FORMULATING INDUSTRIAL POLICY

Tim Besley* and Richard Davies**

Executive Summary

Alongside the challenge of maintaining economic competitiveness in the face of great uncertainty, Brexit brings an opportunity for the government to set out a new industrial strategy. The case for doing so rests on the need to address areas of persistent structural weakness in the UK economy, including low productivity. But it is important that any new industrial strategy be based on appropriately granular data reflecting the real structure of the UK corporate sector: the overwhelmingly preponderant role of services as opposed to manufacturing, for example; the importance of young, fast-growing firms as opposed to SMEs; the relatively high failure rate of companies in the UK; and the relative lack of successful mid-sized firms. Such a data-driven approach might spawn an industrial strategy quite different from the piecemeal programmes of recent years.

Internationally, the UK is a laggard in this area, and the recently-created Industrial Strategy Council does not look strong enough to change that position. To move forward, the government needs to make industrial strategy a central plank of economic policy, embedded at the heart of the administration with its own staff and funding, and operations based on a comprehensive review of the economic contribution and potential of various types of firm. Needless to say, it cannot be a substitute for a continuing commitment to competition and markets, or a stalking horse for protectionism: interventions should be justified by carefully-argued market failure arguments, be time-limited, and transparently evaluated.

The need for an industrial strategy

After a prolonged period of scepticism, Theresa May's government committed to a new industrial strategy and set up the Industrial Strategy Council to deliver it. These steps were fuelled by concerns that the UK has suffered from a period of real wage stagnation due to weak productivity growth. Moreover, the UK has historically had lower productivity compared with the US, Germany, and France. Just what an industrial strategy means in practice, and how it can be delivered effectively, is less than clear. The aim of this chapter is to review the issues and to reach some conclusions about needed changes of policy direction.

Leaving the European Union brings both challenges and opportunities. The main challenge is to remain a globally competitive economy in the face of uncertainty and elevated levels of protectionism. The opportunity comes from the repatriation of powers that will allow more activism if, for example, the European state aid rules are relaxed.

There are however a series of long-standing concerns about investment in the UK and the country's capacity to grapple with economic challenges. The commitment to net zero carbon by 2050 requires fundamental

*LSE; National Infrastructure Commission. E-mail: T.Besley@lse.ac.uk. **LSE.This paper has benefited from significant and substantive comments from Terry Scuoler (Institute of Export and International Trade; Talent Retention Solutions; Llewellyn Consulting) and Gerald Holtham (Cardiff Metropolitan University; Cadwyn Capital; Llewellyn Consulting). The views, judgements and policy proposals expressed in this chapter are those of the authors, but not necessarily those of the critical commentators, Gatehouse Advisory Partners, Llewellyn Consulting, the Federal Reserve Bank of San Francisco or the National Institute of Economic and Social Research.

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press

changes in outlook and transformations in many sectors of the economy. Whether the support structures are in place for government to assist in this transformation in a timely way is questionable. The UK's regional imbalances are fuelled by a pattern of economic growth concentrated in the south. There has been progress, but there is also doubt about the scale and scope of policy to date.

The world in which the UK lives today is one where major trading partners are not shy in developing activist policies to support their economies. Many in the UK have long admired the system of embedded support in Germany. The economic experiences of the economies of Japan, Singapore, and South Korea have long been held up as examples of a different style of engagement between business and the state. And now China is making a concerted effort to move up the value chain, supported by a wide range of government interventions. Even the US, which is often (misguidedly) held up as a model of unbridled free markets, has a range of strategic interventions in markets that support US businesses. Many frontier firms have their origins in government-supported research projects and military initiatives.

The UK is lagging in many areas, as evidenced by its low aggregative productivity performance. Here, we sketch a new approach.

Markets: success and failure

There are good and well-rehearsed reasons for putting markets at the core of successful economies, something that *all* architects of sustained periods of growth and high levels of prosperity have understood. Friedrich Hayek above all understood that the market system provided the basis for the management, creation, and dissemination of knowledge. For example, it was only when China embraced the market system that it was able to deliver the largest reductions in poverty ever witnessed. And the leaders of countries whose hubris allowed them to believe that they could satisfy their citizens' needs without a heavy reliance on the market have, more often than not, impoverished those that they have tried to help.

While markets will be the foundation of any well-functioning economy, it is important to recognise that markets can fail, and that there are many ways of making them work better. The classic accounts of market failure fall into five broad categories:

- First, markets fail to recognise externalities, and regulation is needed to make sure that pollution is kept under control, that systematic financial risks are avoided, and that health and safety standards for workers and consumers are adhered to. And, related to this, they may fail to provide public goods at optimal levels. For example, many technological innovations are also public goods in which the market may underinvest, even when robust systems of intellectual property rights protection are in place.

- Second, markets are not always competitive, and there is a tendency for the powerful to attempt to restrict competition.

- Third, markets can lead to inequalities, some of which undermine efforts to build cohesive societies. For example, agglomeration effects create excessive regional imbalances in prosperity.

- Fourth, a range of information asymmetries and transactions costs create distortions in the behaviour of consumers and firms. Capital markets may thereby fail to allocate capital to its most productive uses.

- Fifth, there is a range of biases in decision-making that affect how markets operate which have been explored by psychologists and can be reinforced by cultural norms. For example, managerial overconfidence can result in poor business judgements that harm consumers and workers.

The case for an industrial strategy stems in part from recognising these issues, and can be motivated by concerns about both efficiency and distribution. For example, lack of competition and agglomeration effects have been particularly important in recent years in fuelling concerns about economic inequality. Moreover, there is often a feeling that, in some areas, there is the possibility of a win-win strategy, where both equity and efficiency can be promoted simultaneously. This is particularly the case with policies that rejuvenate the lagging regions of the UK.

What can government do when designing an industrial strategy?

Governments influence the direction of their economies in many different ways. Even though it is not labelled as industrial strategy, procurement policy can have a major impact on the private sector. The performance of the digital economy, defence and cultural industries, regulated utilities, and health care are all influenced heavily by the state's procurement policies. Hence

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press

any government that has a sizeable public sector has an industrial strategy, regardless of whether or not it chooses to call it that.

Another aspect of industrial strategy are so-called 'horizontal' policies that support the economy across the board. Crucial among these are policies that support skills, innovation, infrastructure, planning for housing and industrial construction, access to finance, the legal system, and basic forms of regulation. On some of these dimensions, the UK is often held up as a paragon. But there are areas where UK policies are sub-standard, such as vocational training, planning, and some aspects of infrastructure, which are discussed in other papers.

The promotion of innovation is an important area for policymaking. This means support for businesses to identify the best practices and most suitable technologies. This can be supported by a vibrant industrial 'civil society' that creates networks where businesses can learn from each other. Such networks can support business in getting to the technology frontier, and are particularly important in the service sector, as well as construction. Government investment in research and development is also important, as is creating effective partnerships between private business and universities.

Regional policies are also part of industrial strategy. Firms choosing to locate typically have an array of considerations around access to markets, a suitable skills base, and infrastructure. Governments can also influence industrial location with tax policy. Regional policy is particularly important, because inequality in the UK has a significant spatial component. Many formerly industrial areas have lost their principal economic basis, in part through technological change and globalisation. And a sense of being left behind is widely thought to be responsible for the electorate in such places voting for Brexit.

Regional policy in the UK was largely outsourced to the European Union and its structural funds in the 1980s and 1990s but, after Brexit, the task of limiting regional inequalities and deprivation falls back on the UK government. Political considerations compel industrial policy to have a more clearly defined spatial dimension. And this means confronting the need for greater decentralisation and devolution of power and funds to the regions themselves where UK efforts, particularly in England, look half-hearted.

A data-driven industrial strategy

A new industrial strategy for 2020 and beyond should start with regular data-driven assessments of the 2.67m firms that make up British industry.[1] Detailed data on individual companies of all sizes has been available for some years in the UK yet, notwithstanding some notable exceptions, this granular information on British companies is an under-utilised resource.[2] Analysis of British industry has tended to be piecemeal and irregular, and has not led to a wider public understanding and debate over corporate conditions in the way that the Bank of England's *Inflation Report* has for inflation and monetary policy, or the publications of the IFS and the OBR have for the UK's deficit, debt, and fiscal policy.

A data-driven approach is vital in all areas of public policy, but is particularly important in the context of industrial strategy. 'Data-driven' means in part making data available to be processed in local and regional centres to form clear ideas about the needs and potentiality of those places. Local knowledge and input, and a degree of decentralisation of decision-making, will be essential if policies are to be both sensible and sensitive to place. Regional structures for policy development and implementation are currently inadequate in many areas, and need to be fostered.

The experience of the 1960s and 70s meant industrial strategy fell out of favour among academics and policymakers alike. Now revived, it is still common to see studies, debates, and policy interventions that are out of line with what British firms actually do, and with the latest research on the types of firm that public policy should support. The latest data and research suggest some areas of focus for state intervention:

- ***Industries: services vs. manufacturing.*** An industrial strategy for the UK must avoid being too focused on the needs of manufacturing. Whether in terms of the number of companies, or the jobs they create, Britain has been a services economy for some time. Between 1997 and 2019 the share of employment in services sectors rose from 71 per cent to 80 per cent, while the share of jobs in manufacturing fell from 16 per cent to below 9 per cent. Service-sector firms have also become increasingly important in exporting. The remaining sectors – agriculture, mining and construction – are essentially stable in terms of their employment share, which is around 10 per cent.[3] Even though it continues to play an important role in exporting, and accounts for a large share of R&D, the share of businesses

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press

involved in manufacturing is now just 5 per cent of UK companies.

- ***Types of firm: small vs. young***. The UK, in line with other countries, offers tax breaks, subsidies, and other forms of assistance to SMEs.[4] A recent research agenda using micro data in the US has shown that the focus on small firms may be misplaced.[5] Most new jobs are created by young firms (which often happen to be small), while older small firms create relatively few new jobs. At the same time, because most young firms fail within their first five years, many young firms are also (ex-post) relatively unimportant. The vital cohort, in terms of contribution to output, productivity, and jobs is a small group of fast-growing start-ups and young firms, sometimes referred to as 'gazelles'.[6]

  The key consideration, of course, is potential, not age and, in areas where venture capital is scarce, unexploited potential may exist among firms that are not so young. Related research shows that policies – targeted loans, subsidies or assistance – that use a firm's size to pinpoint the assistance are poorly targeted.[7] A refreshed industrial strategy for 2020 would review the UK's current offering to SMEs in light of similar studies for the UK.

- ***Location: the north vs. the coast***. In recent years, regional industrial strategy in the UK has tended to focus on specific geographic locations, including Northern England and, more recently, the 'Golden Triangle' drawn between Oxford, Cambridge and London. From the standpoint of capturing positive externalities, focusing on these densely-populated and R&D intensive areas makes sense, innovation and agglomeration both being sources of important spillovers.[8] However, lifting Britain's aggregate productivity will require a strategy that lifts the least productive places: corporate conditions – both productivity and demographic variables such as firm births and survival rates are weakest in rural and coastal British towns.[9] These places have been largely outside the discussion to date.

This overview, while just a sketch, serves to show that *data matters,* as it can challenge the current conception of modern industry and the suite of policies currently in place to support it. Modern industrial policy should consider the young services firm based in Bournemouth just as much as it caters for the small manufacturing company located in Sheffield.

A second reason to build the new industrial strategy on a foundation of a bottom-up, micro-data approach is that it is a useful way to benchmark performance, allowing comparisons of the regions against the UK national average, and of national performance over time *vis-à-vis* international peers. Several simple metrics could be tracked and published regularly:

- ***Birth and deaths*** – a high turnover. Firm birth rates, defined as the number of new firms expressed as a proportion of existing firms, have increased since their post-crisis low, rising from 10 per cent in 2010 to 15 per cent by 2016. Relative to regional advanced country peers, the UK's business birth rate is high (birth rates in Germany, France, Italy, and Spain are all below 10 per cent). Within the UK there is considerable variability by region, with London having the highest birth rate, and Northern Ireland the lowest. Firm death rates are also relatively high in the UK: 10.5 per cent in 2016, compared with 7.7 per cent in Germany, and 4.7 per cent in France.[10] Overall, the picture is of a fluid corporate sector in which is it easy to start up a new firm; but a fruitful policy avenue could be to investigate why so many firms fail to thrive.

- ***Size*** – the UK's missing middle. Most UK businesses are very small: micro-sized firms (1–9 employees) account for fully 86 per cent of enterprises, followed by small firms (10–49 employees) which account for 11 per cent of firms. This broad pattern is seen across most advanced nations, and is even more pronounced in Italy. But the UK stands out relative to many OECD peers in terms of its mid-sized companies (50–249 employees), which account for just 2 per cent of firms. In the US, 3.8 per cent of firms are mid-sized.[11] In Germany Mittelstand firms are an important part of the national debate and policy framework.[12] The UK's 'missing middle' could be another focus of a strengthened industrial strategy body.

- ***Tracking cohorts*** – the echo of 2008. Given the importance of young firms in employment, productivity, and output, tracking cohorts of firms as they grow would be an interesting metric to put at the heart of a new industrial strategy. In the US, recent research has shown that lingering damage to the cohort of firms established between 2007 and

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press

2010 may be important in accounting for the slow recovery from the 2008 crash (see Clementi and Palazzo, 2016). In line with US evidence, preliminary results for the UK show that the 'crisis' cohorts – firms born between 2007 and 2009 – grew more slowly, peaked more quickly, and faded more rapidly than did cohorts of firms born in more normal years. This kind of analysis could be used to track cohorts within industries or locations to assess the efficacy of the UK's industrial strategy.

These observations are a mere snapshot. But they show how a modern industrial strategy can move on from simply measuring corporate productivity, developing more sophisticated metrics of how conducive the UK business environment is for firms to set up, wind down, and grow, and to trace the development of the business sector in a granular way at local level.

Institutions and frameworks

The past three years have seen several developments in the UK's industrial strategy, with evolution of both policy and institutions. A number of calls were made for a new post-industrial strategy following the EU referendum of 2016.[13] In January 2017 BEIS published a White Paper setting out the government's priorities (BEIS, 2018a). The policy is built around five 'foundations' and four 'grand challenges'.[14] To meet these challenges, BEIS intends to adopt a 'mission orientated' approach, the idea being that the government should remain neutral over how challenges – ageing, for example – are approached and solved to allow a variety of ideas to be developed, and avoid bringing political bias or favouritism into policy.[15] Compared to recent UK history, this has been a period of activism.

However, compared to its G20 peers the UK has been a laggard. The period since the euro crisis eased has seen a flowering of interest in industrial strategy. China's 'Belt and Road' initiative is the most well-known and strongly funded: launched in 2013 it involves investment of around $900 billion.[16] Germany is developing a radical shift towards a more activist industrial strategy that would involve intervention in particular markets, a quantitative target for the share of industry in national GVA, and the pursuit of national champions.[17] There are signs that France may follow, including a Franco-German joint 'manifesto' on industrial strategy.[18]

Digging down to the specific challenges that BEIS has identified also shows how far behind the UK is: Japan adopted an industrial strategy devoted to robotics specifically designed to aid an elderly population five years ago (METI, 2015). Looking inward, the UK may seem radical – looking outward, developments remain sluggish.

The UK still lacks the kind of joined-up and determined approach that many of its competitor economies have in place. It does have an array of frameworks for promoting industrial development, many with a regional focus. Their latest incarnation is in the form of Local Enterprise Partnerships (LEPs). Whatever the merits and deficiencies of such arrangements, the UK's inability to commit to stable arrangements prevents the building of the kind of state capacity that is needed.

A further impediment to building a supportive state comes from the fragmented structure of accountability and authority, coupled with a failure to match the unit of governance to a sensible economic geography. Elected mayors in metropolitan areas may help in this, notwithstanding that they (mostly) lack resources and administrative structures.

We reserve judgement about whether the relatively new Industrial Strategy Council (ISC), which was set up in 2018, will provide the kind of independent oversight and guidance that is needed.[19] Its creation marks a potentially important development for the UK, which has not had such a body since the abolition of the National Economic Development Council (NEDC) in 1992.[20]

One way to assess the new ISC is by comparison to the other economic decision-making and advisory bodies that have been established over the past 25 years in the UK. These include independence for the Bank of England and the Competition Commission (now the CMA) in 1997, the Office for Budget Responsibility in 2010, and the National Infrastructure Commission in 2015. These bodies have differing degrees of independence, capacity – both locational, staff, and technical – clarity of mandate, operating framework and legal underpinning. When benchmarked against other independent or arms-length bodies, the ISC looks tame; it is a non-statutory advisory group, and its expert members command few resources and operate under a remit that explicitly prevents them from commenting on tax policy or making public policy recommendations to government.[21]

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press

Conclusion: a plan of action

Policy proposal

- *The government should adopt a new industrial strategy for 2020. It should be:*

– *A central plank of economic policy.*

The UK needs to give greater prominence to industrial strategy in its public institutions and policy debate. Depending on the future relationship to the EU, this should be closely coordinated with trade policy, especially export promotion.

– *At the heart of government.*

HMT lacks the capacity to operate as an effective economic ministry, and BEIS has lacked the authority to play this role. Founding the ISC is a welcome development, but it is too timid. Whoever is responsible for industrial strategy needs a dedicated base of operation, permanent qualified staff, and a legal operating policy mandate similar to those underpinning the Bank of England and the CMA. The ISC should enjoy sufficient independence to provide critical advice to relevant government departments, and it should be embedded in regional governance, coordinating policies on skills, infrastructure, and housing.

– *Properly focused.*

Design of an ambitious strategy should begin with a review of the economic contribution of different types of firms and a consideration of re-focusing aid away from small firms towards young ones and those with potential for growth. Simple yet data-rich metrics on what British industries are lacking are needed to steer industrial strategy and assess its performance.

– *Market led, yet realistic.*

It is essential to maintain a commitment to competition and markets alongside the industrial strategy. Maintaining a commitment to competition is critical in a context of decentralised policy to avoid the risk of 'capture'. Interventions should be justified by carefully-argued market failure arguments, have clear time horizons (often with sunset clauses), and their impact should be evaluated properly using appropriate data collected for the purpose.

NOTES

1 This is the number of VAT and/or PAYE registered businesses. ONS (2018).
2 These databases, including the Business Structure Database, are anonymised taken from administrative databases including the IDBR.
3 Source: ONS, Table EMP13, All employment by industry, May 2019 release.
4 For example, BEIS has a dedicated 'Action Plan' for SMEs (see BEIS, 2019); R&D tax breaks for SMEs and a commitment to use procurement to direct government spending towards SME. Lobbyists also campaign for SMEs – for example the Advertisers Association has a tax break to allow SMEs a tax break on advertising.
5 These studies tend to use the Longitudinal Business Database (LBD) and the related Business Dynamic Statistics (BDS) which are maintained by the US Census Bureau. The UK has parallel databases, including the Business Structure Database (BSD).
6 See for example, Haltiwanger *et al.* (2013, 2017).
7 Brown *et al.* (2017) examine the US Small Business Administration loans and assistance program.
8 More formally, there are positive externalities associated with technological adoption and likely agglomeration effects in large cities.
9 On the disparities between coastal and inland towns in Britain see Bernick *et al.* (2017).
10 Data downloaded from stat.OECD.org, August 2019.
11 OECD data; caution, data are relatively old (2014) – see: http://www.oecd.org/sti/dynemp.htm.
12 Mittlestand firms include small and medium sized enterprises. They are able to access various R&D subsidies.
13 Industrial Strategy was discussed in CEP (2017), and by the Industrial Strategy Commission chaired by Dame Kate Barker.
14 The foundations are ideas, people, infrastructure, business environment, and places. The grand challenges are AI and data, the ageing society, clean growth, and the future of mobility.
15 On 'missions' in Industrial Strategy see Mazzucato (2017).
16 Also known as One Belt One Road or OBOR the initiative is made up (1) the 'Silk Road Economic Belt' and (2) the '21st Century Maritime Silk Road'.
17 See BMWI (2019) for the outline of Germany's strategy which involves support for named technologies (cell batteries) and the creation of a state-supported pan-European champion in AI. These interventionist steps are controversial in Germany, for a dissenting view see German Council of Economic Experts (2019).
18 The joint paper explicitly discusses relaxing competition laws in order to create pan-European companies better able to compete with Chinese firms.
19 The new ISC met for the first time on 1st November 2018 at Downing Street, see BEIS (2018b).
20 The NEDC was established by the Macmillan government. Supported by an 'office' (the NEDO) it operated from 1962 until 1992 when it was abolished by the Major government. For a short history on institutions over-seeing UK industrial strategy see Pemberton (2018).
21 The remit of the ISC is discussed Gov.uk (2018).

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press

REFERENCES

Andrews, D., Criscuolo, C., Gal, P. and Menon, C. (2015), *Firm Dynamics and Public Policy: Evidence from OECD Countries*, Reserve Bank of Australia Conference Volume.

BEIS (2018a), 'Industrial strategy: building a Britain fit for the future', November 2017, updated June 2018. https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

—(2018b), 'Forging our future, the industrial strategy story so far', 6 December 2018.

—(2019), 'BEIS small and medium enterprises (SME) action plan', Policy paper.

Bernick, S., Davies, R. and Valero, A. (2017), 'Industry in Britain – an atlas', CEP Special Paper No. 34, September.

Brown, J. David, J., Earle, S. and Morgulis, Y. (2017), 'Job creation, small versus large versus young, and the SBA', in Haltiwanger, J., Hurst, E., Miranda, J. and Schoar, A. (eds), *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, pp. 371–410).

BMWI (2019), 'National Industrial Strategy 2030', Federal Ministry for Economics Affairs and Energy, February 2019.

Clementi, G.L. and Palazzo, B. (2016), 'Entry, exit, firm dynamics, and aggregate fluctuations', *American Economic Journal: Macroeconomics*, 8, 3, July, pp1–41.

Decker, R., Jarmin, R., Haltiwanger, J. and Miranda, J. (2019), 'Changing business dynamism and productivity: shocks vs. responsiveness', *American Economic Review* (*forthcoming*).

German Council of Economic Experts (2019), 'Setting the right course for economic policy', Annual Report 2018/19, Chapter 1.

Gov.UK (2018), 'New Industrial Strategy Council meets as membership announced', Press Release, 1 November 2018.

Haldane, A. (2017), 'Productivity puzzles', speech delivered at the LSE, March.

Haltiwanger, J., Jarmin, R.S. and Miranda, J. (2013), 'Who creates jobs? Small versus large versus young', *The Review of Economics and Statistics*, 95, 2, pp. 347–61.

Haltiwanger, J., Jarmin, R.S., Kulick, R. and Miranda, J. (2017), 'High growth young firms: contribution to job, output, and productivity growth', in Haltiwanger, J., Hurst, E., Miranda, J. and Schoar, A. (eds), *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, pp. 11–62.

Hopenhayn, H. and Rogerson, R. (1993), 'Job turnover and policy evaluation: a general equilibrium analysis', *Journal of Political Economy*, 101 (October), pp. 915–38.

Industrial Strategy Commission (2017), *Final Report*, November 2017.

Mazzucato, M. (2017), 'Mission-oriented innovation policy: challenges and opportunities', RSA, September 2017.

METI (2015), *Japan's Robot Strategy*, January 2015.

Midrigan, V. and Yi Xu, D. (2014), 'Finance and misallocation: evidence from plant-level data', *The American Economic Review*, 104, 2 (February), pp. 422–58.

Norris, E. and Adam, R. (2017), 'All change: why Britain is so prone to policy reinvention, and what can be done about it', Institute for Government, March.

Pemberton, H. (2017), 'UK industrial strategy, redux: Reinvention or return to the 1970s?', IPPR, January: https://www.ippr.org/juncture/uk-industrial-strategy-redux-reinvention-or-return-to-the-1970s.

White, C. and Wilkinson, B. (2017), 'Creating, not picking, winners: how to develop an industrial strategy which works for everyone', Kings College London, November.

https://doi.org/10.1177/002795011925000117 Published online by Cambridge University Press