employers' *The Guardian*, 23 January.
- Niemietz, K. and D. Zuluaga (2016) Hire Authority Institute of Economic Affairs Discussion Paper 76.

Nolan, L., B. Kamoie, J. Harvey, L. Vaquerano, S. Blake, S. Chawlaf and S. Rosenbaum (2003) The effects of State Dental Practice Laws allowing alternative models of preventive oral health care delivery to low-income children Washington University Medical Center https://publichealth.gwu.edu/departments/healthpolicy/CHPR/downloads/Oral_Health.pdf (accessed 11 December 2017).

Ogilvie, S. (2014) 'The Economics of Guilds' Journal of Economic Perspectives 28, 4, 169-192.

Prantl, S. and A. Spitz-Oener (2009) How does entry regulation influence entry into self-employment and occupational mobility? Institute for Fiscal Studies Working Paper W09/14 <https://www.ifs.org.uk/wps/wp0914.pdf> (accessed 11 December 2017).

Professional Standards Authority (2015) Rethinking regulation <http://www.professionalstandards.org.uk/docs/default-source/publications/thought-paper/rethinking-regulation-2015.pdf> {accessed 11 December 2017}

Professional Standards Authority (2016) Regulation rethought: Proposals for reform <http://www.professionalstandards.org.uk/docs/default-source/publications/regulation-rethought.pdf>

(accessed 11 December 2017)

Rostam-Afschar, D. (2015) Regulatory Effects of the Amendment to the HwO in 2004 in German Craftsmanship Berlin: Free University and German Institute for Economic Research.

Shackleton, J. R. (2017) Working to Rule: the Damaging Economics of UK Employment Regulation London: Institute of Economic Affairs.

Stigler, George (1971) 'The Theory of Economic Regulation' Bell Journal of Economics and Management Science, Spring, pp. 3–21.R.

Susskind R. and D. Susskind (2015) The Future of the Professions. Oxford, Oxford University Press.

Tamkin, P., L. Miller, J. Williams and P. Casey (2013) Understanding Occupational Regulation UK Commission for Employment and Skills Evidence Report 67.

Timmons, E. and R. Thornton (2008) 'The Effects of Licensing on the Wages of Radiologic Technologists' Journal of Labor Research 29, 4, 333-346.

Timmons, E. and A. Mills (2016) 'Bringing the Effects of Occupational Licensing into Focus: Optician Licensing in the United States' *Eastern Economic Journal* <https://doi.org/10.1057/eej.2016.4> (accessed 11 December 2017)

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