SEFYDLIAD bevan FOUNDATION

The shape of Wales to come:

Wales' economy, environment and society in 2020

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SUMMARY

By 2020 an extraordinary number of targets are supposed to be met. But the longest and deepest recession in a generation and unprecedented cuts in public expenditure are changing the Welsh economy, society and environment dramatically. While there is a place for vision, aspiration or ambition, it is crucial to look at what might be the reality of Wales in 2020.

This report uses a wide range of forecasts, outlooks and projections for Welsh economy, society, environment and government and public services. It identifies the key changes ahead, and then outlines the challenges that they raise. These are summarised overleaf.

The conclusion highlights three possible scenarios for Wales in 2020:

- **On trend**: If forecasts are right, Wales will be even poorer economically compared with the rest of the UK. More than four out of ten jobs will be professional or managerial, while semi- and unskilled work will account for less than one in five jobs. Some families will be better off, but thousands will struggle to make ends meet, and a minority will face severe poverty. There will be a greater incidence of ill-health and the gap in educational attainment will remain, with up to 70,000 school leavers without five good GCSEs. Extreme weather and flooding will be more common, and there will be a risk of water and power shortages. Inequalities associated with class, gender, age, disability and ethnicity could all increase, and some communities will be considerably disadvantaged.

- **Worst case**: it is entirely plausible that the trends forecast will prove optimistic. Wales could experience little if any economic growth by 2020, and unemployment and casualised employment could be widespread. The standard of living for most could decline. Health, social care and education services could struggle to meet demand. Disruption due to climate change could be widespread.

- **Bucking the trend**: equally plausibly, Wales might prove the forecasters wrong. The Welsh economy could outpace UK growth, generating full employment and a rising standard of living. Public services could be reformed to deliver top-quality services, shaped by the people who use them, while sustainable lifestyles could see the effects of climate change halted.

If two of the three scenarios are unappealing, then public policy needs to change radically. It is highly unlikely that the approaches of the last fifteen years will manage to buck the trend in the next five. Times really are changing, and it is time for something new. We need to ask some searching and fundamental questions about the role of the state, third sector and business; about the effective levers for change; about how to target scarce resources and how to engage with people. Most importantly, we need to recognise that, despite the challenges, Wales has abundant resources in the shape of its environment, history and culture, its businesses and institutions and, crucially, the skills and resilience of its people. Brought together, there is every reason to anticipate that Wales might just prove the forecasters wrong.

THE ECONOMY IN 2020	CHALLENGES AHEAD
• The gap between Wales and UK GVA could widen. • Professional and managerial jobs will grow by 17%, creating skills gaps. Semi- and unskilled jobs will contract by 12%, with intense competition for jobs. • The majority will enjoy a modest rise in standard of living. Public sector workers and those on benefits will experience a drop in living standards. A minority will experience extreme poverty. • Innovation in goods and services will continue but Wales' poor innovation record could hold it back.	• Growing the economy and labour market • Closing the skills gap • Reducing severe poverty • Better prospects for young people. • Fostering innovation.
SOCIETY IN 2020	**CHALLENGES AHEAD**
• Wales' population will grow, with 25,000 more children and 115,000 more older people. It will be more diverse. • Ill-health is likely to increase, as is demand for healthcare services and social care (paid and unpaid). • 70,000 children could leave school without five good GCSEs. • There is likely to be a shortage of housing, rising prices and increased homelessness.	• Improving health and reducing health inequalities • Increasing attainment amongst young people and adults • Providing affordable and suitable housing
THE ENVIRONMENT IN 2020	**CHALLENGES AHEAD**
• Summers will be 2 degrees C warmer with 7% less rain. Winters will be 1.3 degrees C warmer with 7% more rain. There will be more extreme weather. • Energy generation is changing but there could be issues of security of supply and affordability. • There is a risk of water shortages by 2020. • Several habitats and species are threatened. • Significant gaps in IT infrastructure and use could remain. • Road and rail traffic is forecast to grow but Wales could still be marglisalised by investment elsewhere.	• Reducing carbon emissions and living sustainably • Mitigating the impacts of climate change • Improving digital and physical accessibility
GOVERNMENT & PUBLIC SERVICES	**CHALLENGES AHEAD**
• Wales could be part of a smaller UK, outside the EU. • There could be a change of control in the Assembly. • The Welsh block grant could be smaller than in 2010, with 20% of income coming from Welsh taxes. • There is uncertainty about the reform of Wales' public bodies.	• Putting Welsh public finances on a sustainable footing. • Reforming the public sector to save money & match needs. • Asserting Wales' needs during constitutional change.

1. INTRODUCTION

A casual observer might be persuaded that 2020 was the year of nirvana. By this year, an extraordinary number of targets are supposed to be met. For example, child poverty was meant to be eradicated, Wales' school children's attainment was meant to be in the world top 20, Wales' smoking rates were hoped to be amongst the lowest in the world and Wales' carbon emissions were expected to be down by 40 per cent.

But as 2020 gets closer, it is highly unlikely that many, if any, of these targets will be achieved. The longest and deepest recession in a generation coupled with unprecedented cuts in public expenditure are changing the Welsh economy, society and environment in ways that were unthinkable ten to fifteen years ago when many of the targets were set. Few would have foreseen that living standards would fall for four successive years – the longest period of decline since records began in the 1960s. Nor, after ten years of growth, would most have anticipated that the Welsh Government's budget would fall by nearly ten per cent in just three years.

While there is a place for vision, aspiration or ambition, it is crucial to be realistic about the future. The trends that shape Wales' fortunes lie far beyond its borders and include developments in the global and UK economy, innovations in technology, and long-term demographic changes to name just a few. Public policy needs to take account of these trends, not least because of their ability to drive good intentions off course.

Public policy also needs to be thinking ahead, looking at how to prevent tomorrow's problems as well as solving today's. Indeed, the lead times for major changes in legislation, policy or finance suggest that the Welsh Government, local authorities and other bodies ought to be actively anticipating the future rather than reacting to the present.

This report sketches out what Wales might be like in 2020 and identifies the key issues that need to be addressed in the run up to it. It uses a wide range of forecasts, outlooks and projections made in respect of the economy, society and the environment, some specific to Wales but many concerned with Britain or the UK as a whole. It is of course by no means certain that these forecasts and projections will come about. The May 2015 General Election polls, which were universally wrong, are a salutary reminder that reality can trump the forecasts. And while most forecasters can take account of the 'known knowns' and even some of the 'known unknowns', it is Donald Rumsfeld's famous 'unknown unknows' which are the problem.

So, while this report presents an evidence-based picture of what Wales *might* be like in 2020, we are all too aware that the forecasters – and we - could be wrong. What is clear is that, even if the forecasters are only partly right, Wales will be a different place in 2020 compared with today. Some of the challenges that lie ahead are all too familiar – child poverty and low educational attainment for example. But others, such as new technology and pressure on public spending, are new.

Current ways of doing things will not necessarily be right for Wales in 2020. We need to develop new ways of thinking and working. This will not be easy - few people have spare capacity in their paid work and even fewer have time outside their employment. Too often those who do come up with new ideas that challenge the orthodoxy are shot down in flames or ignored. But this report shows that business as usual is not an option – we *have* to find new ways of doing things.

To find a way forward we need to have an open and honest debate about the assumptions the underlie, usually unacknowledged, how Wales usually does things. These include:

1. **What should be the role of government, the third sector, business and individuals in society?**

2. **What are the most effective levers of change?**

3. **What is the best way of targeting scarce resources?**

4. **How to involve people?**

This report highlights the direction in which Wales could be heading and frames the issues that need to be addressed. We hope that it will encourage organisations and individuals across Wales to debate these questions and to meet the not inconsiderable challenges ahead. It would be good indeed if they change Wales' trajectory and prove the forecasters wrong.

2. ECONOMY & LABOUR MARKET

Key messages:

- **The gap between Wales' GVA and that of the UK as a whole is likely to widen.**
- **Professional and managerial jobs will grow by 17% and more than 1 in 10 semi- and unskilled jobs will disappear.**
- **The majority will enjoy a modest rise in standard of living as wage growth outstrips price inflation, but some will find it hard to make ends meet and a minority will experience extreme poverty.**
- **There will be innovation in a wide range of goods and services but Wales' poor record of r&d and IT use could hold it back.**

Wales' economic prospects are critical to its long-term future, with many of its social ills being closely linked with its relatively weak economy and labour market. Wales has borne the brunt of successive recessions and major industrial restructuring, each of which has stripped out large chunks of productive capacity and employment.

This section considers the outlook to 2020 in respect of:

- Gross Domestic Product / Gross Value Added
- The labour market, including employment and unemployment
- Standard of living, including earnings and incomes, relative income poverty and prices
- Innovation.

2.1. Gross Domestic Product / Gross Value Added

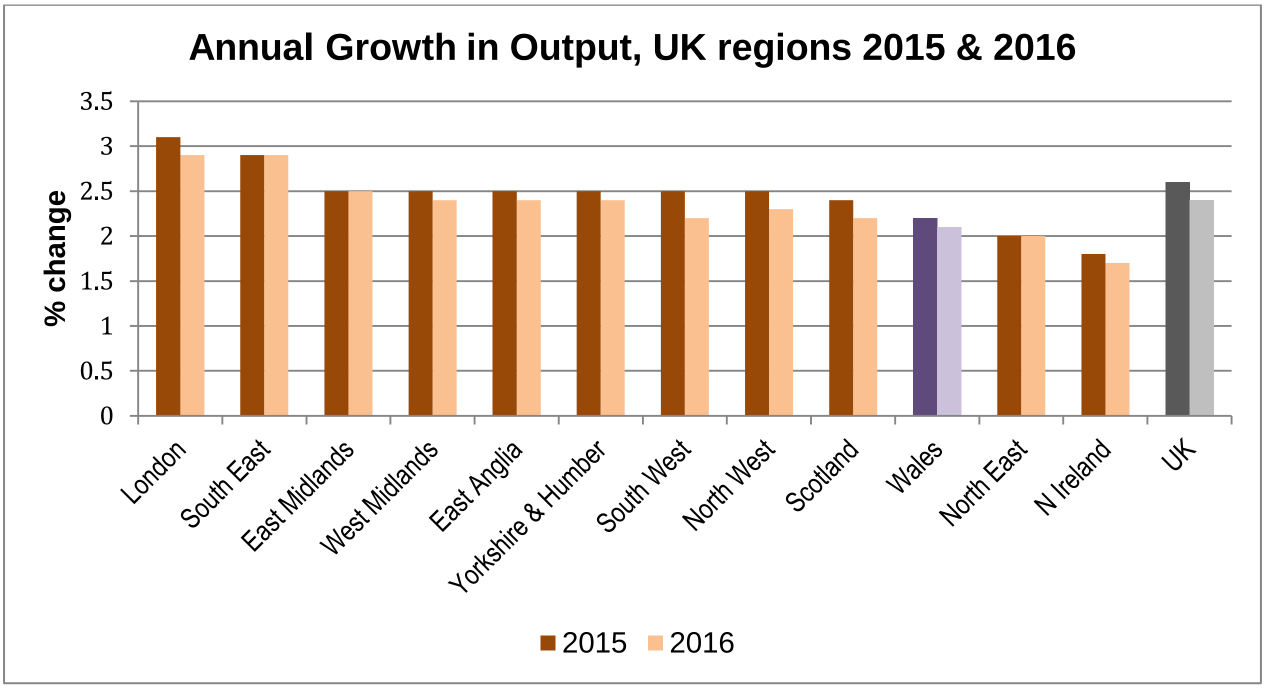
Wales' Gross Value Added (GVA) per head is the lowest in the UK, at 72.2 per cent of the UK figure in 2013.[1] Like several other UK regions, the gap between Wales and the UK has widened slightly since 1997, when it was 73.8 per cent of the UK figure.

Wales' low GVA primarily reflects long-standing, below-average employment, low productivity and low skills. Additional but less important factors are the relatively small size of the population of working age compared with the total population, and Wales' industrial mix.

Outlook to 2020

The most recent forecasts for the UK suggest that the modest growth begun in 2013 and 2014 will continue. For 2015 and 2016, forecasts range from 2.4 per cent[2] to 2.7 per cent[3] growth in GDP. Looking further ahead, the Office for Budget Responsibility forecasts that growth will continue at around 2.4 per cent a year to 2020. It is worth noting that almost all forecasters are extremely cautious about the UK's economic prospects, because of unknowns in the global and Eurozone economies, oil prices, and the position in the Middle East, as well as domestic factors. In all cases the impact of any 'unknowns' is more likely to be negative than positive. As a worst case, PwC estimates that growth could be less than 1 per cent a year.[4]

The anticipated UK growth will not be experienced equally by all parts of the country. London and the South East are expected to continue to account for the lion's share of increase in GDP with much lower increases in GDP forecast elsewhere. In Wales PwC forecast that GDP growth could be 2.2 per cent in 2015 and 2.1 per cent in 2016.[5] While the precise figures should be treated with caution, what is important is that Wales is expected to remain in the three worst performing UK regions, slightly ahead of the North East of England and Northern Ireland but behind the East and West Midlands, Yorkshire and Humberside and North West, all of which can anticipate growth of 2.5 per cent.



Source: PriceWaterhouseCoopers (2015) **UK Economic Outlook**, **July 2015.**
http://www.pwc.co.uk/en_uk/uk/assets/pdf/ukeo-jul2015.pdf

If the forecasts are realised, Wales in 2020 will be slightly better off than in 2014, but it will continue to be one of the poorest parts of the UK. Moreover, its position relative to the UK as a whole will have worsened rather than improved as a result of Wales' relatively poor performance and the strength of growth in London and the south east of England.

2.2. Labour Market

The Welsh labour market has recovered, at least in headline terms, from the recession, with more people in employment now than at the start of the downturn. The employment rate in Wales has also done slightly better than its comparator regions, being higher than in the North East of England and Northern Ireland. However the July 2015 employment rate is still below the GB figure (70.7 per cent compared with 73.5 per cent).[6]

Unemployment is also down - to less than 100,000 - with numbers only slightly above pre-recession levels. The unemployment rate in Wales has also improved and is in July 2015 only slightly above the GB average (6.6 per cent compared with 5.6 per cent).[7] Economic inactivity, at 24.1 per cent, is also above the GB rate of 22.0 per cent, but the gap is slowly closing.[8]

Behind these headline figures lies a slightly different picture:

- Much of the recent growth in employment is in various forms of casualised work – self-employment, part-time and temporary jobs in Wales have increased by 10 per cent since the recession started and account for **all** the jobs created in the recovery.[9]

- Some groups of people experience very high unemployment or inactivity rates:
    - nearly one in five 16-24 year old males is unemployed;
    - less than half (44 per cent) of people with a work-limiting disability are in employment compared with 81 per cent of people without a disability,
    - the unemployment rate of people from ethnic minority groups is 9.2 per cent compared with 6.7 per cent for white groups.[10]

- Some parts of Wales have not seen any recovery – employment in Carmarthenshire, Flintshire and Wrexham for example is lower than at the start of the recession, while total unemployment stands at over 10 per cent in Blaenau Gwent and Caerphilly.[11]

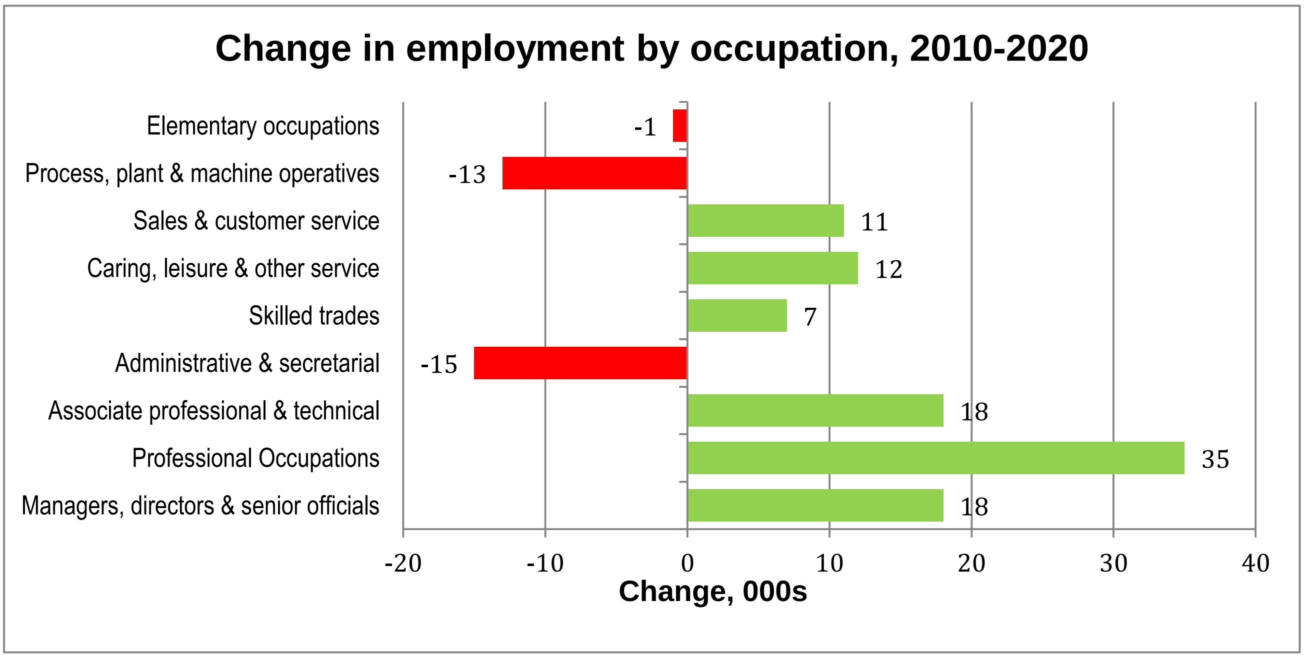
Outlook to 2020

Forecasts of employment are as fraught with uncertainty as anything else. Most forecast very modest growth in the number of UK jobs. The Office for Budget Responsibility forecast that total UK employment will increase by 4.6 per cent between 2014 and 2020 – an increase of 1.4 million jobs.[12] Other forecasts are shorter term, with estimates of employment growth in 2015 and 2016 at around 1.1 per cent per annum.[13]

Forecasts for Wales suggest slightly lower rates of employment growth. Those made in 2012 indicated that the number of jobs would increase by 0.5 per cent a year between 2010 and 2020, generating about 70,000 additional jobs.[14] Assuming that employment growth would be spread evenly over the period, employment in Wales could grow by about 35,000 jobs between 2015 and 2020. PwC forecast that the rate of employment in Wales could be one of the lowest in the UK up to 2024.[15]

The total number of jobs is only part of the story – the mix of jobs and who gets them also matter. Key messages for Wales from the UK Commission on Employment and Skills forecasts[16] are:

- **The majority of new jobs and vacancies will be in higher level occupations** The number of managers and directors for example is forecast to increase by 16.8 per cent while the number of operatives is forecast to shrink by 12.3 per cent by 2020.
- **More than half the additional jobs are likely to be part-time and a one in six is likely to be self-employed** – while some increase in full-time jobs is forecast, the majority of the growth is expected to be in part-time or self-employed roles.
- **The rise in female employment is likely to slow** – while women will continue to enter the labour market, men are forecast to occupy two out of three new jobs. Further cuts in the public sector, where nearly four out of ten women work, could also reduce women's employment. This raises issues for gender equality as well the wider well-being of families who depend on women's incomes.
- **The workforce is ageing** – the impact of the equalisation of state pension age for women to men's retirement age of 65 by November 2018 and the rise in state pension age to 66 for both genders by October 2020 will retain large numbers of older people in employment who would have otherwise retired.
- **A significant proportion of new jobs are likely to be taken by people commuting into or migrating into Wales** – the Welsh workforce is forecast to rise more slowly than the number of jobs, with the shortfall in labour supply being met by people from outside Wales.



Source: Owen, D. (2012) Working Futures 2010-2020: Summary report for Wales. UK Commission on Employment and Skills.

Unemployment in the UK is forecast to fall slowly, to around 5.4 per cent by 2020.[17] If Wales follows the same downward trend and the differential with the UK is maintained, then total unemployment is likely to be fractionally above the UK rate. It is unlikely that the trend will change who is most affected by unemployment.

The consequences of the forecast changes in the labour market could be significant. By 2020, there could be 1.4 million working people in Wales, with about 40 per cent of all employment being in professional and managerial jobs, and fewer than one in five in operative and elementary occupations. Self-employment, part-time working and temporary employment are likely to be even more important than today. There will be many more older people in employment, and a high proportion of vacancies could be filled by people from outside Wales.

Competition for a shrinking pool of precarious jobs at the bottom of the labour market is likely to be intense. The prospects for people without qualifications or skills, disabled people, young people and people in areas with the weakest growth can be expected to be tough.

2.3. Standard of Living

In Wales as elsewhere in the UK the long-term upward trend in standard of living came to halt with the onset of the recession. There has been no improvement in real terms for seven years, although there are some signs of recovery recently. This section looks at household incomes, income poverty, and housing and other costs.

Household incomes

Average earnings in Wales are amongst the lowest in the UK. In 2014, median weekly earnings of all workers were £383.30 a week (excluding overtime). Women typically earn less than men whatever their working pattern and at all levels of earnings.[18]

A higher proportion of the Welsh population is dependent on working-age benefits than in Britain as a whole (in November 2014, 16.2 per cent of the population in Wales received a benefit from the Department for Work and Pensions compared with 12.5 per cent in GB),[19] with households including benefit claimants typically having much lower incomes than others.[20]

As a result, average gross disposable household income per head in Wales in 2013 is just were 87.8 per cent of the UK figure, amongst the lowest of nations and regions,[21] and Wales has slightly higher rates of relative income poverty than the UK as a whole.[22] In 2012/13, 31 per cent of children and 22 per cent of working-age adults lived in households with an income of less than 60 per cent of the median (compared with 28 per cent and 21 per cent in the UK). The proportion of pensioners with low household incomes was about the same as elsewhere.

Measures of poverty assume that incomes are distributed equally within households, which may not always be the case. Poverty amongst women, for example, is therefore hidden. For families dependent on benefits, the introduction of Universal Credit, which is paid to one person (unless in exceptional circumstances), paid monthly in arrears, and inclusive of any help with housing costs is widely anticipated to create hardship and inequality, and could trigger higher rates of domestic abuse and family breakdown.

Housing costs

Across the UK housing accounts for just over a fifth (21 per cent) of a household's spending.[23] Housing costs (rent, mortgage and maintenance) are relatively low in Wales compared with other parts of the UK, averaging £113.10 a week – higher than the north east of England and Northern Ireland but considerably less than in London and the south east of England.[24]

For owner-occupied housing, the 'average house' in Wales costs £166,000, 3.5 per cent less than at the start of the recession.[25] For rented housing, median private rents have increased by around 6 per cent for one- and two-bedroom properties but by 13 per cent for rooms in shared houses.[26] Median rents for social housing are about one fifth of their private sector equivalents, but have risen more quickly.[27]

Other consumer prices

Consumer prices have, until recently, outstripped wage rises resulting in a significant 'squeeze' on the standard of living of low- and middle-income households. The rises in food and fuel costs have been well above average, hitting low-income households particularly hard. Overall, consumer costs in Wales are slightly below the UK average, at 97.6 per cent of the UK figure.[28]

Outlook to 2020

Forecasts of changes in the standard of living and its various components paint a mixed picture.

Household incomes

Wages are forecast to rise over the next five years, with estimates of growth of 2.2 per cent in 2015 rising to 4.4 per cent by 2020, outpacing inflation.[29] However, the 2015 summer budget's cap on public sector pay rises of 1 per cent will mean real terms cuts for those workers.

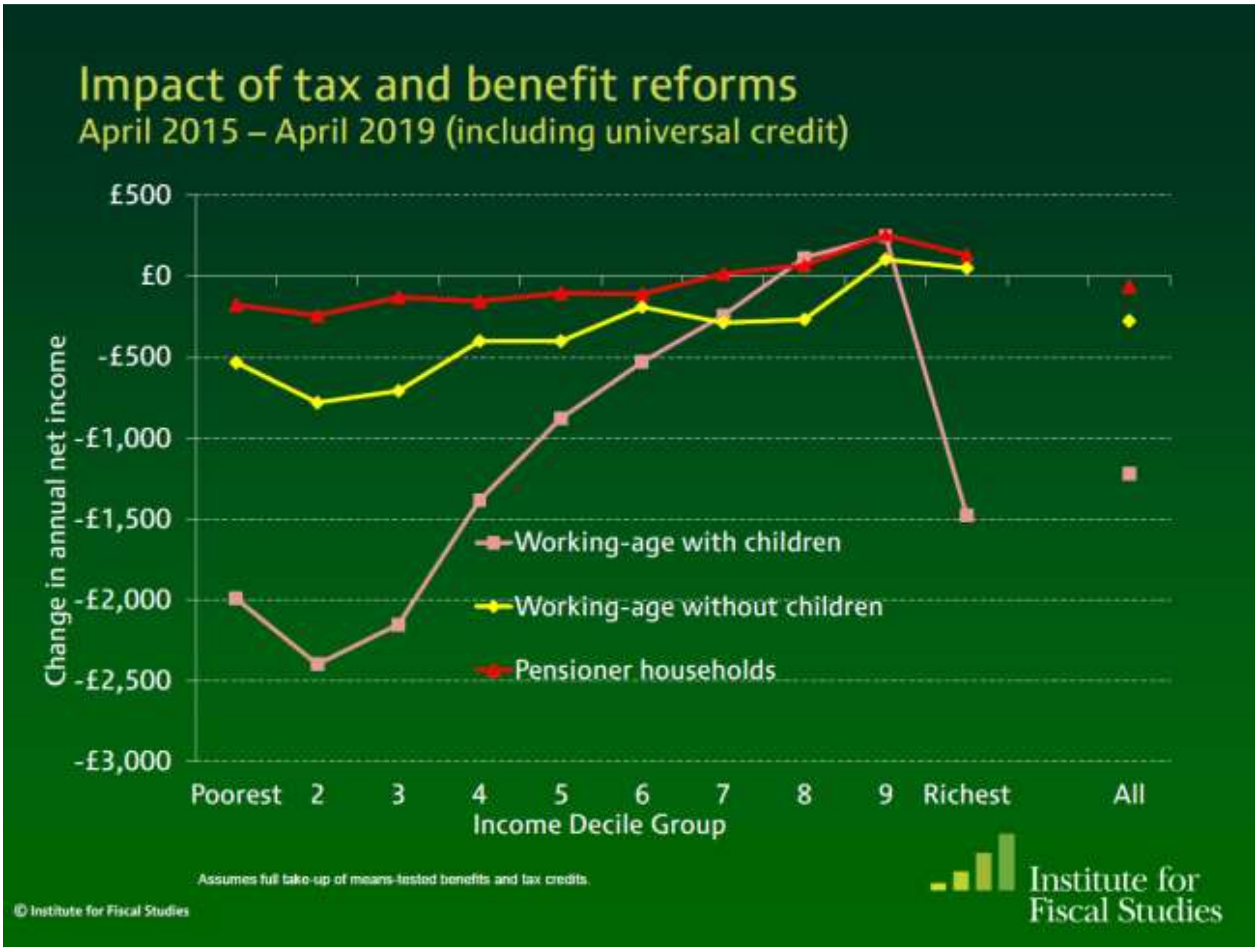
Households dependent on social security benefits, other than pensioners, are also likely to see real terms decreases in their incomes, as the summer 2015 budget changes take effect on top of previous reforms. The freeze on benefit rates, roll out of Universal Credit, shift to Personal Independence Payments, lowering of the benefit cap and cuts to in-work benefits will mean that households towards the bottom of the income distribution, and particularly young people, workless households and households with children, will experience real terms losses in income – sometimes of several thousands of pounds a year.[30]

Losses from the tax and benefit reforms together are expected to reduce the incomes of non-working lone parents on average by £40 a week, of non-working couples with children by £55 a week and of single-earner couples with children by £32 a week. [31] Altogether the pre-summer 2015 changes take £780 million out of the Welsh economy – equivalent to £10.75 a week for every household, claimant or not,[32] and the summer 2015 changes will take at least a further £183 million a year out of the economy.[33]

In addition, tough sanctions on claimants deemed not to comply with the Department for Work and Pensions' requirements are likely to increase. It might be that the reduction in benefits coupled with sanctions increase employment amongst those who were workless, but recent experience suggests that most 'exits' from benefits are not to sustainable work.[34]

The exception is pensioners, whose state pensions have been protected (and will continue to be protected) by the 'triple lock'. The new flat rate pension (from April 2016), the ability to withdraw cash from private pension pots, and the protection of other benefits (e.g. Winter Fuel Allowance, protection from 'bedroom tax') are likely to ensure that pension income is relatively secure.

Forecasts of relative income poverty[35] predict a gradual increase in child and working age poverty by 2020. Extreme poverty, or destitution, is already argued to be rising as a result of benefit sanctions and administrative issues, low benefit rates for some people (particularly young people) and exclusion of some groups (such as young people and asylum seekers) from state support.[36]



Source: Hood, A. (2015) [Benefit Changes and Distributional Analysis](). Institute for Fiscal Studies.

Housing costs

Forecasts of rises in house prices are difficult, because of the diversity within the UK market, and very different assumptions made by forecasters. For owner-occupied housing, estimates range from growth of just 1.5 per cent a year[37] to increases of 25.9 per cent by 2019.[38] Forecasts are made all the more difficult by uncertainty around the economy and wages, and the possible impact of the release of pension funds on demand for buy-to-let purchases.

The private sector is also forecast to grow, with an increase in both the proportion of households living in privately-rented accommodation and an increase in rents outside London of around 2.5 per cent in 2016, 3 per cent in 2017 and 2018 and 2.5 per cent in 2019.[39] This is a potentially significant issue if household incomes and housing benefit lag behind rent rises.

Consumer Prices

Price inflation (excluding housing costs) is forecast to remain very low (at or close to zero) for much of 2015 then rise slowly to reach the Bank of England target of 2 per cent.[40] Big unknowns are trends in oil prices, which could affect domestic fuel as well as other goods, global commodity prices, and the UK and world economies.

The forecasts for changes in food prices are mixed. While food prices have fallen in recent months, not least as a result of competition between supermarkets, in the longer term global demand and climate change effects are forecast to push up prices.[41]

To sum up, there seems little prospect of a significant improvement in many people's standard of living in Wales. Public sector workers and benefit claimants face real terms decreases in income. Low inflation could ease the pressure slightly, but housing costs could be a continued pressure. Against this backcloth, significant increases in severe poverty seem inevitable.

2.4. Innovation

Innovative businesses drive high growth – and high growth businesses are more likely to be innovative. Innovation can occur in any aspect of business activities, and while it often associated with the use of technology or science it is not necessary – innovation can occur in public services or private services such as retailing. Wales does not have a strong recent record of innovation, with significantly below average investment in research and development,[42] below average innovation in most business activities,[43] and below average take-up of broadband by businesses and households as well as below average availability of superfast and 4G mobile connections.[44]

Outlook to 2020

Forecasts of future innovations abound, from the weird and wonderful to the highly probable. What is clear is that digital technology is extending to previously unthought-of areas; that new materials will bring many new products and miniaturise others; and that the emphasis is also very much on personalisation – whether it is technology that enables street furniture to respond to the specific needs of a pedestrian or trainers that provide feedback on the fitness of the wearer.

With already below-average levels of innovation and IT use, people and businesses in Wales risk being left behind as technology develops further in the next five years. And while the link between innovation and inequality is contested, unless people are digitally literate and have sufficient income to access new technology as consumers it is hard to see how they can benefit from innovation.

2.5. Wales' economy in 2020

By 2020, Wales is likely to be even further down the UK economic league as it lags behind not only London but almost all other regions as well on key measures of prosperity such as GVA, unemployment, earnings and household incomes, and poverty. While GVA is an imperfect measure of quality of life, the widening gap between Wales and the rest of the UK is not a welcome prospect.

By 2020, it is likely that professional and managerial jobs will dominate the labour market, that insecure employment and self-employment will be more important than ever, and that the public sector will be at its smallest for decades.

For those in secure jobs or pensions in the top half of the income distribution, the forecast rise in earnings coupled with relatively low increases in the cost of living are likely to generate a ‘feel good’ factor by 2020. For those in insecure work or looking to enter the labour market, or for people on various social security benefits (whether working or not) the outlook is much less rosy, with the prospect of real-terms falls in income, rising costs of essentials, and shortages of housing.

It is likely that the people who are already disadvantaged, such as people without qualifications, young people, disabled people and people from minority ethnic groups will face particularly tough competition finding work and this, coupled with increased ‘conditionality’ on benefit claims could be a significant issue.

Within Wales, it is reasonable to expect that places that are already disadvantaged, including parts of rural Wales, north Wales and the south Wales valleys, are likely to struggle to close the gap with the rest of Wales, and might potentially lag even further behind.

It is at this point that we must remember that the relatively gloomy prospects for Wales in 2020 are no more than forecasts – many of which are projections of recent trends. While bucking powerful economic forces is very difficult, it is not impossible. We have identified four key challenges that, if addressed, could help to change Wales’ direction of travel.

The key challenges are:

1. **Growing the Welsh economy**

Without active intervention, it is clear that the gap in economic prosperity between Wales and the rest of the UK will widen further. It is not necessary or realistic to aim for stratospheric growth rates, but is it feasible to seek to match, if not exceed, the growth of regions such as the East or West Midlands, both of which are forecast to have higher growth rates than Wales.

This will require a radical change in thinking and approach by the Welsh Government, local government and other public bodies, who will need to be 'pro-business' in both perception and reality.

2. **Closing the skills gap**

Wales is heading for a massive skills gap, as thousands of people with few or no qualifications, including many ‘incentivised’ to find work from changes to social security benefits, chase a shrinking pool of semi- and unskilled jobs, at the same time as there is a shortage of people to fill the growing number of managerial and professional jobs.

Closing the skills gap, by increasing the skills and qualifications of adults and providing clear pathways for progression into higher-level jobs, will be a significant challenge.

3. **Reducing severe poverty**

The combination of changes to benefits, the growth in insecure and low-paid work, and the rising cost of living (including housing costs) means many more households in Wales are likely to face difficulty making ends meet. While some may come within the conventional definition of 'poverty' in that their incomes are below 60 per cent of the median, arguably more important are the small but growing minority who face severe poverty, where people do not have enough food, warmth or shelter to meet their basic human needs.

The changing nature of poverty and the rise of severe, or extreme, poverty raise new challenges for public policy.

4. **Better prospects for young people**

Across the board, the forecasts are that young people face particularly difficult circumstances over the next five years. They face fewer job opportunities as older people defer retirement, lower minimum earnings than other people, relatively high private sector rents and a tough benefits regime which prevents access to help with housing costs for unemployed under-21s and allows only shared accommodation for under 35s. Some parents are able to help their children to get on in life, but many cannot.

3. SOCIETY

Key messages:

- **Wales' population is set to grow with 25,000 more children and 115,000 more older people, and will be more diverse.**
- **The incidence of ill-health is likely to increase, with 50,000 more cases of cancer and 36,000 more cases of diabetes as well as a rise in other diseases. Demand for social care (both formal and unpaid) will grow.**
- **70,000 children could leave school without five good GCSEs.**
- **There is a looming housing crisis, as a shortfall in new build, high prices and homelessness bite.**

Social change is often much slower than other changes, as family structures, knowledge and culture evolve relatively gradually. There have already been major shifts in Welsh society, in terms of in-migration, the decline in use of the Welsh language, and emergence of new family structures. There are likely to be further changes, even in the relatively short space of five years, in respect of:

- Population and households
- Health and social care
- Education and skills
- Housing
- Welsh language.

3.1. Population & households

Wales' population has slowly increased to 3.1 million in 2013. The growth is mainly the result of net international in-migration, with smaller increases resulting from the number of births exceeding the number of deaths since 2005.[45] The Welsh population is older than that of other UK nations, with nearly one in five of the population (19.5 per cent) being over the age of 65.

Outlook to 2020

Wales' population is forecast to increase by 119,000 people (4 per cent) from 2012 to 2022 to 3.12 million.[46] Much larger growth could be achieved if there is higher fertility and in-migration, or there could be lower growth if fertility declines, deaths increase or there is net out-migration.

The forecast increase to 3.12 million is expected to result from:

- 357,000 births
- 301,000 deaths
- net in-migration of 63,000

Local population projections are highly sensitive to the assumptions made about fertility, mortality and migration, but all variants show the greatest percentage and numerical growth occurring in Wales' cities (mainly Cardiff but to a lesser extent, Wrexham, Newport and Swansea).

Older people

The anticipated increase in the number of older people is well-known. Between 2012 and 2022 the number of over 65 year olds is forecast to rise by 115,000 to 702,000. The largest numerical increase is amongst younger pensioners (aged 65-79) – up by 61,000 – but the greatest percentage growth is amongst people aged 80 and over. This age group is expected to increase by 41,000 (25.8 per cent) with the number of people aged 90 to 99 up by 77.6 per cent and the number of centenarians up by more than 100% - 5,000 more people of 90+ years than in 2012.

The population aged 65 and over is projected to increase by mid-2026 for all local authorities. The population aged 85 and over is also projected to grow in all areas.

Children

Much less well known is that the number of children aged under 16 is also forecast to rise, up by 25,000 from 2012 to 2022. The growth is anticipated to be amongst five to fifteen year olds, up from 339,000 to 364,000, by rather than amongst under-fives, the numbers of which remain constant at around 180,000.

Where the increase in the numbers of children is forecast varies. The numbers are forecast to increase substantially in Cardiff, Newport, Swansea and Wrexham although the size of the increase depends on assumptions made about fertility and migration. In most other authorities, forecast growth is more modest, while in Blaenau Gwent the numbers of children are forecast to decline.

Migration

Migration is forecast to result in a net increase of 6,000 people a year, half from net in-migration from elsewhere in the UK and the other 3,000 from net international in-migration. Forecast in-migration has been reduced from previous projections to reflect recent trends.

Household projections

The number of households is forecast to increase by over 90,000 (6.9 per cent) between 2011 and 2021,[47] with almost all the net increase accounted for by one adult households (up 54,000), two adult households without children (up 27,000) and lone parent households (up 8,000). There are expected to be fewer households of four or more people that include children.

Accompanying the rise in single-person households are forecasts of increased isolation and loneliness, accompanied by increased social interaction via technology (such as Skype, Facebook etc) rather than face to face.

3.2. Health and social care

Wales' population includes more people who say that their health is poor than any other part of the UK. In 2011, nearly a quarter of a million people said their health was bad or very bad (7.6 per cent compared with 4.3 per cent in the south east of England).[48] Wales also has a larger proportion of the population with a health condition or disability that limits their lives a lot (11.7 per cent).[49] There are marked inequalities in health, with people in lower socio-economic groups and those living in deprived areas facing shorter life expectancy and experiencing very substantially worse health than those in better-off groups.[50]

Specific diseases are also more prevalent in Wales than elsewhere. For example, the prevalence of cancer is above that of all other nations and regions,[51] the prevalence of coronary heart disease, stroke and hypertension are above the UK average,[52] and the prevalence of diabetes is the highest of UK nations.[53] As with general health, prevalence and mortality is much higher amongst low income groups than others.

Misuse of alcohol is widespread amongst people of working age, with nearly 12,000 hospital admissions in 2013-4 for conditions directly attributable to alcohol.[54] Nearly one in twelve (8.6 per cent) of people aged 16-59 reporting use of illicit drugs, which caused nearly 4,000 hospital admissions in 2013-14.[55]

In terms of social care, at 31 March 2014 there were just over 78,000 adults receiving social care services, of which 22,800 were under the age of 65. Most adults (84 per cent) received community-based services, while 17 per cent were in care homes.[56] At the same date, more than 25,000 children were provided with social services, including 5,700 children who were looked after by the local authority and 3,135 who were on the child protection register.[57]

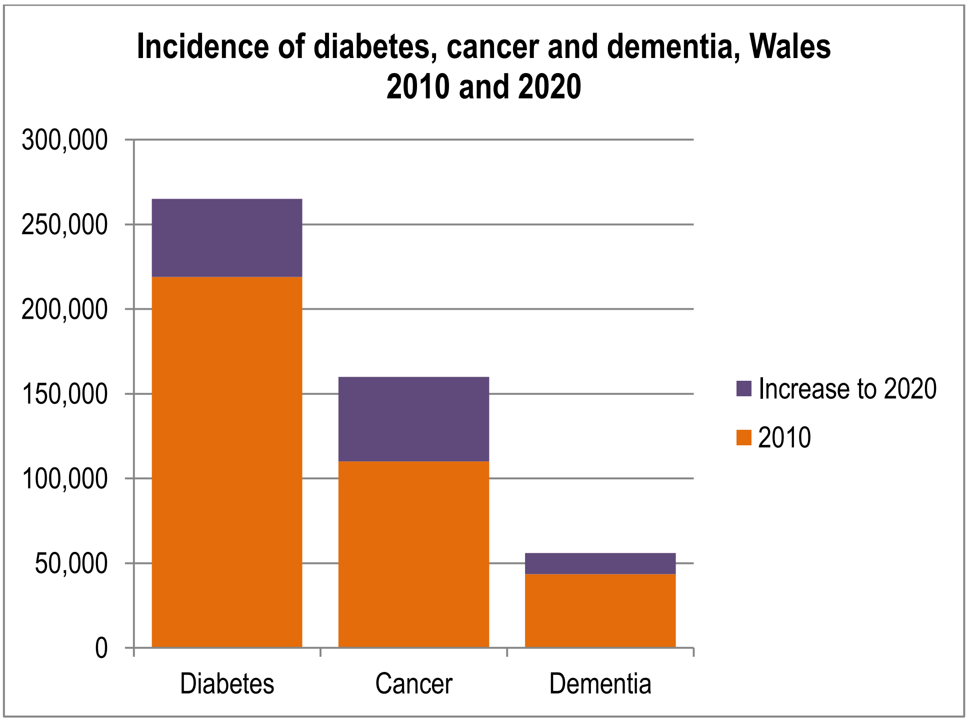
Associated with high levels of illness and disability is a relatively high proportion of children and adults who are carers – one in eight (12.2 per cent) of all ages provide some unpaid care, with the proportion rising to a quarter (25 per cent) all women aged 50-64.[58]

Outlook to 2020

The incidence of almost all major diseases is projected to rise in the next few years, reflecting the changing age structure of the population, changing lifestyle factors e.g. increasing obesity, and the forward projection of recent trends. It is important to note that because future generations of older people may be healthier than older people today the rise in some diseases is not inevitable.

There are relatively few forecasts specifically for Wales but those that are available suggest:

- **Cancer -** an increase in the number of people living with cancer from 110,000 in 2010 to 160,000 in 2020 – 50,000 more people.[59]
- **Dementia** – an increase in the number of people with dementia by 31% to 56,000 by 2021.[60]
- **Diabetes** – an increase in the number of people with diabetes from 219,000 in 2010 to 265,000 in 2020.[61]



Note: dementia figures are for 2014 and 2021. Sources: as in text.

Almost all other diseases, ranging from coronary heart disease and chronic obstructive pulmonary disease, to arthritis, Parkinson's disease and sensory impairment, are also forecast to increase in prevalence. We have not identified any forecasts of mental illness, but as mental health is closely associated with physical health, the rise in incidence of many conditions could well increase the prevalence of mental illness. External factors such as financial hardship and social isolation could also play a part. There are also unknown risks from the emergence of new and unknown diseases, the re-emergence of diseases such as TB, and drug resistance.

What does this mean in terms of numbers? It is difficult to say, but simply applying the 2011 rates of reported bad or very bad health for different age groups to the forecast population in 2022 suggests that there could be an extra 25,000 people with bad or very bad health, as well as increased demand for almost all NHS services.[62]

In terms of social care, forecasts for Wales are relatively limited. Jeffs[63] estimates that based on population projections and current patterns of use, by 2030 there could be a 71 per cent increase in demand for residential care from those over 65 years old, and a 61 per cent increase in demand for community services. Again, improvements in healthy life expectancy could affect these forecasts. Jeffs also notes that there is likely to be rising demand for services from adults aged 18-64, as a result of a greater prevalence of learning disability and mental illness in the population, and rising demand for children's services, for a mix of reasons.

Given the increase in numbers with a health condition, an increase in the numbers of people providing unpaid care is also likely. Some health inequalities could increase – while the gap between social groups is narrowing for some conditions, it is widening for others.

3.3. Education and skills

Attainment of school leavers in Wales has been rising for many years, but the rate of increase has been significantly less than in England resulting in a marked gap between the two countries.

This is evident at age 15, where in 2013/14, 55.4 per cent of pupils achieved the Level 2 threshold of five GCSEs at grades A*-C including English or Welsh and mathematics.[64] There is also a gap between the two countries in the proportion of high-achieving pupils.[65]

Participation in higher education has increased substantially, with 25 per cent of 19-24 year olds participating in 2013.[66] However Wales' HE institutions are relatively weak in terms of research, with most expertise concentrated in Cardiff University.[67]

The number of young people aged 16-24 who are not in education, training or employment stood at 10.5 per cent for 16-18 year olds and 21.2 per cent of 19-24 year olds in 2013, slightly down on the previous years' figures.[68]

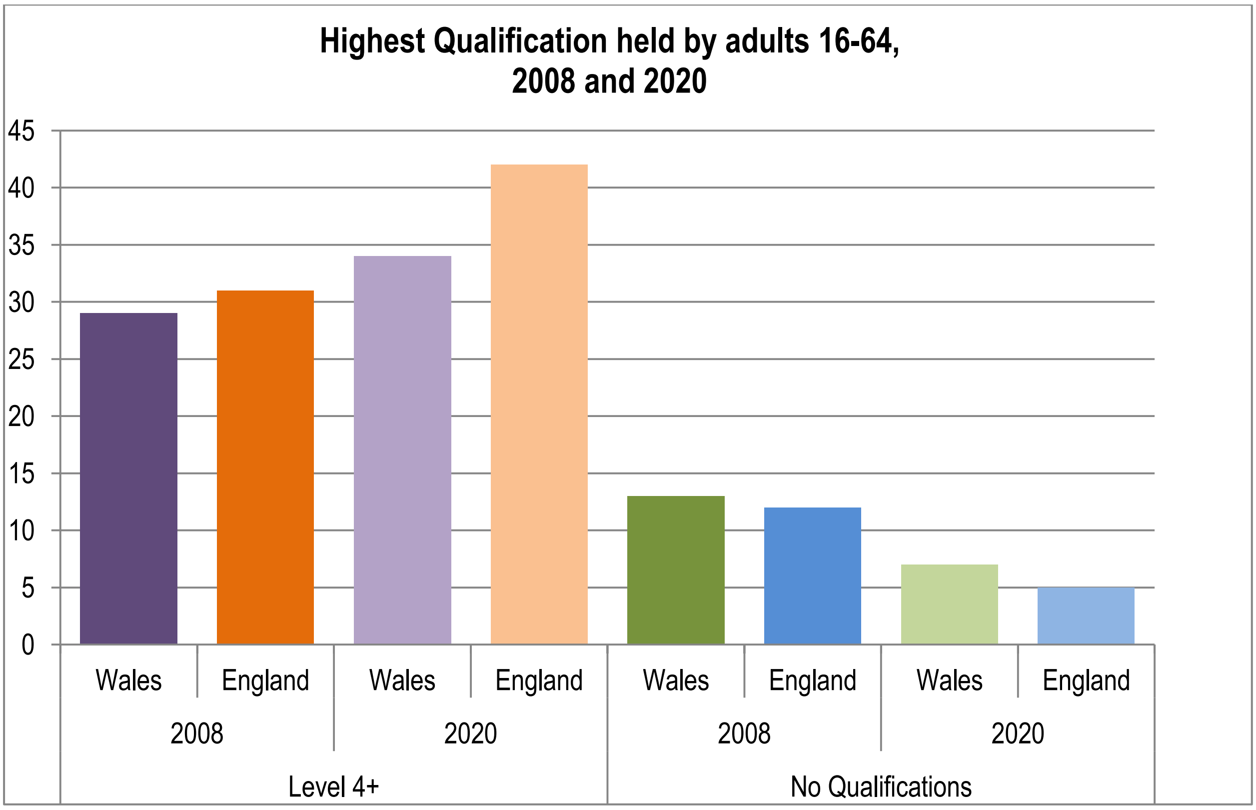
Low skills amongst adults continue to be a serious issue - in 2014, 10 per cent of adults had no qualifications at all, and only 33 per cent were qualified at degree level.

Outlook to 2020

By 2020, the number of children of compulsory school age is forecast to increase by 15,900 from 2014 levels, to a total of 384,500.[69] Most of the growth (12,200 children) is expected to be at maintained primary schools, with a further 3,400 additional pupils forecast at maintained secondary schools. The growth is not expected to occur in all parts of Wales, with significant increases occurring in Cardiff, for example, while rural Wales is likely to see a net decrease in pupil numbers.[70]

Between 2015 and 2020 about 160,000 children in Wales will reach the end of year 11 (very roughly about 31,000 leave each year). If attainment continues to be at the 2013/14 level, over the next five years around 71,000 children will leave school without five 'good' GCSEs. [71]

In the adult population, the proportion of people with qualifications at level 2 and above is forecast to increase by 2020 from 2008 levels, while the proportion with level 1 or no qualifications is forecast to decline.[72] However, the rate of increase is substantially below that forecast for England, so that gap in the qualifications held by the Welsh and English populations is likely to widen very significantly. For example the difference in the proportion holding level 4 qualifications or above could rise from two percentage points in 2008 to eight percentage points in 2020, and the gap in the proportion holding level 3 qualifications could rise from two percentage points in 2008 to seven in 2020. The biggest difference is likely to be in those with qualifications at level 4 or above – precisely the qualifications needed for the anticipated growth in professional and managerial jobs.



Blackaby, D. et al (2013) **Skills in South West and Central Wales**. Swansea University.

The Welsh Government has pledged to reduce the proportion of 16-18 year olds who are not in education, employment or training to 9 per cent of the age group by 2017, and to reduce the proportion of young people aged 19-24 who are not in education, employment or training to the overall UK level by the same date. The Auditor General for Wales concluded that the Welsh Government was 'well placed' to achieve the target for under-18 year olds, but that the target for the older age group was more challenging.[73]

3.4. Housing

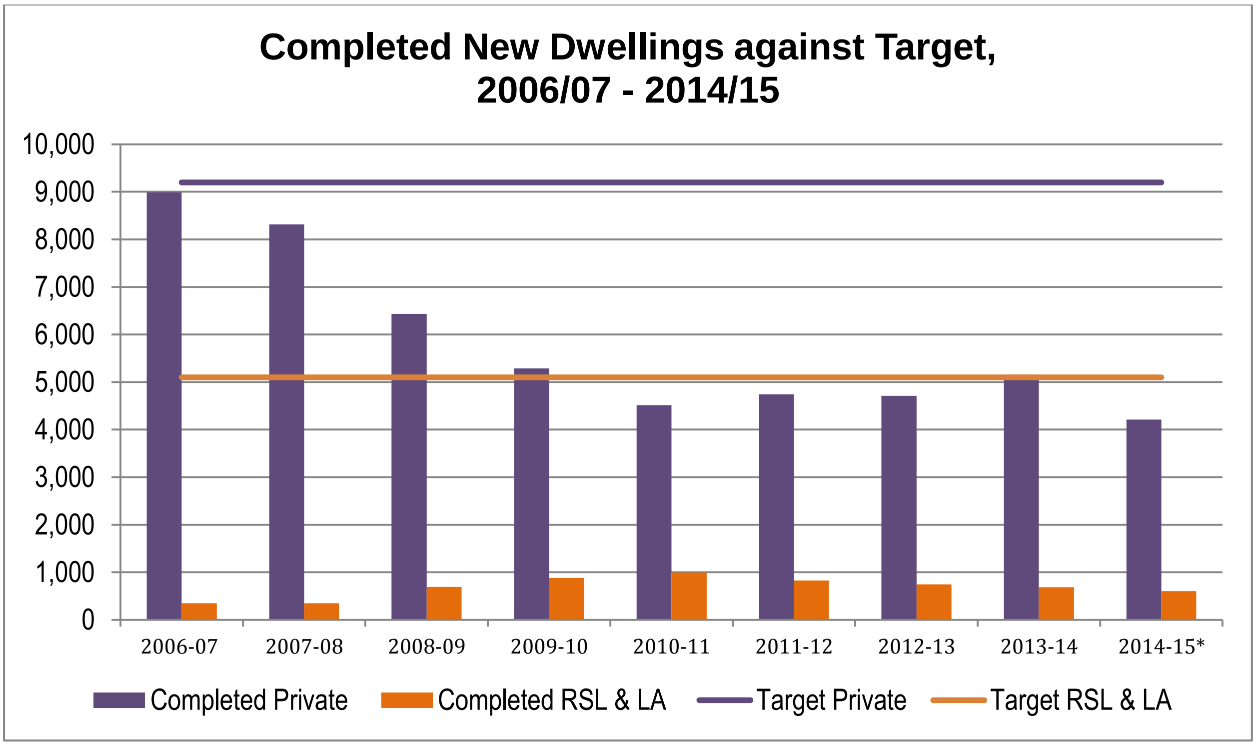
Just over two-thirds of Wales' dwellings are owner-occupied – nearly 1 million home owners.[74] A substantial minority of the housing stock has some form of hazard (e.g. excess cold, damp and mould and fire hazards), not least because of the age of much of the stock.[75]

There are very significant variations in supply and demand across Wales. In some communities, two bedroom terraced houses in good condition are less than half the price of similar properties just 25 miles away. And while areas have waiting lists for social housing, the likelihood of being housed varies considerably.

More than 5,000 households were accepted as homeless and in priority need in 2013/14, and a further 10,000 presented as homeless but were deemed to be either not eligible for help, not really homeless or not a priority need.[76] There are in addition an estimated 130,000 households whose homelessness is concealed, for example by unwanted sharing with others.[77]

Outlook to 2020

The Housing Task Force has forecast that in order to meet anticipated housing need between 2006 and 2028 there need to be 14,200 new homes created each year,[78] 9,200 provided by the market and 5,100 non-market homes. There is already a substantial shortfall between projected requirements and actual provision, with less than half the requirement being met (just 58,482 completions between 2006/07 and the third quarter of 2014/15. The biggest shortfall was in social housing. [79]



Source: Stats Wales **New dwellings completed by period and tenure**
https://statswales.wales.gov.uk/Catalogue/Housing/New-House-Building

The combination of lack of supply and rising prices is forecast to affect young people in particular.[80] It is anticipated that the number of young people owning their own properties in 2020 will decrease sharply, while private renting and living with parents will increase. This is likely to create significant difficulties for low income young people, who cannot access high-cost private rented accommodation, and for young families requiring stable, long-term homes.

There are few signs that the shortage of housing will improve the quality of Wales' housing stock, or offer a better match with people's needs. The ageing population, for example, may find difficulties adapting homes to their changing requirements.

Most commentators anticipate that homelessness will rise in the next few years as a result of a sluggish economy and the playing out of recent welfare reforms.[81] Further reforms announced in the summer 2015 budget could increase the pressure on young people.

3.5. Welsh Language

In 2011, just under one in five of the Welsh population aged three and over (19 per cent) said they could speak Welsh – 562,000 people.[82] Nearly a third of those who say they can speak Welsh are aged 5-15. About half of Welsh speakers say they are fluent.[83]

Outlook to 2020

We have not identified any forecasts of the number of Welsh speakers. Recent trends have been downwards – between 2001 and 2011 there was a 1.5 percentage point fall in the proportion who can speak Welsh.[84] More recent surveys have confirmed the downward trend in both the numbers speaking the language and the number who are fluent.[85] If the trends continue the proportion speaking Welsh by 2020 could have fallen even further.

3.6. Wales in 2020

Wales in 2020 could be moving towards a rather different kind of society to today. Not only will there be more people, there will be many more older people and slightly more children than at present. Childless households, of one or two people, rather than families will be the norm. Wales will also be a more diverse society, as in-migration from other parts of the UK as well as overseas brings new people, languages and cultures. The evidence on the impact of in-migration is mixed, but it without creates difficulties as well as opportunities for Wales.

Even though attainment rates in Wales are increasing and the Welsh Government's aim is that they should continue to do so, qualification rates of school leavers and of adults are forecast to rise more slowly than in England. Over the next five years, around 70,000 children could leave school without good GCSEs, while the adult population could be significantly less well qualified than in England. This is against a backcloth of almost all job growth being forecast to be in higher level occupations, which typically require qualifications.

With an already high level of ill health, the forecast rise in almost all diseases means there is a very strong likelihood that the population of Wales reporting poor health will increase. In addition, it is highly likely that the complexity of illness will increase, with more people living with multiple health problems. Demand for social care services in all age groups is also likely to rise, and more people will need to provide unpaid care.

In all spheres, the existing inequalities in health, education and housing are likely to increase.

These social trends raise some very significant challenges, as follows.

1. Improving health

The forecast increase ill-health is a wake-up call. The demands on society of roughly a quarter of a million people whose health is bad or very health are considerable. The resulting demands on health and social care services, and expectations of unpaid care also, are unprecedented. The likelihood of increasing ill-health is compounded by growing health inequalities.

It is important to remember that not all illness is inevitable - many of the diseases that are forecast to grow are strongly associated with lifestyle, such as smoking and lack of exercise, or environment, such as poor housing.

2. **Learning for children and adults**

The prospect of 70,000 children leaving school without five good GCSEs is a considerable challenge. Their prospects in a changing labour market are severely limited, and support from welfare benefits with the housing and living costs of young people is set to be dramatically cut.

These young people will join the 40 percent of adults with qualifications below level 2, whose lack of qualifications also make adjusting to rapid changes in the jobs market very difficult. The link between low attainment and inequalities is likely to continue to be strong.

3. Affordable and appropriate housing

There is a real prospect of a housing crisis, as the mis-match between Wales' housing stock and people's housing needs grows. The difficulties are likely to manifest as high prices in areas of high demand, accommodation that is sub-standard e.g. damp, or unsuitable e.g. for older people, and homelessness.

4. ENVIRONMENT

Key Messages:

- Global carbon emissions means that some climate change is inevitable by 2020 – the only question is of the extent of change.
- Energy generation is changing but there could be issues of security of supply and affordability.
- Water supply could begin to be a concern by 2020.
- Several habitats and species are threatened.
- Despite investment in road, rail and air in Wales, increases in traffic and investment elsewhere in the UK could marginalise Wales.
- Significant gaps in IT infrastructure and use will remain.

Climate change has been described as the greatest global threat of the 21st century, affecting world security, the economy, health, and food and water supplies. It is also a significant opportunity, with the potential to drive new technologies, create jobs and improve quality of life.

This section looks at what is forecast for 2020 in respect of:

- Carbon emissions and climate change
- Energy
- Waste
- Water
- Biodiversity
- Transport
- ICT infrastructure.

4.1. Carbon Emissions and Climate Change

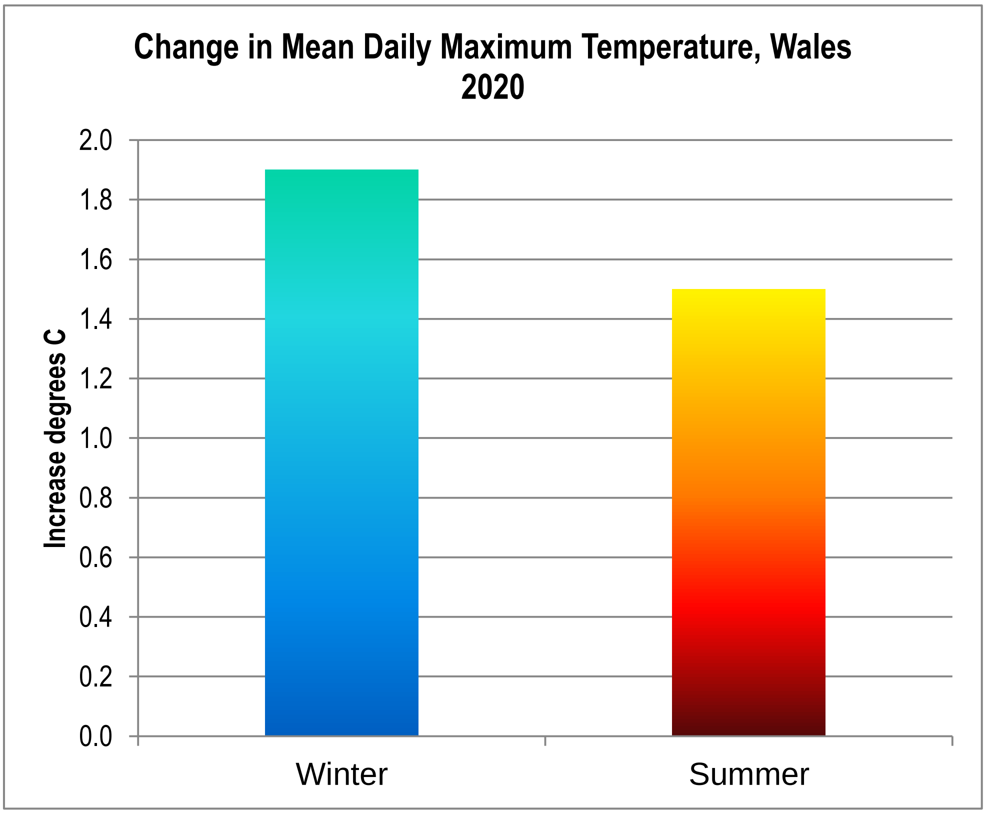
In 2011, Wales' carbon emissions were the highest of UK nations, reflecting the presence of a number of carbon-emitting industries such as steelworks and power stations.[86] Wales' climate has already changed, with 2014 being the warmest on record, and there is the prospect of more change to come.[87]

Outlook to 2020

The Welsh Government's target is that carbon emissions will fall to 40 per cent of their 1990 levels by 2020. This has proved difficult to achieve with the 2011 figures showing a fall of 20.6 per cent on 1990, suggesting the 2020 target is unlikely to be achieved.[88]

The outlook without a reduction in global carbon emissions is a transformed climate – by 2050 temperatures in south east Wales could be similar to those in Northern Spain.[89] Assuming global emissions at a medium level, there is a 50:50 probability of Wales experiencing the following changes in the 2020s:

- 1.9 degrees C increase in summer mean daily maximum temperatures
- 1.3 degrees C increase in winter mean temperatures
- 7 per cent less summer precipitation
- 7 per cent more winter precipitation
- more extreme weather events, including storms. [90]



The forecasts if global emissions are at a high level are considerably worse, with a 50:50 chance of Wales experiencing an increase of 3.8 degrees C in summer mean daily maximum temperature, an increase of 13 per cent in winter precipitation and a decrease of 17 per cent in summer precipitation by 2050.

4.2. Energy

Wales has long been a major energy producer. At its peak in 2008, Wales generated 10 per cent of the UK's electricity. Since then production has declined by nearly a third, reaching 26,351 GWh in 2013.[91] Gas and nuclear generation have plummeted, while coal and renewables have increased with coal now accounting for 43 per cent of electricity produced. Renewables account for 10 per cent of generated energy.

Domestic consumers in South Wales and in Merseyside and North Wales have the highest electricity bills of England and Wales regions, at 16.37p per kwh and 16.67p per kwh, compared with a UK figure of 15.58 p per kwh.[92] Annual domestic electricity bills have risen by 24 per cent since 2007.[93] As a result of rising prices and energy inefficient homes, 30 per cent of households in Wales were estimated to be in fuel poverty in 2012, four percentage points higher than in 2008.[94]

Outlook to 2020

Energy supplies in Wales as in the rest of the UK face the triple challenge of security of supply, affordability and sustainability.

There are significant, though diminishing, concerns about energy security in the next five years, from a combination of declining electricity generation, reliance on imported gas and oil, and uncertainty about demand. Ofgem estimates there is a one in four year chance of consumers being disconnected because of supply difficulties.[95]

Unconventional sources of gas are also likely to become important. Gas from various coal sources is estimated at 290 billion cubic metres, and although there are no formal estimates of Wales' shale gas resources, some exploratory work has been undertaken with license holders claiming relatively large reserves.[96]

The UK Government and Welsh Government are committed to increasing the proportion of energy generated from renewable sources to 15 per cent by 2020.[97] Renewable generation is increasing in Wales – up by half between 2009 and 2013, to 2,664 gigawatt hours. However Wales still generates a much lower proportion of energy from renewables than other parts of the UK. It remains to be seen if changes in taxation announced in the summer 2015 budget will change the upward trend.

Future generating capacity is uncertain. While the Severn Tidal Lagoon, marine energy, a pumped storage scheme at Glynrhonwy and several other schemes are in the pipeline, others, such as such as Wylfa Newydd, are at an early stage and some, such as the LNG plant at South Hook have been mothballed.

Forecasts of fuel prices are extremely difficult, but vary from increases in real prices of 6 per cent 2013-2020 to rises of 18 per cent 2010-2020.[98]

Projections of fuel poverty are also very difficult as they combine forecast prices with forecast household incomes and energy efficiency. With many caveats, the 'central projection' for England is that the number of households in fuel poverty in 2016 (using the 10 per cent of household income measure) will be double that in 2009.[99] In Wales this would mean 664,000 households being in fuel poverty by 2016.

4.3. Waste

In 2013/14 Welsh households generated a total of 1,557 thousand tonnes of waste, 54 per cent of which was recycled.[100] In 2007 there were a further 3,700 thousand tonnes of industrial and commercial waste, plus construction waste.

Outlook to 2020

As well as various EU Directives setting UK targets for waste reduction and recycling, the Welsh Government has adopted a target of zero waste by 2050 with associated interim targets. The general trend in the amount of waste generated per household is downwards, although short of the target reduction, whilst the proportion of municipal waste that is recycled is above target.

We have not identified any forecasts of waste arisings or recycling rates for Wales. Those produced for England stress the uncertainty, but suggest that the English 2020 target is very likely to be met.[101]

4.4. Water

Wales has a plentiful supply of water although some of it is difficult to capture and store.[102] Water is one of the first resources to show the effects of climate change.

In 2009, one in six properties (357,000) were at risk of flooding, with 65,000 at significant risk of flooding. It is not just residential properties – about a fifth of electricity sub-stations have a flood risk, and agriculture, manufacturing and services can be damaged by flooding too.[103]

The quality of Wales' water is improving dramatically. In 2012, 36 per cent of designated river basins were of good environmental quality rising to 42 per cent in 2014.[104] The quality of bathing waters has improved so that all 106 designated bathing waters met the relevant EU standard in 2014.[105] There continue to be challenges from diffuse pollutants, such as agricultural and highway runoff, and new pollutants from pharmaceuticals, personal care products etc.

In terms of drinking water there are three major statutory suppliers and more than 17,000 private supplies. As well as supplying the majority of the Welsh population, Wales' water also supplies consumers in the midlands and northern England.

Affordability of water supply attracts relatively little attention. In 2009-10 nearly a quarter of households were spending more than three per cent of their disposable income on water,[106] the measure of affordability set by Defra.

Outlook to 2020

Climate change is likely to have a significant effect on water resources. The forecast decrease in summer rainfall of 7 per cent and accompanying forecast increases in temperature could reduce supply, increase evaporation and increase demand. Summer river flows could fall by 50-80 per cent[107] and droughts such as that experienced in 1976 could be much more common. [108]

In winter, higher and more intense rainfall could increase river flows and raise the risk of flooding. There are also flood risks from rising sea levels. The number of properties at significant risk of flooding is likely to nearly double by 2035 due to climate change.[109] It is also likely to increase the runoff of pollutants, and overflows from sewers.[110]

In terms of demand, population, housing growth and changing habits are expected to increase water demand by 5 per cent or an extra 800 million litres of water per day by 2020.[111] The areas of the UK with the highest forecast growth in demand are those with the lowest rainfall.

If water companies need to invest to cope with increased demand and be more resilient to climate change it is likely that consumers will bear the burden through their bills. The provision of flood defences could also be costly – an estimated £135 million a year would be required to keep the number of properties at significant risk of flooding at 2009 levels.[112]

4.5. Biodiversity

Wales' species and habitats have already been affected by pollution, loss of habitat and climate change. Of habitats, in 2005 59 per cent of habitats identified in the Biodiversity Action Plan were declining and 60 per cent of marine habitats were in continued or accelerated decline. Only 9 per cent of woodland Sites of Special Scientific Interest were in favourable condition.[113] The trends for species are only slightly more favourable: 57 per cent of Wales's flowering plants are declining while 43 per cent are increasing; butterfly species are increasing and decreasing in roughly equal numbers; and of those birds whose populations can be assessed, slightly more are increasing than decreasing.[114]

Outlook to 2020

The United Nations Convention on Biological Diversity includes some challenging targets. By 2020, the aims include: halving the rate of loss of all natural habitats by 2020; managing and harvesting all stocks of fish and invertebrates sustainably; managing all areas of agriculture, forestry and aquaculture sustainably; reducing pollution so that it causes no harm to ecosystems; and that the extinction of known threatened species is prevented and their conservation status has been improved.

The Welsh Government has identified significant threats to biodiversity, ranging from increased risks of drought and extreme weather, risks of new species, pests and diseases, acidification of marine environments, and the fragmentation and loss of habitats from development.

4.6. Transport

On average, people in Wales travel around 7,500 miles a year (144 miles a week), with the majority (84 per cent) of the distance covered being by car.[115] Wales has 21.1 thousand miles of roads, which have amongst the highest casualty rates in the UK. Connectivity with the rest of the UK and key international destinations, as well as mobility for people on low incomes and in rural areas are key concerns.

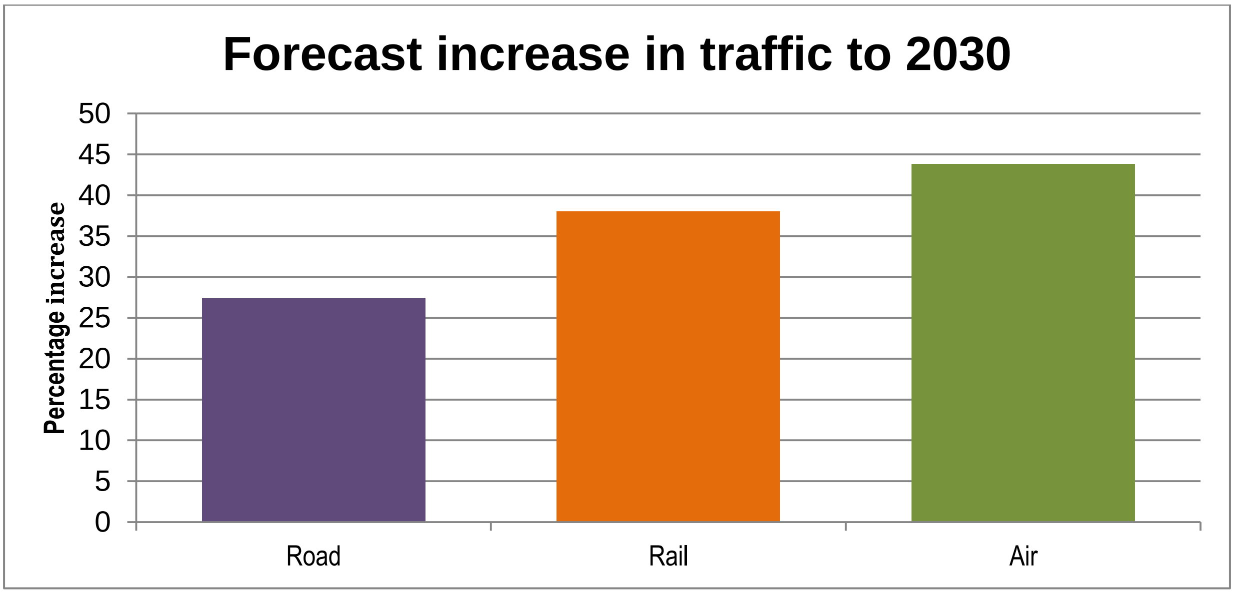
Outlook to 2020

Traffic forecasts are shaped by estimates of population increases, economic growth, costs and network capacity and congestion. It is worth noting that even if there is significant modal shift (e.g. a trebling in the use of public transport), cars and vans would continue to be the main mode of travel.[116]

Recent increases in road traffic are forecast to continue, with mileage by all types of vehicle forecast to rise by 12.5 per cent in Wales between 2010 and 2020, some 2.1 billion additional miles.[117] The increase in road traffic is likely to increase pressure on all road types, particularly those that already experience capacity issues. The M4 relief road around Newport will be close to its target completion date of 2021 and the final section of the A465 dualling is due for completion by 2020.

Passenger rail demand in Wales is also forecast to grow substantially. The central projection is of around 4.5 million journeys (growth of 23 per cent) by 2016 and 7.5 million additional passenger rail journeys (increase of 38 per cent) by 2026, against 2006 figures.[118] With high growth, passenger demand could increase by 48 per cent by 2026. It is worth noting that most previous forecasts have been exceeded.

By 2020, the South Wales main line should be electrified, although Cardiff could be at a major disadvantage compared to major English cities such as Birmingham and Manchester as their journey times to London are slashed by the completion of HS2 to 45 minutes and 80 minutes respectively, while Cardiff's is likely to be 105 minutes. The resignalling of the Valleys Lines and other improvements will be complete by 2017 but electrification will not be complete until 2024. There are no plans for major investment in north Wales rail.[119] Rail freight growth is uncertain, with coal and steel broadly constant, although container traffic anticipated to grow.



We have not identified any forecasts for Wales of bus passenger numbers although bus vehicle mileage is forecast to remain static. Passenger numbers have declined recently, and they are likely to continue to do so if reductions in public subsidies for non-commercial and marginal bus services continue.

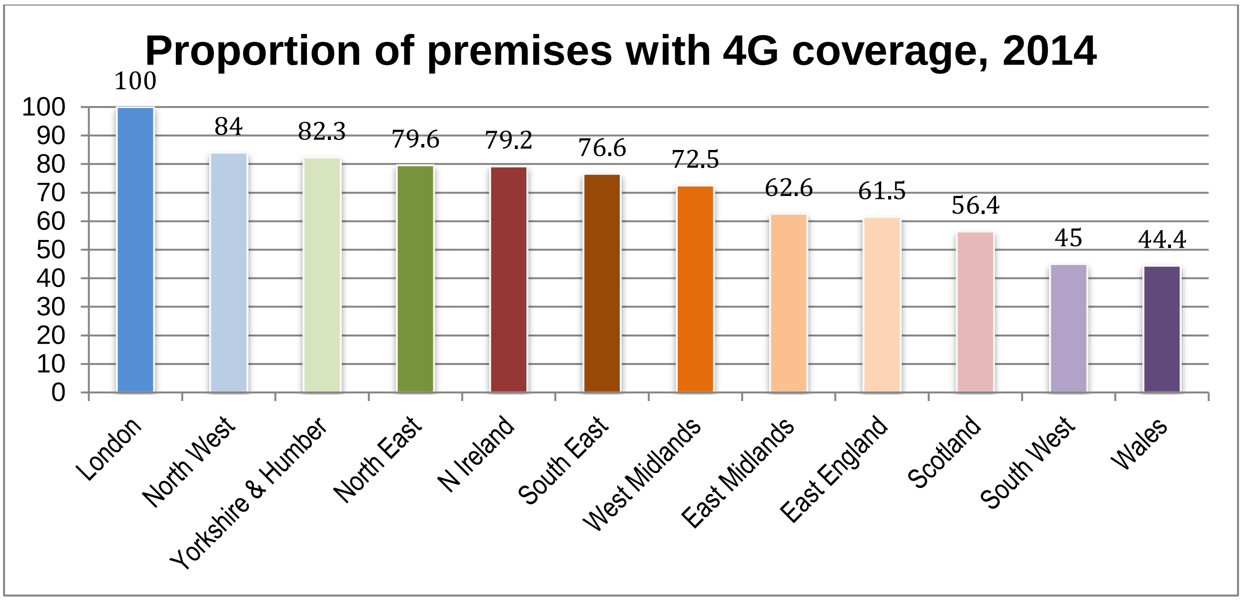
In terms of air travel, the UK central forecast is for passenger numbers to increase from 219 million passengers in 2011 to 315 million in 2030. This is an increase of 96 million passengers over 19 years compared to an increase of 185 million since 1970.[120] It remains to be seen how many fly from airports in Wales.

4.7. ICT

Despite improvements there are significant gaps in Wales' ICT infrastructure and lower levels of take up compared with other parts of the UK.[121] Average broadband speeds are below those for all other UK nations, and there are substantial 'not-spots' where there is no or limited 3G coverage. 4G coverage is even more patchy and a small number of premises still have no 2G coverage. Take-up by households is slightly below the UK figure and take-up by small and medium sized enterprises is substantially below the UK figure. Use of the internet to access public services is lower in Wales than elsewhere.

Outlook to 2020

The Welsh Government aims to make Wales a 'truly digital nation' and is committed to rolling out Superfast Broadband (which will offer speeds of up to 80 Mbps) to 96 per cent of premises in Wales, with some areas having ultrafast Broadband of 330 Mbps, by 2016.[122] However as the use of mobile devices increases dramatically it is much less clear if 4G coverage will increase without similar intervention. While take-up and use of internet-based technology has risen quickly in Wales, some groups of people – mainly older people and lower socio-economic groups – lag behind considerably.



Source: Ofcom (2014) **Communications Market Report: Wales.**
http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/2014_CMR_Wales.pdf

4.8. Wales in 2020

The environmental challenges ahead are substantial indeed. The combination of increasing global carbon emissions makes climate change inevitable – the only question is that of the extent of change. At the same time, rising demand from Wales' population for resources such as water, waste-producing goods, energy and mobility place further pressure on the environment.

In looking ahead, the major challenges are:

1. **Reducing Carbon Emissions and promoting sustainable living**

Wales needs to play its part in reducing carbon emissions and managing natural resources sustainably, by encouraging households and businesses to cut their carbon output, increase their resource efficiency and live and work sustainably. The Future Generations Act is a unique opportunity for Wales to lead the way in developing practical solutions. Finding new ways of doing this, in a tough financial climate, at the same time as achieving other ambitions, will not be easy.

2. **Mitigating the worst effects of climate change**

While extreme weather frequently grabs the headlines, measures to reduce the impact of weather events are less eye-catching but no less significant. Flood defences, coastal protection and water conservation are all costly, yet without action the consequences in both human and environmental terms could be catastrophic, with those on low incomes set to suffer most.

3. **Increasing digital and physical accessibility**

The future is digital so dramatically increasing access to online services – both through better connectivity and increased use of IT in businesses and by consumers - is a major issue if Wales is not be marginalised from wider economic and technological development. Demand for physical mobility is also growing, requiring a step-change in Wales' public transport provision.

5. GOVERNMENT, FINANCES & PUBLIC SERVICES

Key Messages:

- The next five years are highly uncertain politically, with several significant constitutional changes ahead.
- The challenges to public spending are unprecedented.
- There is uncertainty about the reform of Wales' public bodies.

If previous sections have been uncertain, the future of government, public finances and public services is a near impossible call to make. Despite this, there are some 'known unknowns' which can at least be explored, leaving the not inconsiderable 'unknown unknowns'.

This section looks ahead to 2020 in respect of:

- Government and constitutional change
- Public spending
- Public services.

5.1. Government and Constitution

The next five years look to be ones of considerable changes in governance and the constitution. The changes themselves have barely been explored, let alone the implications for Wales.

Outlook to 2020

The UK population has just returned a government with a Conservative majority which is therefore able to take forward its manifesto pledges in full. Some of these affect Wales specifically, for example the devolution of powers, while others are UK-wide but could nevertheless have a significant impact, e.g. a referendum on EU membership. Over the next five years the key developments are likely to be:

- ***The National Assembly for Wales elections***

Various polls and projections from the UK general election result suggest that the outcome of the May 2016 elections could see five parties represented in the Assembly, with none having a majority.[123] [124] While polls proved a poor predictor of the general election result and a lot can happen in the next 11 months, it is highly likely that there will be a coalition government in the Senedd for 2016-21. Whether this will be Labour – likely to be the largest party – in coalition with one party or a rainbow of non-Labour parties remains to be seen – but there could be a significant shift of direction whatever the result.

The downward trend in participation in elections also makes the outcome harder than ever to predict, as well as bringing the legitimacy of elected politicians into question.

- ***Devolution of powers***

The Queen's Speech[125] included provision for a new Wales Bill taking forward the St David's Day Agreement[126] with a reserved powers model and devolution of additional powers in energy, the environment and transport. Consideration of whether the recommendations of the Smith Commission in respect of Scotland should be applied in Wales has also been promised. There could also be implications from any further devolution of powers to Scotland – including a second referendum on independence – and devolution to Northern Ireland and to English cities.

Also during the next five years, most of the recent new legislation passed in Wales will be enacted. Much of this legislation imposes 'duties' on other public bodies, although some such as the Housing Act and Social Care and Wellbeing Act are more wide-ranging.

Allied to further devolution is the prospect of 'English Votes for English Laws' in the UK Parliament, the detail and implications of which for Wales are still very unclear. There could also be other changes such as the rolling together of Welsh, Scottish and Northern Irish select committees and changes in the roles of Secretaries of State for devolved nations, in the medium if not short-term.

- ***Referendum on EU membership***

The UK government has promised a referendum on EU membership, possibly in 2016 or 2017. The likely outcome is unclear, and issues could also arise if parts of the UK vote very differently. The implications of an 'out' vote for Wales are not known.

5.2. Public Expenditure

Total expenditure by the Welsh Government in 2014/15 was £15.3 billion,[127] which increased during the year with supplementary budgets.[128] This budget was £1.7 billion less than its 2010/11 budget.[129]

Outlook to 2020

Public spending plans for Wales will be announced in autumn 2015. Some reduction in the Welsh block grant is inevitable – the only question is how much. The Institute for Fiscal Studies[130] has generated possible scenarios for the Welsh Government budget, which depend on both the overall trends in UK public expenditure and the allocation of funding to the social security budget and to English government departments. The most optimistic forecast is that the Welsh budget will be in the region of £14.3 billion in 2017/18, a 5 per cent cut on 2012/13's budget. After 2017/18, the scenarios are even more uncertain, with baseline forecast being for Welsh expenditure in 2020 to be around £15 billion (at 2013/14 prices), over £1bn less than in 2010/11.

During the next five years the Welsh Government will become responsible for some devolved taxes. It will begin collecting taxes on waste disposed to landfill and on land transactions from April 2018, and has the potential to vary income tax (subject to a referendum) and introduce new taxes (subject to UK parliamentary agreement). The potential of landfill and land transaction taxes to increase revenue is modest, but these, plus business rates and a Welsh rate of income tax are forecast to account for a fifth of the National Assembly for Wales' total budget by 2020.[131]

5.3. Public service reform

Wales' public services are under enormous financial and political pressure to reform.

Local authorities in particular are likely to see huge pressures. Even under the most optimistic set of assumptions, their spending power per person in 2020−21 would be 1.6 per cent lower in real terms than in 2012−13. Under the most pessimistic – yet plausible - assumptions, their spending power would be 18 per cent lower. [132] At the same time, demands for local government services, from social care to education, are likely to be rising.

As well as the promised changes in structure, finance, culture and practice, the Welsh Government proposes to reorganise local government into fewer, larger authorities although it remains to be seen whether the proposals will survive into the next Assembly term.

We are not aware that reforms to other bodies such as health boards or any non-departmental bodies are in prospect, but they are nevertheless under scrutiny, with the Welsh Government demonstrating that it is willing to intervene by 'special measures' on occasions.

Outlook to 2020

The wealth of literature on the reform of public services in England is conspicuous by its absence in Wales. In England, the RSA's 2020 Public Services Trust, INLOGOV and Grant Thornton and the Local Government Chronicle highlight that councils might respond to the challenges by:

- greater collaboration and partnership – between themselves and with other bodies;
- greater commercialisation, including increased commissioning of services and the commercialisation of in-house services;
- an emphasis on local authorities' role as 'place leaders' as well as service providers.[133]

It is by no means certain that all local authorities will respond in this way. Out of six scenarios identified by Grant Thornton / INLOGOV,[134] three involve no more than bare survival – 'running to stand still', 'nostril above the water' and 'just local admin' – while two – 'wither on the vine' and 'imposed disruption' – anticipate the authority's demise.

It remains to be seen if and how Wales' public bodies, and in particular its local authorities, respond to the challenges ahead.

5.4. Wales in 2020

By 2020 Wales could be quite different politically and constitutionally to today. Within Wales, there could be a Conservative-led coalition, with the ability to legislate and raise taxes in all but a few reserved areas. Within the UK, Wales might be marginalised as Scotland is increasingly autonomous, and as England focuses on its own affairs. Internationally, Wales might no longer be part of the EU - European funding programmes would end and European in- and out-migration would halt.

It seems highly likely that the cuts to public spending will continue throughout the next five years, with the Welsh budget in 2020 being around £1 billion lower in than in 2010/11. While by this date the Welsh Government will be collecting some devolved taxes, their impact on revenue will be limited. The Welsh Government ***could*** have held a referendum on income tax and be beginning to collect a Welsh element of it, and it could also be introducing and collecting new, as yet undetermined, taxes. Nevertheless the assumption must be that public spending in Wales in 2020 will be less than at the start of the decade. The impact on Welsh local government and on other bodies, as well as the third sector which they often fund, will be enormous.

The key challenges for government and public services in Wales are:

1. Putting Welsh public finances on a sustainable footing

The days of the Assembly being funded by a gradually expanding block of UK government cash – no matter how unfairly allocated – are gone. Not only is the allocation shrinking, there is potential to raise revenues from other sources, while devolution to Scotland and English cities could result in further shifts in the settlement. 'Doing more with less' will be the mantra of the next five years.

2. Reforming the public sector to save money and match needs

The pressure to reform public sector bodies is mounting, not least in anticipation of achieving financial savings. Reorganisation is always disruptive, and it remains to be seen if finance-driven reform is necessarily the best long-term solution.

3. Asserting Wales' needs in a period of constitutional change

As devolution to Scotland and English cities accelerates, the implications for Wales are not clear, with real risks that decisions that are not carefully thought-through or which no do reflect Wales' circumstances could bring deep and lasting damage. Anticipating possible withdrawal from the EU is an additional challenge.

6. CONCLUSIONS & IMPLICATIONS

Wales in 2020 will be different to today. Some changes are inevitable: the growth in the number of older people, the increase in the number of children, the rise in temperatures and the incidence of severe weather are trends set in train long ago and about which little can be done. Some changes are highly likely: the sluggish growth in the economy, the shift towards managerial and professional occupations, the increasing incidence of some diseases, the growth in road traffic and the reduction in public spending, to name just a few. And some are highly uncertain: the outcome of the referendum on EU membership, the composition and priorities of the next Welsh Government for example. And then there are the 'unknown unknowns' – which could change any of the forecasts dramatically.

Pulling all the forecasts and projections together, we have identified three key scenarios:

- on trend
- worst case
- bucking the trend.

6.1. On-Trend

If the various forecasts are correct, the outlook for Wales is far from rosy. By 2020, Wales could:

- Be even poorer economically compared with the rest of the UK.
- Have thousands of unqualified workers chasing insecure jobs while people commute or migrate to do higher-level work.
- Have thousands of households struggling to make ends meet, while some face severe poverty.
- Face rising incidence of ill health and growing demands on health and care services.
- Have up to 70,000 school leavers without five good GCSEs.
- Cope with shortages of affordable, good quality housing.
- Deal with extreme weather, flooding and the risk of water and power shortages.

These are likely to be cross-cut by a new inter-generational divide, as young people develop marked differences in opportunities, attitudes and expectations to older people; rapid technological change as new goods and services come to market, and increasing divisions between Wales' growth areas and the rest of the country.

While most of these challenges are all too familiar, what is really striking is that the public policy toolbox in 2020 will be different to today, with substantially less public funding and key public bodies having gone through a period of reorganisation, coupled with a volatile political landscape.

6.2. Worst Case

If the on-trend forecast makes uncomfortable reading, the worst case scenario is deeply worrying – yet the worst case is entirely possible.

Global events such as financial problems in the Eurozone, unrest or entirely unforeseen events could see UK economic growth of less than 1 per cent.[135] Similarly, the worst forecasts of climate change could see sustained warming as well as more frequent extreme weather, imposing significant social and economic disruption and costs. There could be as yet unannounced further cuts in public spending, unspecified reforms to public services (such as charging for health care) and the privatisation of more UK public bodies – all have been mooted.

In this scenario, while there are few figures available, it is possible that:

- There would be zero or negative economic growth in Wales.
- Unemployment and casualised employment would be widespread.
- Severe poverty and hardship would be commonplace.
- Waiting lists for health care could rocket.
- Young people could abandon learning because of their poor prospects.
- Hot, dry summers, marked by water shortages, and cool, very wet winters, marked by flooding, would be the norm.

It would be easy to dismiss this scenario as doom-mongering, but it is a real possibility that should be considered.

6.3. Bucking the trend

The last scenario envisages Wales bucking the trend and performing better than expected - this too is entirely possible and not just wishful thinking.

The UK economy might soar with growth of around four per cent, taking Wales with it; global carbon emissions might be low with less impact on temperatures, precipitation and extreme weather; and targets to increase educational attainment, reduce smoking and increase exercise might be achieved.

In this scenario, we might anticipate:

- A thriving economy closing the GVA gap with the rest of the UK.
- Close to full employment, including for young people, with rapid upskilling of workers and the workless.
- Everyone can afford the essentials of food, warmth and shelter.
- The incidence of killer diseases has begun to fall.
- Sustainable lifestyles are the norm.

While some aspects of this scenario might be achieved without government intervention, it is unlikely that there would be significant changes without a marked shift in public policy.

6.4. Key Questions

If two of the three scenarios outlined are unappealing, then something needs to change, and change radically.

Welsh public policy is sometimes characterised as 'predictable and a bit boring'[136] or 'unambitious'.[137] Whether this is true or not, it is highly unlikely that continuing the approaches favoured over the last fifteen years will achieve the step-change in Wales's fortunes required to buck the trend. Nor will trying to do the same but better be likely to be successful – times really are changing, and it is time for something new.

Unfortunately, there are no solutions lying on a handy shelf, ready to address the challenges ahead. We need to ask some and fundamental questions about how to go forward. These are:

1. What should be the role of government, the third sector, business and individuals in society?

To date, the role of almost all public bodies in Wales has been 'statist', in that they have sought to control many aspects of the economy, society and environment as well as to provide many services directly. While there are many discussions about **how** public bodies should do this there are few if any about the fundamental role of the state. Yet this is critical – is the role of the Welsh Government to establish rules and prohibit certain activities? Or can it persuade and incentivise some activities? Which should it ban? Should it provide, purchase or subsidise services? Or even sell them? Which services should it provide?

Related to this, there have been even fewer discussions about the role of the third sector, even though many of those involved in it sense a shift in focus towards contracting and a reduced sense of partnership with both central and local government.

Business is often perceived with some suspicion and hostility, often identified as the source of many of Wales' problems rather than offering possible solutions, despite the majority of Wales' workforce working in the private sector and many supposedly public services, in health, social care and education, being delivered by private contractors.

2. What are the most effective levers of change?

The typical levers of change used in Wales to date are the public provision of services (either directly or via grant aid), compulsion through imposition of 'duties' and regulation, and use of targets. The kinds of approaches popular elsewhere, such as incentives and relaxation of regulation, have not been widely used here. And when finance is shrinking, is money always the best way of achieving change?

The National Assembly for Wales now has powers to legislate and to introduce new taxes, and is on course for a shift towards a reserved powers model – in theory eliminating many of the obstacles it has faced so far. Most importantly, the Assembly has some new tools in its box, yet it is not clear how it can and should use them.

It is time to discuss whether the Assembly needs to develop and use new ways of achieving change, and what might be appropriate.

3. What is the best way of targeting scarce resources?

Much Welsh public policy is based on the principle of universal entitlement. This ranges from the core of the welfare state, such as free health care and free education to age 16, to add-ons such as free prescriptions and free bus passes for older people. However there are also gaps in entitlement, such as social care; some fudges, such as higher education fees; and some tough means-testing (such as school uniform grants, free school meals and help with council tax). As public finances tighten, it is time to consider whether universal entitlement is always the best model, whether the services which are provided free at the point of use are the right ones and whether there are unintended consequences.

In contrast, some elements of Welsh public policy are based on 'place', which is in turn based on the somewhat elusive idea of community. So issues such as poverty and low educational attainment are addressed through place-based programmes (Communities First and regional education consortia). Important though place is, it might not always be the most effective basis for policy – for example a large proportion of people in poverty live outside Communities First areas.

At the very least there needs to be a debate about the circumstances in which place or community are the right approach, or whether other approaches (such as pan-Wales, directed at individuals or households) might be more effective.

4. How to involve people?

Last, and probably most important, is the question of how to involve people. There is a lot of discussion about 'co-production', in which people work with professionals to design the services that they receive.

The issue is deeper than that, however. How people's energy and commitment can be harnessed for the greater good – and not just for the ballot box - is probably the biggest challenge of all to face Wales. There is a wealth of skill, talent, ideas, enthusiasm and willingness to graft amongst Wales' 3 million people. The challenge is more than just 'co-production' or 'volunteering' but is about the distribution of power and self-determination.

There is a unique opportunity to re-shape Wales over the next five years. The people, the politicians, the public bodies and the businesses must all play their part.

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