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Changes in employment trends and their impact on product

What are the product solutions?

by Kuen Chik, Elena Djarlijeva, Alison Fisher, Bradley Shearer, Sumit Ramani, Uros Kovac

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Abstract

The question we were asked to address was, what should the Actuarial Profession or industry do with product design in light of changing employment trends?

Our approach was to look at the current structure of the employment market and how that is changing. At the same time, we analysed this against the emerging product landscape and how technology is enabling novel solutions. We performed online desk research and literature review, adding our own thought leadership and insight.

Our key finding was that there are no simple answers and that the Profession and the insurance industry cannot act alone. They need to influence and work with the government. And the issue is not simply one of product design. Whether portability is helpful should be carefully considered given the tension between the advantages of portability and the objectives of providing employer benefits. We identified key issues to address for each product class.

Protection: should there be soft compulsion?

Pensions: auto-enrolment is here – but what about the self-employed and the gig economy underclass?

Investment products: already more flexible than before – but have we moved too far away from offering guarantees?

Keywords

Products, Employment Trends

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1. Introduction

This IFoA working party was set up to examine the current provision for pensions and life products against a background of emerging employment trends, including topics like product portability, simplicity and contract flexibility.

The question we attempted to answer was - what should the profession or industry do with product design in light of changing employment trends? Our main focus was the UK.

Traditionally employment was such that the working lifetime of a individual was dominated by employment at one or two companies with a linear or flat career progression. In stark contrast, work in the modern economy has become more fragmented, not just with multiple jobs but multiple careers.

Technology has meant a shift from manual labour to the service sector and the knowledge economy and workers are having to re-skill and re-train and adapt to the new technology of the workplace.

Final salary pensions were designed for a job-for-life era promoting and rewarding loyalty to the employer. But the last 20 years of low inflation and low interest rates have made final salary arrangements expensive for sponsoring employers which has led to a move towards money purchase / defined contribution.

The role of the state in pension provision has gradually become de-emphasised and personal provision has grown. On the individual side, personal pensions were introduced in the UK over 30 years ago and stakeholder pensions promising greater access and lower charges were introduced 20 years ago.

Non-pension insurance based savings have also seen great change in the UK. The slow death of the with-profit endowment – replaced by unit-linked products and mutual funds has been a defining trend in the market.

Industrial branch business has now been confined to history. The thrifty working class, who might not even have bank accounts, could save in a with-profits endowment with door-to-door weekly collections by the sales rep in an era dominated by Prudential, CIS and Pearl. While such products were useful at a time when borrowing was difficult and access to banking limited, once direct debits became commonplace, the inevitable demise of industrial branch business followed.

The dominance of company reps born from the era of industrial branch business has also changed. Now distribution of products is more fragmented with IFA/whole of market distribution, multi-ties, banks and digital channels.

Against this backdrop, in Section A we examine what these trends mean for products and in Section B we consider what solutions should be put in place in the context of the UK market.

SECTION A: Changes in employment trends and their impact on products

2. The Emerging Environment in employment

In the second half of the twentieth century, it was normal for an employee to work their whole career at one (or a few) employers, climbing up the career ladder. Loyalty went both ways: in return for the employees' skills and time, the employer offered stable and growing incomes, and benefits like insurance cover and retirement savings (often Defined Benefit in nature) i.e. mutual commitment.

Towards the end of the twentieth century and beyond, this social contract began to change, with employers needing more flexibility to respond to volatile market dynamics, and retrenchments as well as hiring of contractors and flexible workers increased. Work has become far more project driven, with employers hiring skills on an as-and-when, just-in-time basis, with people seen very much like other raw materials a business needs – outsourcing of functions has coincided with this cost-drive too. Together, these factors have led to workers changing roles and employers more often (with terms like 'tours of duty' now used to describe roles, underlining workers' mobility).

Industries have changed too, with a shift in the UK for example from manufacturing and commodity industries towards service-based industries over many decades. More recently, digital businesses have also grown substantially, with long-established companies (and industries) facing competition from nimbler start-ups.

Beginning with the industrial revolution, **automation** displaced labour-intensive jobs in favour of knowledge and service-led ones, and now technology changes are displacing knowledge-based ones too, as machine learning and artificial intelligence expand. One example is the role of radiologists as imaging algorithms get better and better at interpreting diagnostic images like x-rays and scans.

At the same time, society has become far less collective and paternalistic, and more individualistic, with responsibility shifting more and more onto individuals. One example is the reduction in employment rights and the decrease in union power over time.

The extent and pace of this change means that workers have had to adapt too, even if many of them still prefer security and stability, showing "a longing for more traditional career paths" per an Allianz survey of millennials. Generally, the workforce is also more mobile geographically in their search for work – the Allianz survey notes that roughly 50% of millennials across major countries surveyed, would move abroad if it is beneficial to their careers.

Individuals have come to accept that regular reskilling over the course of their multi-decade careers will be needed, as studying only at the start will no longer last. One example of this is "lifelong learning". Workers will be able to have multiple careers, changing industries or professions and/or disciplines/specialisms, and are likely to adjust over time between full-time and part-time work, permanent and contract work, and combine different income streams ("portfolio careers").

Individuals face more and more of the risk and uncertainty as governments and employers step away (given the significant costs of long-term commitments), yet we are not equipped to manage the risks, especially in the longer-term (e.g. protecting ourselves from obsolescence). Increasing individualisation implies we are missing out on collective wisdom and negotiating power, and at the extreme, are fending for ourselves. This points to the advantages which other collective solutions might offer, including professions, industry-level bodies, or pooling/insurance arrangements. However, they need to serve the individual at their level, following them as they change employers, types of work, lifestage, and possibly even countries!

Key considerations: *The emerging environment is becoming more complex now, with a steady shift to flexible working, re-training and multiple careers leading to overlapping employment categories. Although the labour market has performed strongly with record high employment rate before Covid-19, an increasing proportion of the workforce is in unconventional forms of employment, including part-time or less secure forms of employment.*

3. The gig economy

The growth of the gig/sharing economy, self-employment and contracting

Reinforcing the earlier points about the changing nature of work, the proportion of people in full-time employment has fallen over time. Part-time employment has grown (in part due to increased participation by women in the workforce), and self-employment has also grown. Self-employment includes independent contractors like plumbers, electricians, sports coaches, translators, designers, artists, programmers/developers, actuaries, project managers, marketing professionals, supply teachers, locum doctors, etc. Even Non-Executive Directors can be viewed as contractors with medium-term contracts: they typically work with multiple organisations.

'Gigging' is one form of self-employment, where individuals use online platforms to find small jobs, where the paying party asks when they want the task/service done (i.e. on-demand). There are broadly two kinds of platforms – asset-based platforms, and labour-based platforms. **Asset-based** platforms allow individuals to earn money from renting out assets they own like homes, or vehicles. **Labour-based** platforms allow individuals to offer their time/skills/services e.g. doing tasks, freelancing, deliveries. Transport/delivery services can be a mixture of asset-based and labour-based where the individual owns the vehicle as well as provides the service.

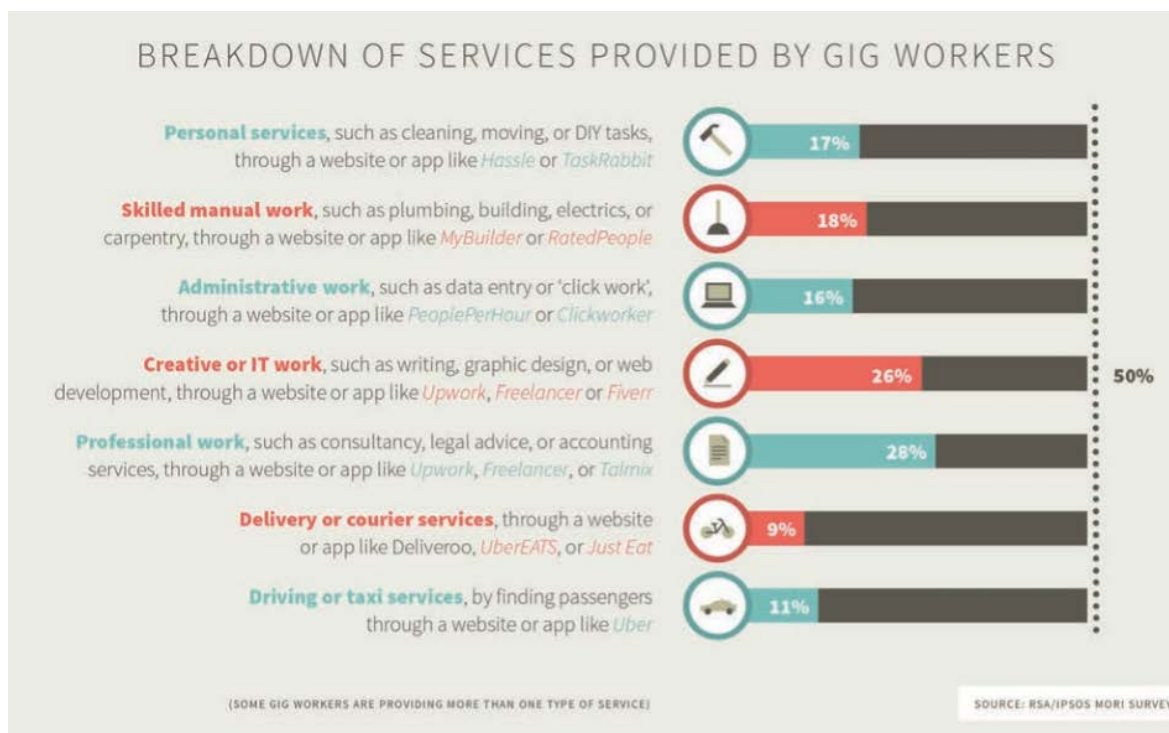
The percentage of people 'gigging' has increased significantly over the past decade, with technology making matching buyers and sellers of services much easier. Often though, gigging is used to *supplement* income (as a 'side hustle'), sometimes in combination with stable employment i.e. is not an individual's only income stream. Unsurprisingly, those renting out underused assets tend to make more money per month on average than others i.e. average gig earnings from Airbnb are higher than from Uber, Lyft, TaskRabbit etc.

The distinction between gigging by choice (for flexibility, for example) and gigging by necessity (because stable employment is not available) is crucial. Some people choose to work flexibly because they have other commitments e.g. other jobs, caring responsibilities, or creative pursuits. Locum doctors could be viewed in this category for example. Others gig because they *cannot* find more stable income, even though they want a permanent job. Gigging incomes can fluctuate significantly, impacting an individual's ability to save consistently, raise a mortgage, or even get a mortgage. Thus, the *uncertainty* of earnings impacts the likelihood of using insurance or investment products, thus making giggers very different to the thrifty poor of yesteryear who bought industrial branch business – they had a regular income nevertheless. In fact, there are more similarities to subsistence farming in developing economies, and interestingly some forms of microinsurance in that context can help improve resilience for households e.g. crop insurance, equipment insurance, health insurance.

Stats:

- 80% of giggers work for less than 16 hours per week, with only 8% working for 35+ hours
- >60% of gig workers use platforms to *supplement* their income (25% of them work full-time, and 12% part-time), meaning almost 40% are solely using platforms to source work.

The diagram below shows the types of services provided by gig workers



Some of the consequences for giggers who do not have other stable income streams include:

- They have no group benefit arrangements as they have no employer, so would need to arrange their own savings and insurance cover, as well as their own education and training – skills obsolescence over time can become an issue (especially as the worker may not be able to take time off from earning to retrain or keep up-to-date)
- They may have their own businesses, which implies the need for business insurance, but how often is insurance used when it is not compulsory (e.g. bike or van insurance for delivery drivers is used, and there are examples of companies offering this in on-demand format, but would the demand be there if it was not compulsory – underscoring the role of government again).

Key considerations: *A high proportion of the gig economy, which is forecast to keep growing, are permanent employees who gig to supplement their income in response to fear of unemployment, as well as real wages being held down. Together with self-employment and temporary work, gigging is changing the nature of work and predictability of income, whilst simultaneously giving rise to the largest gap in protection cover.*

4. Product distribution

The Retail Distribution Review (RDR) enacted in 2013 has changed the face of distribution for the industry. Commission has been banned for investment and pensions products but not for pure protection. And qualification requirements for advisers were enhanced.

Commission has been replaced by fees and 'adviser charging', whereby fees agreed by the customer with the adviser are deducted from the premiums. This has led to a new dynamic with access to financial advice moving away from the mass market and towards higher wealth groups.

Online has now become an important channel either direct to consumers or via intermediaries.

For investment business, fund platforms now dominate with a number of direct to consumer online fund platforms. In the corporate pensions place, a similar non-advised 'self-service' offering has emerged with online capability and tools to assess a policyholder's attitude to risk.

Online self-service suggests the need for simpler products.

In such circumstances, new distribution is beginning to emerge under the label of roboadvice. This term has been used to cover a multitude of advice models but is usually used to mean the provision of regulated advice using algorithms or artificial intelligence without a human adviser.

***Key considerations:** Modified product distribution driven by commission being replaced by adviser fees, as well as a consumer tendency to 'self-service' online, has amplified the need for product simplicity.*

5. Social trends

Though not as fast as computer technology development, the changes in social trends are becoming progressively apparent. This is intertwined with people having easier access to information and more possibilities due to improved transport and cross-border cooperation.

There are a few visible social trends that could be influencing the future strategy and product development of insurance entities.

Fewer marriages, older brides and grooms, older first-time parents, falling fertility rates

- The number of marriages fell from a high of around 400,000 in the seventies to 240,000 a year in recent years. Also, people get married first time at a later stage in their lives.
- Women are nowadays getting married at around 31 years, while men marry for the first time at a ripe age of 33 years.
- A similar pattern is observed when analysing the age of first-time mothers. The average age grew from 26 in the seventies to more than 30 years old at present.
- The total fertility rate for England and Wales in 2017 was an average of 1.76 children per woman, declining for the fifth consecutive year, from 1.94 in 2012. It is around one child per woman lower than the highest rates observed in the 60s. In the last 50 or so years, it has remained stable.
- These trends are relevant for the design of products as often marriage and family formation are catalysts for people to take out protection products.

Growing student debt, buying first home increasingly difficult, savings ratio decreasing

Repayment of student debt decreases the disposable income of younger people, which has an impact on both the take up of pure protection and savings products.

The main reasons for the social trends above originate from the fact that young people spend more time in education and have more difficulties in setting up a home for their families.

- In 1960, the profile of first-time buyer was the following: 23 years of age, married with probability of 84% and needed to save for 2 years to pay the deposit. On the other hand, today a first time buyer is 30 years of age, married with probability of 27% and needs to save for 5 years to cover the deposit payment [5.1].

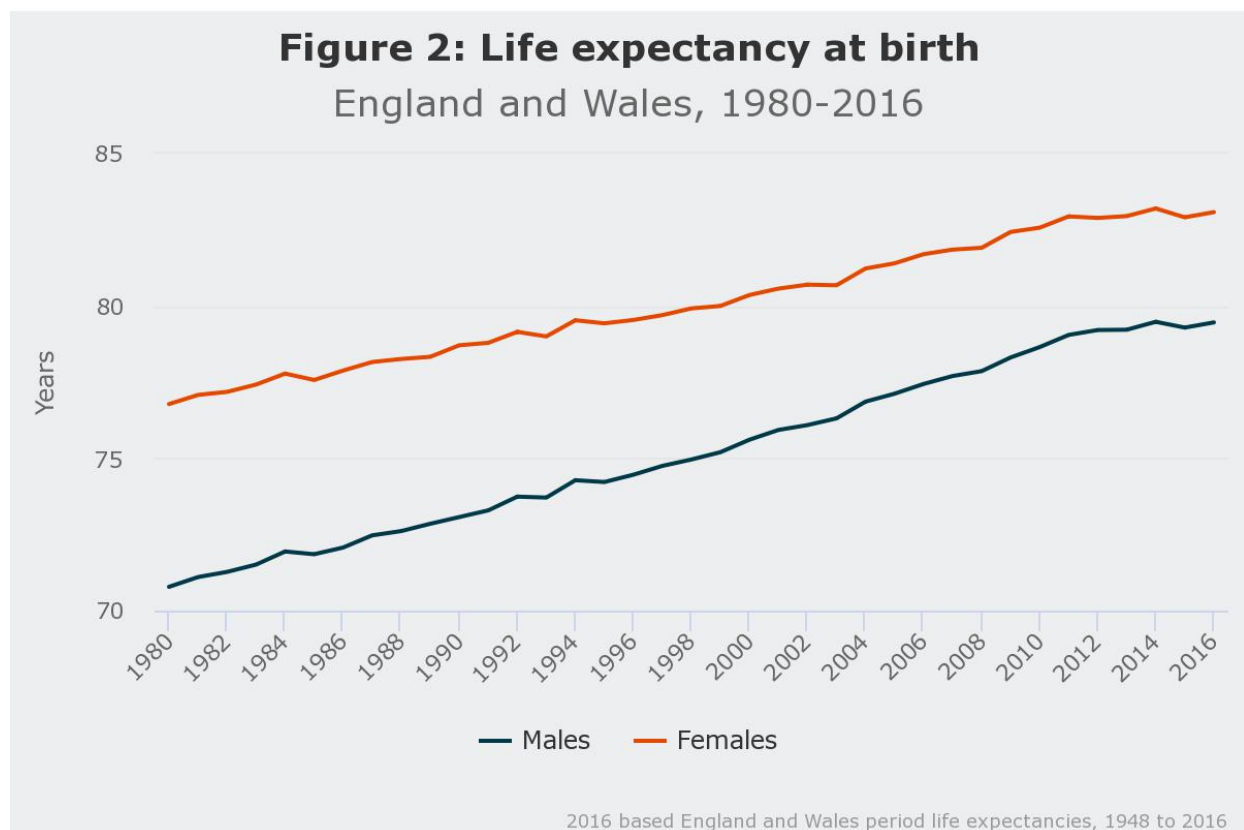
Additionally, in 2012, the authorities in England and Wales introduced a new system to enhance students' affordability to study. A government body offers a student loan to cover tuition fees (and possibly living expenses) with repayments (9% of salary) following the completion of studies subject to earnings exceeding a certain threshold (currently 25,000 pounds) [5.2].

- The introduction of the system was accompanied by the increase of the tuition fees, which has, consequently, led to an increase of the student debt.
- The total amount of student debt increased to over £100 billion in 2018 [5.3]. One could argue that the system brings additional uncertainty in planning personal finances regarding family expenses and long-term saving.
- More generally, the households' saving ratio (disposable income less expenditure) in the UK has been decreasing in the last decade.

Key considerations: These changes in social trends are directly applicable to future product design as higher student debt combined with less frequent and delayed life-changing events like home-buying, marriage and family formation alter the demand for protection products.

6. Longevity trends

The 20th century saw dramatic improvements in life expectancy resulting from public health measures such as childhood immunisations, the introduction of universal health care, medical advances (such as in treatment of heart disease and cancer) and lifestyle changes, including a decline in smoking. By 2016, life expectancy at birth had increased to 79.5 years for males and 83.1 years for females (Figure 2). Since 2010, there has been a slowdown in life expectancy improvements.



Source: Office of National Statistics

Note: Period life expectancy is the average number of years a person would live from a given age if he or she experienced the prevailing mortality rates in that population throughout his or her lifetime. This measure makes no allowance for any future actual or projected changes in mortality. In practice, a population's mortality rates are likely to change, so period-based life expectancy does not measure the number of years someone could actually expect to live. A less commonly used measure is cohort life expectancy, which measures the average number of years lived based on past and expected changes in mortality rates for that population group.

Healthy life expectancy has also increased, but not at the same rate as life expectancy, so more years are spent in poor health. Although an English male could expect to live 79.5 years in 2014–16, his average healthy life expectancy was only 63.3 years – i.e. he would have spent 16.2 of those years (20 per cent) in poor health.

An English female could expect to live 83.1 years, of which 19.2 years (23 per cent) would have been spent in 'not good' health. And although females live an average of 3.6 years longer than males, much of that time is spent in poor health – they experience only 0.6 more years of good health than men.

People living in more affluent areas live significantly longer than people living in deprived areas. In 2014–16, males living in the least deprived 10 per cent of areas in England and Wales could expect to live almost a decade (9.3 years) longer than males living in the 10 per cent most deprived areas, and for females the gap was 7.4 years. The gap in healthy life expectancy at birth is even greater – about 19 years for both males and females, and those living in the most deprived areas spend nearly a third of their lives in poor health, compared with only about a sixth for those in the least deprived areas.

In the UK, the government has been reviewing the State Pension Age. It has said that “When the State Pension was introduced in 1948, a 65-year-old could expect to spend 13.5 years in receipt of it – around 23 per cent of their adult life. This has been increasing ever since. In 2017, a 65-year-old can now expect to live for another 22.8 years, or 33.6 per cent of their adult life.” At the moment, the State Pension Age is increasing. For both men and women, it increased to age 66 in October 2020.

The government is planning further increases, which will raise the State Pension Age from 66 to 67 between 2026 and 2028. The Pensions Act 2014 requires the State Pension Age to be reviewed at least every 6 years. The reviews will consider changes in life expectancy and wider changes in society.

Therefore, more people are going to be in employment for a longer period, and at older ages.

Key considerations: Almost 3 in 10 workers are now over 50 (compared to closer to 2 in 10 in 1997), according to a recent Taylor Report. Ageing workforce is reflective of the UK's ageing population, with more people living longer and declining birth rates.

SECTION B - What are the product solutions?

7. Portability

As discussed above, there is an emerging environment with the following features.

- New job landscape, including emergence of the gig economy
- New industries
- Multiple careers
- Emergence of web and apps for distributing products
- Social trends: delay in life stages

Is portability the answer? Let us first examine the benefits of portability.

- Helps people to keep track of all their savings and financial products (as they can be consolidated).
- Helps people to make better informed decisions.
- Economies of scale if all products of a similar type were managed together and an individual did not end up with high fixed costs of a large number of different savings and pensions pots.

However, within a workplace context, employer pensions and benefits are designed to aid retention of employees. Therefore, a lot of employment-based products are not readily portable. For these products, there is a lack of motivation from the employer to make these benefits more portable, but it would help employees if they were. The benefits to employees include:

- Ability to track their financial position over their lifetimes
- Ease of managing personal financial strategy
- Reduced friction due to transaction costs and admin time

Employers currently offer these benefits because they are valued by employees and employers can get a good deal on these bulk agreements.

Portability within pensions

Since 2012, the UK government has rolled out auto-enrolment. Auto-enrolment has made it compulsory for employers to automatically enrol their eligible workers into a pension scheme. The employer must also pay money into that scheme. The purpose is to encourage workers to build up retirement savings, as they may not be able to live comfortably in their retirement on just the State Pension. It also reduces the burden on the state to provide for people in their retirement. The key attribute of this scheme is that workers do not have to take any actions themselves – employers will automatically deduct contributions from wages and pay them into a pension scheme on the worker's behalf.

As a result, workplace pension participation has risen from 42% of private sector workers to 73% of private sector workers as at 2016. There has been significant growth in participation from under 30s and those on a low income, which has made retirement saving appear more standard.

There is still some gaps in coverage – in particular, those in low-paid multiple part-time jobs and the self-employed. The UK has seen a significant increase in those who are self-employed (to around 15% of the workforce).

There may be many pots building up in the UK due to auto-enrolment. For large employers, the annual cessation rate was around 22%, with around two-thirds of ceasing due to the employee leaving their job. The number of “old” pension pots is now 15.8m in the UK – these are preserved pension entitlements where the member is no longer currently contributing. [7.1]

This increase in preserved pension pots has made work on the government's Pensions Dashboard project more critical. The Pensions dashboard aims to enable individuals to access all their pension information in one place online. The government has projected that without the pensions dashboard, there could be about 49.6m dormant pension pots, worth £757bn by 2050, if a dashboard is not created. [7.2]

In the UK, there were proposals to allow for a system where pension pots worth £10,000 or less would follow an employee automatically when they moved to a new employer. However, this has been put on

hold as the government focusses its priorities elsewhere. There are some concerns about how to effectively run “pot follows member”, such as:

- Transfers involve risks for the member if they move their pot from a well-run scheme with low charges to a poorly run scheme with high charges
- There are transactions costs to transferring between schemes, esp. if members have to sell assets for cash, and then repurchase assets in their new scheme.
- Members feel that they need to invest in more liquid assets

The Swiss system is an example of one which provides portable pension benefits. The portable part we focus on is an occupational pension scheme and is the responsibility of employers. It is commonly known as “Pillar 2” of the Swiss pension system.

Swiss Pillar 2 pensions have the following features:

Who can join?	All employees earning above a minimum salary. Self-employed workers have the right to join on a voluntary basis.
Contributions	Pensionable salary is defined by law. Retirement credits can be purchased through different levels of contribution, which are age-related. Employers have to match member contributions. Contributions are tax-free.
Investment returns	There is a guaranteed minimum interest rate on benefits set by the government each year. (quite low – currently 1% p.a.)
Benefits on retirement	Up to a quarter of benefits can be taken as a lump sum. The rest is converted to an annuity, at a guaranteed annuity rate set by the government (currently 6.8% at age 65 for men and 64 for women).
Other benefits	Disability pension Spouse's pension Money can be withdrawn to buy an owner-occupier property within 3 years of retirement
Portability	Employees transfer their pensions when they change job. If they become unemployed, they can move their benefits to a vested benefits policy or open a vested benefits account. They can then move to an employer's scheme if they become employed again.

This system allows portability because of the uniformity of the benefit design - all schemes are subject to the same minimum guaranteed interest and the same conversion terms at retirement.

Key considerations: *Certain employer benefits are not portable by design (group risk or group PMI cover), due to being offered to maximise employee engagement and retention. When benefits lend themselves to being transferred between jobs (pensions), the advantages associated with portability of benefits will need to be weighed up against the additional costs of poor customer outcomes from complicated options and bad decisions.*

8. Product simplicity and flexibility

Life and pension products are often criticised for being complex and inflexible. If products were simpler, more customers would understand the product and be more engaged. Flexibility would mean that products could adapt as a customers' circumstances change.

But is flexibility desirable? Take pensions, for example. Recent pension reforms have introduced new flexibilities. Those with a Defined Contribution (DC) scheme have been able to access and withdraw their pension pot from the age of 55; certain Defined Benefit (DB) members are able to switch to a money purchase scheme if the rules allow. There are a number of options for taking income to those retiring after 6th April 2015 such as: lifetime annuity, flexible annuity, flexi-access drawdown, uncrystallised funds pension lump sum, scheme pension, small pots and trivial pension contribution (for DB schemes only). This flexibility just adds to complexity. How is a customer meant to know what to do?

Not only does the added flexibility create complexity but it could lead to poor decision making due to lack of knowledge and worsening numeracy skills with age. Also, there have been concerns that with the new flexibilities, people could withdraw and spend all their cash, leaving little for actual retirement. Government plans to allow those who have purchased pension annuities to sell them for cash (secondary annuities) have been abandoned. Alongside this flexibility, a tendency for people to underestimate their own longevity, could lead to a risk of running out of money and turning to the state for help.

So, could the answer be pension advice? The Tata Steel scandal is a cautionary tale. In 2017 Tata Steel, which owns the giant steelworks in Port Talbot, announced a restructuring of the final salary pension scheme with current and former steelworkers having to decide what to do with their pension. The British Steel pension scheme (BSPS) was one of the biggest in the UK, with 130,000 members and a staggering £15bn of assets. Tata closed the scheme in order to keep its UK loss-making operations afloat – by paving the way for a merger with a German rival.

Members were told they could take their life savings in a lump sum and invest it in personal plans; move it into a new Tata pension scheme, with fewer benefits; or default into the Pension Protection Fund, the government's lifeboat scheme for failed companies. Those that failed to respond by the deadline defaulted into the PPF (25,000 members); whilst others decided to join the new scheme, backed by Tata. Many thousands, however, decided to withdraw huge sums – averaging between £300,000 and £700,000, depending on length of service – to invest in personal plans. That resulted in workers being targeted by rogue financial advisers, who have been accused of charging large fees and pushing steelworkers towards unsuitable, risky investments that lost them tens of thousands of pounds at the outset. The Work and Pensions Select Committee found the UK government, Tata and regulators failed to protect 124,000 members from a "major mis-selling scandal". The FCA has contacted 109 financial firms about the BSPS – and 21 of them have been asked to provide case files so the regulator can assess the suitability of the advice given. Eight financial advice firms have already accepted voluntary restrictions on their permission to provide pensions advice following intervention by the FCA.

Key considerations: Old style regular premium pensions with high charges and penalties for discontinuance are long gone. Nowadays auto-enrolment pension charges are price capped and there is a great deal of flexibility in stakeholder pensions and pension wrappers such as SIPPs. Furthermore, pension drawdown offers the flexibility needed by people with multiple careers who intend to retire gradually. Alternatively, the workforce of today, which is receiving variable incomes, might argue that pensions are not even part of the solution, especially given the flexibility of lifetime ISAs and HTB ISAs.

9. Innovation and Insurtech

Insurtech (or Insurance Tech) are Technologies & platforms that help optimize any of the principles for success or requirements of insurance like lead generation, sales, underwriting, claims management, customer service and marketing. Over the last 5 years, Life & Health Insurtech has attracted more than \$5 billion globally in funding, which is 20% more than P&C over the same time period [9.1].

Most innovations are driven by insurtechs designed to squeeze out savings and efficiency from the current insurance industry model for the customers. However, there are a few that are simplifying insurance for customers by unbundling it while others are increasing transparency. The following diagram illustrates the key Insurtech players and part of the value chain they aspire to make efficient.

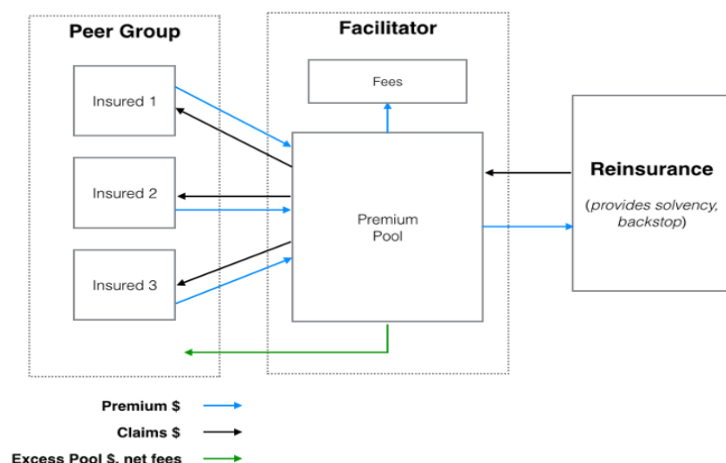


While most insurtechs aim to make the insurance value chain more efficient, there are a few who have created a parallel insurance model. In the diagram above they are classified under P2P i.e. Peer-to-Peer insurance.

Peer-to-Peer (P2P) Insurance

While P2P insurance is a potential disruptor in the insurance market, it is not entirely a new concept. It is essentially mutual insurance with a lot more transparency. P2P insurance has been gaining popularity because they guarantee to either return the leftover money to the members or to charity (i.e. no estate builds up). The profit margin for the P2P Insurer/Facilitator is either unconnected to the claims paid or increases with claims paid. Hence, they are not motivated to decline claims making the entire process more transparent. On the flip side, they are not motivated to manage expenses if the expenses are covered by the group. Fees of the Facilitators are either a fixed percentage of premiums [9.2] or a fixed percentage of claims [9.3].

The following diagram explains the working of P2P Facilitator model wherein the Facilitator charges a fixed percentage of premium as fees. [9.3.5]



In order to protect the members from the extreme scenarios, P2P Facilitators generally reinsure themselves. In some jurisdictions, P2P Facilitators can work without being regulated insurers. While some of them prefer to be unregulated, the others obtain insurance licences to increase the confidence of their policyholders.

While P2P Insurance has made inroads in Property & Casualty insurance, there aren't any popular use cases for life and health business. This could possibly be attributed to the long-term nature of life insurance business and complexity of health insurance. The popular P2P insurance offered are for pets, bicycles, and renters and home insurance.

Technology is becoming a great enabler

Technology can help build customised products that are economically viable. It can also help to build more effective distribution channels and to close the protection gap driven by the rising costs of health care.

The advanced technologies like Blockchain [9.4], Artificial Intelligence [9.5] and Internet of Things (IoT) [9.6] are enabling several businesses, and insurance business is no exception.

Blockchain – Blockchain was invented in 2008 but the insurance world has started adopting it only recently. The technology, since its adoption, has generated a lot of interest amongst the insurance players across the globe. There are several consortiums that have been formed across the globe to take advantage of Blockchains. The two more prominent ones are B3i [9.7] and R3 [9.8].

Apart from the adding value to the insurance value chain by increasing efficiency, Blockchain has also led to new product lines. One of the examples of new product lines includes the parametric insurance for gestational diabetes. The product is focused on pregnant women and the claim is paid out if the woman is detected with gestational diabetes. There is no requirement on customers to make claims, payout happens automatically based on an index. [9.9] This is similar to flight delay insurance where claims are paid out automatically if the flight gets delayed by a pre-agreed number of hours.

Artificial Intelligence – Insurance products are complex and deciding which products need to be bought can get complicated. Over the years, intermediaries have played the role of advising prospective policyholders. However, with Artificial Intelligence carrying out **need-based analysis** can be automated. One such attempt has been made by a UK based Insurtech called Anorak [9.10]. i.e. robo-advice using AI to determine what an individual customer may need.

Internet of Things – Internet of Things is most commonly used for smart home insurance and health telematics. There are several instances of life and health insurers offering insurance premiums discounts based on daily physical activity (tracked by apps or fitbands)[9.11]. Apart from the advantage of a potential **improvement in the health** of policyholders, the activity driven programs give insurers an opportunity to **engage more frequently**. This engagement otherwise was only restricted to the time of sale and time of claims i.e. now much more focus on ongoing wellness.

IoT, when combined with other technologies like Artificial Intelligence, can take the customer experience and insights to another level. Two such examples are Dacadoo and Boundlss.

Dacadoo - a company based in Switzerland, which focuses on device connectivity, data management and the development of a health score index to help insurers to better track, manage and tailor products and services to new and existing customers.

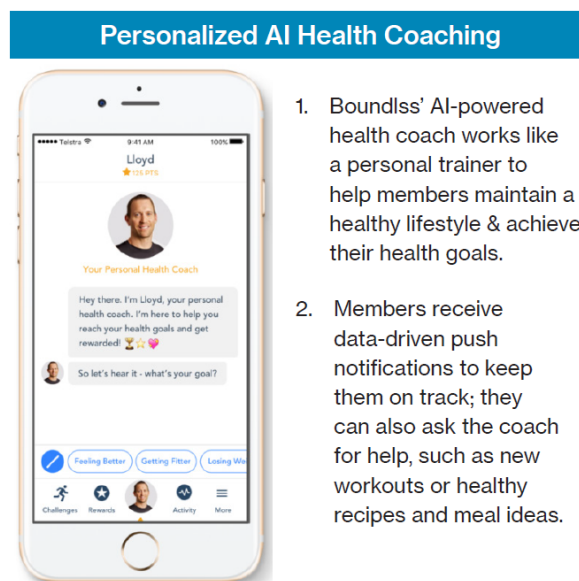
The Dacadoo platform combines **motivational techniques** drawn from behavioural science and online gaming with **collaborative elements** inspired by social networks – all with the goal of helping users track and improve their health. The dacadoo platform is agnostic in terms of devices or wearables used by the consumer, plus can easily integrate with all popular types of devices and data sources.

Their Health Score also enables Life & Health insurers to **more accurately price policies**. Dacadoo has introduced an underwriting system called 'Pay As You Live', which allows insurers to **update a**

policyholder's premium rates based on any increase or decrease in the user's risk factors. This gives policyholders a tangible opportunity to save money by **implementing positive lifestyle changes**. [9.1]

Boundlss is a digital Health company based in Perth, Australia and Hartford, Connecticut, that provides Life & Health insurers with an AI-powered health assistant for its members.

The Boundlss platform seamlessly blends AI and humans to provide deeply personalized, scalable, 24/7 health coaching. The AI uses Internet of Things (IoT) data from members' wearable devices and health apps to spark a conversation, check in, nudge and applaud healthy behaviours and provide one-on-one support. The coaching service is provided via chat in a white-labelled mobile app, allowing insurers to create a health coach and a tailored coaching experience. [9.1]



Source: www.boundlss.com

Will the customer of the future have greater and simpler access?

There have been several innovations to better cater to the needs of the customer and offer **simpler access**. While selling insurance products online has been in vogue for a while, the advancement in technology and innovations are making things simpler. On one hand, there is the advent of **robo-advisers that are available 24X7** to answer queries of prospective buyers. On the other hand, the innovations are aimed at making product **simpler by unbundling** them. For example, now one can get life insurance cover for a period as short as 24 hours. These are more commonly known as **on-demand life insurance** covers and are focused on those who want cover only during the time they undertake hazardous activities like bungee jumping. Some of them ask as few as 5 questions before issuing the contract [9.12]. On the health insurance side there is a start-up (Toffee Insurance) that offers you bite-sized insurance. For example, if you are travelling to an area where dengue fever is prevalent you could buy a cover for dengue for the duration of your travel. [9.13]. On P&C side, Trov offer on-demand insurance for household items and Zego allows delivery drivers to obtain pay-as-you-go hourly vehicle insurance they need to work as drivers. [9.14][9.15]. Additionally, Buzzvault uses Blockchain to store household contents data to enable easier and appropriate household insurance. Every time a new article is bought, it can be added in the Blockchain and the contract gets revised to reflect it. [9.16]

There are also insurers that let you increase or decrease the sum assured for a life insurance contract based on the changing needs of the policyholder [9.17]. And then there is an Insurtech that is building a platform to trade a life insurance contract when you no longer need it. While the secondary life insurance market is not new (and has been in existence for over 100 years), this Insurtech is building a Blockchain-based marketplace which makes it a lot easier to liquidate the life insurance contract and this usually offers a better deal than the surrender value offered by the insurers. The trustless [9.18] feature of Blockchain, for instance, makes it possible for an American to buy a contract sold by Singaporean [9.19].

Key considerations: *Technology is helping to make insurance more customised and unbundle the insurance products as well as simplify the buying and claims processes. There are proven examples wherein the customers have options to buy the cover that meets their specific requirements at that time, which in turn are evolving along with employment trends and flexibility.*

10. The role of the state: private versus public

The impact of employment changes on product design will differ from country to country. A key aspect is the role of the government. A country's investment or insurance industry itself cannot act in isolation of government. Tax incentives can influence customer choices and product design. For example, in the UK products such as Individual Savings Accounts (ISAs) and pensions are highly dependent on government rules, limits and tax incentives. Their very existence has crowded out other insurance-based investment savings products which are not tax advantaged.

Within the UK ISA category, the introduction of Lifetime ISAs where the government add a 25% bonus to your savings (for savings of up to £4k pa), means that for basic rate taxpayers under the age of 40, the Lifetime ISA has nearly all the advantages of a pension but with more flexibility. The money can be withdrawn to buy a house, or at age 60 without penalty, or at any other time with a 25% deduction. In essence, a lifetime ISA can be used as a more flexible pension savings vehicle – and it is entirely independent of the workplace. So the real question for the insurance industry is whether other products to take into account changing employment trends are needed when there already exists a product which operates independently of the workplace? What additional features are required?

In the UK, the state has introduced soft compulsion for workplace pensions in the form of auto-enrolment. You can opt out of the company-sponsored pension, but the default is that you are opted in. This simple change has worked but contribution rates are still low.

But what about protection and the often quoted “protection gap”? While larger employers purchase group risk products for their employees offering up to 9 times salary, many smaller employers do not. Is there a case for protection auto enrolment or adding protection onto auto-enrolled pensions? The advantage of auto-enrolled protection is that you retain a level of cover moving from employer to employer. The downside is if you lose your job or move into self-employment. In these circumstances the products could be designed to be converted into individual products. Another example could be adding waiver of premium cover to auto-enrolled pensions – this could protect individuals if, for example, they were made redundant or fell ill. Their ongoing pensions savings could continue until they were able to work again.

Perhaps the biggest UK government intervention alongside pensions auto-enrolment, was to create a pensions provider, NEST (National Employment Savings Trust). The idea behind this was to create a legal vehicle to accept pensions contributions – particularly as providers at the time said the charge cap made some smaller pensions uneconomic to administer. So now we have a government-sponsored provider competing alongside the private sector.

Actions of the state can also have a detrimental impact on the industry and good customer outcomes. For example, the introduction of Universal Credit included a clause, which deducted income from insurance policies from the amount of Universal Credit benefit pound for pound. This created a perverse disincentive against buying income protection for anyone who thinks they may one day need to claim Universal Credit.

The government's actions can therefore be a source of moral hazard. Moral hazard can manifest itself in many ways. Why, for example, should someone save for their retirement if government benefits in retirement are means-tested and your savings would be used as a reason to reduce your pension from the government? The UK government have reformed the state pension to reduce this moral hazard as it is not means-tested.

A topic which has been spoken about again recently is that of a Universal Basic Income (UBI) – this time in the context of machines taking human jobs, leading to less labour by humans, and hence less earnings potential and more leisure time. While funding is a significant challenge, if a Universal Basic Income were introduced, it would allow every recipient to meet their basic needs – in effect a form of

income protection which is always paid. It could then replace state pensions too. Industry's role would be about helping individuals above the UBI level: savings, protection, etc.

***Key considerations:** There are two aspects to consider around the government's role in pension and savings: whether the government should provide a mechanism that encourages pension savings and if so, what steps should be taken to ensure the soundness of it. The second qualitative aspect has direct consequences on the insurance industry whilst introducing further considerations for individuals and influencing their attitudes towards private provisions.*

11. Conclusion

So back to the original question that this paper sought to answer:

What should the profession or industry do with product design in light of changing employment trends?

In conclusion, there are no simple answers.

The Profession and the insurance industry cannot act alone. It needs to influence and work with the state. And the issue is not simply one of product design.

Whether portability is helpful should be carefully considered as we acknowledge the tension that exists between the advantages of portability and the objectives of providing employer benefits.

The key issues to address for each product class are:

- Protection – should there be soft compulsion?
- Pensions – auto-enrolment is here – but what about the self-employed and the gig economy underclass?
- Investment products – already more flexible than before – but have we moved too far away from offering guarantees?

In the future, affinity and trade groups could play a part of the solution. There are certainly benefits in terms of economies of scale and negotiating power. Plus, people are more likely to change jobs than careers making portability less of an issue. For insurers anti-selection could be a consideration if take-up is not widespread or compulsory. Could individual protection, which is facilitated but not funded by the employer, be the answer? (e.g. Uber in India).

Nevertheless, large sections of people will remain unreachable. There could be a growing potential for change if the recent ruling against Uber to class its drivers as 'workers' is extended across other gig platforms.

However, employer-based arrangements will still not reach large segments of the workforce. Auto-enrolment of pensions only encompasses around half of workers. Employment data shows growth in non-conventional employment types, which supports the need for more individual provision.

With the gig economy consisting of giggers by choice and those forced into it (and often on low earnings), should buying life and pension products be a priority for those who are on precarious earnings?

As discussed earlier, the government can have an immense impact, such as that of creating a new pension provider NEST alongside the introduction of auto-enrolment. In terms of the insurance and pensions industry meeting its social obligations and ethical responsibilities, it needs to work within the playing field of regulation, taxation and incentives as set by the government.

12. Postscript

After the research for this paper was concluded, the Covid-19 pandemic gripped the world. In the UK, the world of employment underwent great change, in particular, government intervention to support the employment market with the furlough scheme and schemes to help the self-employed.

In May 2020, the Financial Conduct Authority required firms to allow premium holidays and premium deferrals for up to 3 months for those in financial difficulties and some firms went beyond what was required. In the event, few policyholders took these options up, but it offered a blueprint in terms of premium flexibility for protection contracts.

References

3 - The gig economy

<https://www.protagon.com/stories/contracting-experiences>: experiences of actuarial, IT, change / programme management, and marketing professionals who choose interim or contract roles, including why and when they choose them, what they like best and what they don't like.

<https://www.nytimes.com/2017/02/09/business/europe-jobs-economy-youth-unemployment-millennials.html>: the emotional impact of the cycle of constant job searches / treadmill as well as practical implications like struggles with getting a mortgage, credit card or mobile contract given the uncertainty of income

https://www.allianz.com/v_1511198235000/en/press/news/company/human_resources/Allianz_Millennial_Survey.pdf: 70%-80% of millennials value security and stability, showing a longing for more traditional career paths; traditionalists vs free spirits; circumstances are impacting behaviour, rather than preferences – “the majority are responding to the changing reality of work where a person can no longer rely on an employer for a career”

<https://www.protagon.com/stories/contracting-career>: reflections on contracting and suggestions from actuarial, IT, change / programme management, and marketing contractors on how they've managed their careers

<https://www.protagon.com/stories/contracting-thriving>: thoughts on a Harvard Business Review article “Thriving in the Gig Economy” which juxtaposes the anxieties faced versus the benefits of independence, including empowerment. Four “liberating connections” (to place, routine, purpose, and people) help independent workers to “endure the emotional ups and downs of their work and gain energy and inspiration from their freedom”

<https://www.earnest.com/blog/sharing-economy-income-data/>

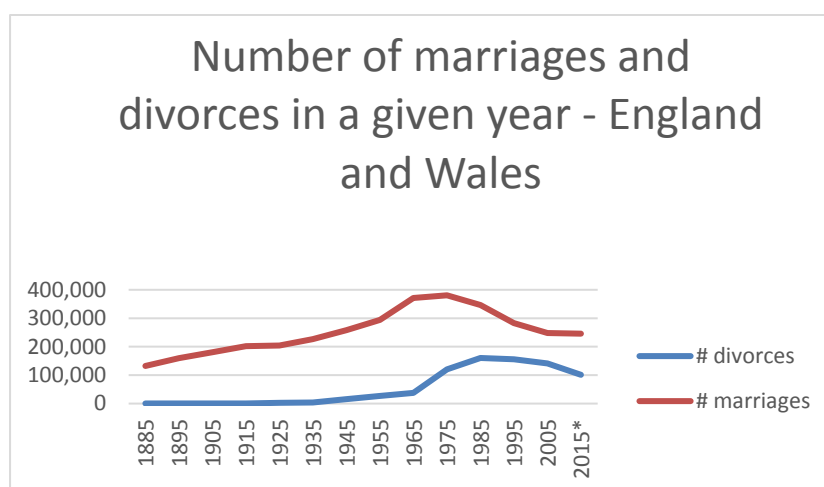
<https://www.protagon.com/stories/side-hustle>: according to a Harvard Business Review article, five reasons for corporate employees to actively develop at least one alternative income stream (whether from consulting, speaking, mentoring or building a product/service): (i) a hedge against uncertainty, (ii) to learn new skills, (iii) to build your network, (iv) an enhancement to your brand, (v) to grow your income.

5 - Social trends

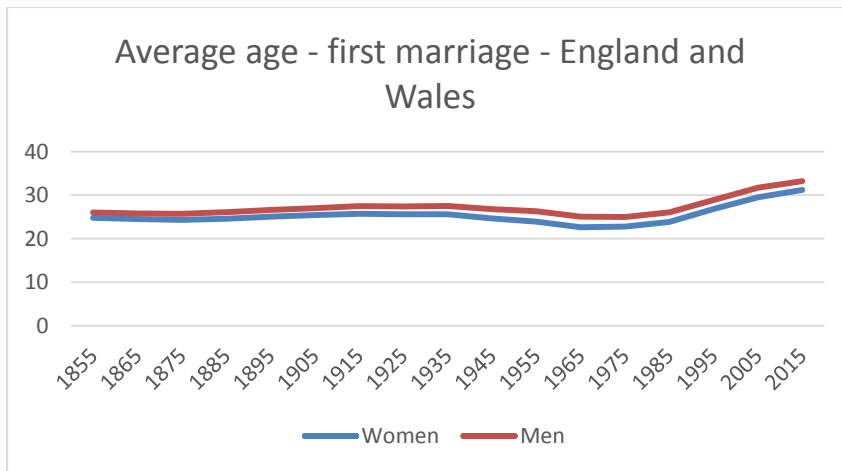
[5.1]: <https://www.independent.co.uk/property/first-time-buyer-age-increase-1960s-housing-market-cost-property-ladder-a8244501.html>

[5.2]: <https://www.moneysavingexpert.com/students/student-loans-tuition-fees-changes/>

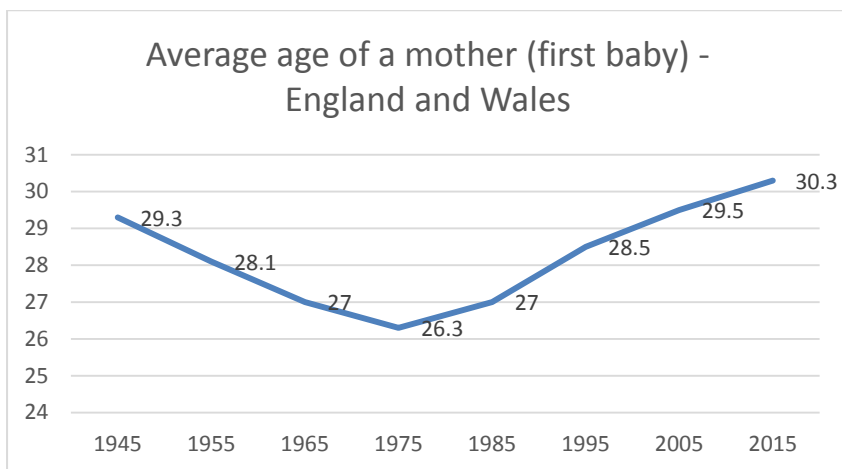
[5.3]: <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN01079>



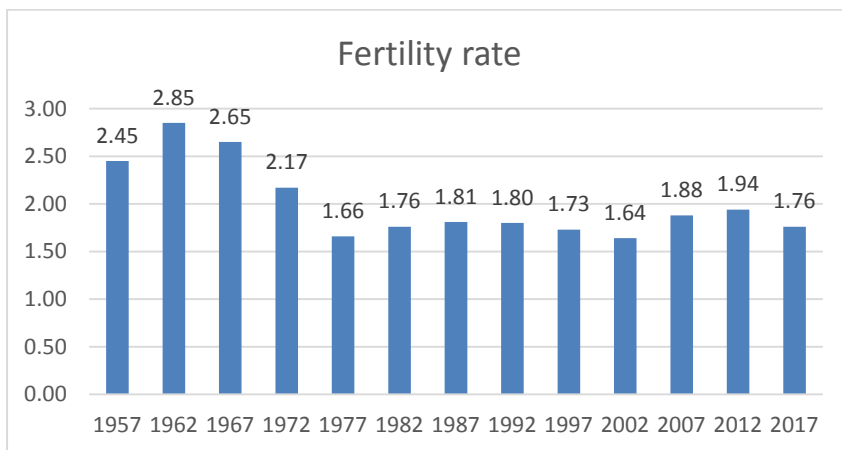
Women are nowadays getting married at around 31 years, while men marry for the first time at a ripe age of 33 years.

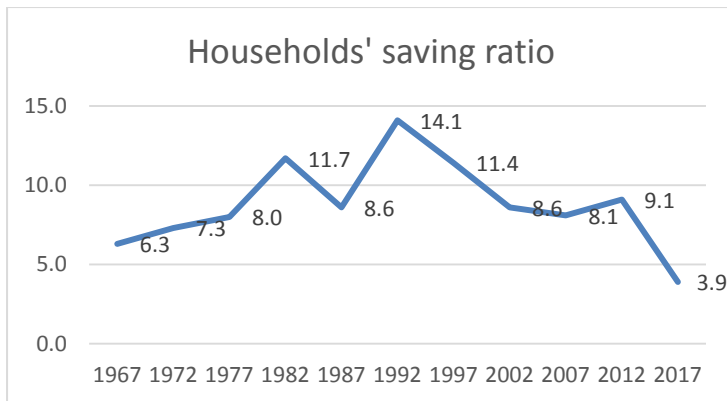


The average age grew from 26 in the seventies to more than 30 years old at present.



The total fertility rate (TFR) for England and Wales in 2017 was an average of 1.76 children per woman, which is around one child per woman lower than the highest rates observed in the 60s.





All charts use data sourced from the Office for National Statistics.

7 – Portability

[7.1] <https://www.ftadviser.com/pensions/2018/09/06/number-of-old-pension-pots-hits-record-high-of-15-8m/>

[7.2] <https://www.ftadviser.com/pensions/2018/08/30/savers-to-retire-with-15k-less-without-pension-dashboard/>

9 – Innovation and InsureTech

[9.1] Quarterly InsurTech Briefing Q2 2018

<https://www.willistowerswatson.com/en/insights/2018/09/quarterly-insurtech-briefing-q2-2018>

[9.2] Lemonade - <https://www.lemonade.com/>

[9.3] Teambrella - <https://teambrella.com/>

[9.3.5] <https://www.agencynation.com/p2p-insurtech-start-ups-disruption/>

[9.4] Blockchain - A blockchain, originally block chain, is a growing list of records, called blocks, which are linked using cryptography. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data (generally represented as a merkle tree root hash).

By design, a blockchain is resistant to modification of the data. It is "an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way". For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for inter-node communication and validating new blocks. Once recorded, the data in any given block cannot be altered retroactively without alteration of all subsequent blocks, which requires consensus of the network majority. Although blockchain records are not unalterable, blockchains may be considered secure by design and exemplify a distributed computing system with high Byzantine fault tolerance. Decentralized consensus has therefore been claimed with a blockchain.

Source: <https://en.wikipedia.org/wiki/Blockchain>

[9.5] Artificial Intelligence - Artificial intelligence (AI) is a term for simulated intelligence in machines. These machines are programmed to "think" like a human and mimic the way a person acts. The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal, although the term can be applied to any machine that exhibits traits associated with a human mind, such as learning and solving problems.

Source: <https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp>

[9.6] Internet of Things - The Internet of things (IoT) is the network of physical devices, vehicles, home appliances, and other items embedded with [electronics](#), [software](#), [sensors](#), [actuators](#), and [connectivity](#) which enables these things to connect, [collect](#) and exchange [data](#), creating opportunities for more direct integration of the physical world into computer-based systems, resulting in efficiency improvements, economic benefits, and reduced human exertions.

[9.7] B3i - <https://b3i.tech/home.html>

[9.8] R3 - <https://www.r3.com/>

[9.9] Metlife demos health parametric insurance - <https://www.ledgerinsights.com/metlife-parametric-insurance/>

[9.10] Anorak - <https://www.anorak.life/>

[9.11] Vitality – <https://www.vitality.co.uk/>

[9.12] OUTsurance - <https://www.outsurance.co.za/company-news/out-there-press-release/#content>

[9.13] Toffee - <https://toffeeinsurance.com/>

[9.14] Trov - <https://www.trov.com/>

[9.15] Zego - <https://www.zego.com/scooter/>

[9.16] Buzzvault - <https://gobuzzvault.com/>

[9.17] LadderLife - <https://www.ladderlife.com/>

[9.18] In the context of Blockchain, “trustless” is frequently used to convey that with Blockchain there is no requirement to trust the parties one is dealing with. The system ensures that even if the one doesn’t know the other party, one can carry out a transaction as Blockchain takes care of the trust part.

[9.19] FidentiaX - <https://www.fidentiax.com/>



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