



Regional Economic Development: Local Economy Briefing 26

Human Capital

Introduction

Human capital is a key component of economic potential, reflecting the contribution to added value that individuals or populations can make, given their current and expected productive attributes. Human capital is expressed as a stock variable (HCS - the monetary value of the capital tied up in the current worker/labour force) and a flow variable (FTPE - the future total potential earnings of that stock). It is important to assess whether the stock is good enough and whether the flow is growing in real terms over time.

The latest ONS figures on human capital for 2017, and over time since 2004, have just been released. They show, at best, modest readings for the United Kingdom. Within the total, SW England (including Dorset) displays below average performance. If this mediocre record persists, it will be hard to break away from anything other than sluggish growth prospects in the years ahead.

Local businesses often complain about the availability and usefulness of the skills base in the workforce. In business surveys and meetings, ability to attract, capture and retain new and replacement skills is always mentioned as a key constraint on current and future growth. Skills 'gaps' or mismatches are a fundamental brake on development. Education and training for the fourth industrial revolution are vital investments we all need to make, as individuals, employers and education/training providers, for boosting productivity, relative competitiveness and living standards.

The National Data

Statistically, human capital measurement is a function of five key elements – both real and potential: qualifications, educational progression, earnings, age and more intangible factors (such as social cohesion and aspiration)¹. In simple terms, a qualified and younger workforce has more productive and earnings potential.

Between 2004 and 2017, the UK's real HCS increased by 10.9%. This was composed of a 26.5 points increase in earnings, more than offset by a 29.9 points rise in prices. Population and qualifications growth both added 8 points each, whilst population ageing took off 1.7 points. For many age groups, in this period, there was little real increase in human capital stock and earnings.

¹ In practice, this final element is rarely, if ever, measured

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In 2017, the UK HCS was recorded as £20.4 trillion or about ten times GDP. That year, in real terms, the HCS value fell by 0.8%, largely because of a drop in real earnings. Over the period 2012-2017, the average growth of the real HCS was a modest 2% per annum. There was an increase in the contribution of qualifications to the overall HCS but not in the value per unit, especially for those in the younger age brackets and by comparison with overseas competitors. (The United Kingdom is cited as suffering a worse record on numeracy and literacy relative to the OECD average.)

Estimates of the flow of TFPE during a lifetime are based on crucial assumptions about labour productivity growth (2% per annum), the discount rate (3.5%) and the 'normal' retirement age (65). If these assumptions are changed, TPFE figures can shift significantly. For example, recently, productivity has not managed 2% growth per annum (decreasing TFPE), arguably discount rates have been less than 3.5% (increasing TFPE) and people have started to work longer (increasing TFPE). The net effect of these realities has probably not helped the series.

In 2004, the pay premium for degree equivalent qualifications was 41%. For masters+, it was 69%. By 2017, these ratios had dropped to 24% and 48% respectively. This partly reflected a supply surge in new graduates/post-graduates, as well as some qualification inflation on the demand side. It still pays to be more highly qualified but the differentials have narrowed.

A lot also depends on the sector distribution of human capital usage. For example, graduates+ in agriculture, tourism and leisure services, earn markedly less from their equivalent human capital than those in mining, utilities and financial services. This is likely to reflect real productivity differentials by workers related to the wider capital and investment characteristics of the different industries.

Local Data

The table below shows a regional summary of HCS in 2017. It indicates that the SW share of the HCS is broadly consistent with (but slightly below) its population and total output shares at just over 7% of the UK total. The key UK factor, however, remains the 'hothouse' that is the Greater South East, which has more than a third of the total UK HCS. On this measure, as with so many others, the UK economy displays a marked regional pattern, with large differences between the Capital and the periphery.

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Human capital stock by region, (2017, £ trillion & %)

Region	£trn	%	Region	£trn	%
London	4.08	20.1	S West	1.46	7.2
S East	2.93	14.4	York & Humb	1.45	7.1
N West	2.01	9.9	E Mids	1.29	6.4
East	1.91	9.4	Wales	0.88	4.5
W Mids	1.63	8.0	N East	0.68	3.3
Scotland	1.55	7.6	N Ireland	0.43	2.1

Source: ONS

The next table shows the regional summary of TFPE per individual, in 2017. Only three regions are above the UK average. The SW is ranked seventh, operating at about 10% below the UK average with a discounted earnings total of £433,122. (N.B. this is 12.5% below the £494,560 England average). Again, SW England performs reasonably but 'could do better'. We do not have the data at a lower geography, but Dorset is likely to be a bit better than the SW average but still adrift of the SE figures.

Regional real discounted lifetime earnings per individual,
(2017 £ '000, UK=100)

Region	£ '000	UK=100	Region	£ '000	UK=100
London	667	138.1	S West	433	89.7
S East	519	107.5	York & Humb	432	89.6
East	500	103.6	E Mids	421	87.3
W Mids	448	92.8	Wales	407	84.3
Scotland	445	92.3	N East	404	83.7
N West	441	91.3	N Ireland	365	75.5

Source: ONS

Occupational Data

Finally, we consider the occupational data on human capital. The next table shows HCS and TFPE. The interesting thing here, is how the ranking by HCS differs from the ranking by TFPE. For example, over a lifetime, managers (etc.) earn more from their human capital than professional workers. Similarly, machine operators rank last of nine on HCS but fifth on TFPE. Productivity and earnings power of individuals or occupational groups are linked to the availability and use of other forms of capital (physical and natural) and output value rather than just human capital alone.

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Occupational HCS & TFPE, (2017 £trn, £ '000)

Region	£ trn	£ '000	Region	£ trn	£ '000
Professional	4.72	749.8	Elementary	1.03	316.5
Associates & Technical	3.02	678.6	Sales & service	0.94	397.4
Managers & seniors	2.46	750.5	Caring & leisure	0.87	305.6
Skilled trades	1.70	527.7	Plant & Mach ops	0.86	441.3
Admin & secretarial	1.32	415.1			

Source: ONS

Conclusions

Human capital is an important ingredient for growth potential, productivity and development. Over time, improvements in the stock and lifetime earnings of human capital are a vital component of sustained advances in competitiveness and real living standards.

The UK human capital stock could be improved and, within that the SW England position could be ranked higher. Investment in human capital at every level of education, training and experience is key to sustainable futures for businesses and sectors across Dorset.

Local actors (businesses, educationalists and other development bodies) recognise this when they talk about current constraints on growth. In the period ahead, they will probably need to back up this concern with real action, working together to boost human capital resources and earnings potential over time. This becomes especially urgent in an era of rapid, disruptive and novel technological change.

Professor Nigel F Jump, Bournemouth University, October 2018