



department for
**culture, media
and sport**

Will expected demographic changes impact participation in culture and sport?

Analysis of the Taking Part Survey

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Our aim is to improve the quality of life for all through cultural and sporting activities, support the pursuit of excellence, and champion the tourism, creative and leisure industries.

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Executive Summary

Background and aims of the research

This report presents findings from analysis of the 2007/08 Taking Part survey on how changes in demography might impact engagement with, and participation in five sectors: sport, arts, heritage, museums and galleries, and libraries.

The analysis was commissioned by the Department for Culture, Media and Sport (DCMS) and undertaken by TNS-BMRB.

The research was driven by one overarching research question:

Will expected demographic changes impact participation in culture and sport?

The impact of population change on participation in culture and sport becomes particularly pertinent in the context of government targets. Public Service Agreement (PSA) 21 is a government target, aimed at building cohesive, empowered and active communities. While Communities and Local Government are the lead department for PSA21, DCMS have responsibility for Indicator 6: to increase the percentage of adults (aged 16 and over) who participate in culture and sport by 2010/11.

By using a range of methodologies, TNS-BMRB examined participation across five sport and culture sectors, each broadly representing one element of PSA21's Indicator 6:

1. Recreational physical activity and sport (participated in 30 minutes of moderate intensity level sport and active recreation on three or more days in the past week)
2. Arts activity (engaged in the arts at least three times in the past 12 months)
3. Museum and gallery visits (attended a museum or gallery at least once in the past 12 months)
4. Heritage site visits (visited at least two historic environment sites in the past 12 months)
5. Library visits (used a public library service at least once in the past 12 months)

Summary of findings

The research concludes that demographic changes alone will have only a marginal impact on participation in culture and sport. However, while changes in the predictive power of factors such as age, educational level or health status might amplify the impact of demographic change, these changes need to be all in one direction to move participation levels by more than a couple of percentage points.

Introduction

The population of England is not static. It slowly evolves as some people die while others are born, some emigrate while others immigrate. The demographic profile of the population is altered by this constant churn although the year-on-year effect is usually tiny.

It is difficult to predict exactly how the demographic profile in England will change because the general pattern is likely to be interrupted on several occasions over the course of a long time period. How much of the demographic change observed since the war could have been predicted before the war?

The Office of National Statistics (ONS) is tasked with making these projections and they do so via a single 'principle' projection plus variants covering scenarios in which fertility, life expectancy or migration rates are higher or lower than assumed for the principle projection¹.

For the most part, the projections are limited to sex and age distributions, although household-level marital status projections are also produced occasionally. There are significant differences in sporting and cultural activity between the sexes and between age groups so any change in the population profile might be expected to impact upon the aggregate level of activity.

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It is unlikely that demographic change will hinder DCMS's ability to meet this target in the short-term. However, it is important to understand the potential long-term impact in order to inform the development of future targets and to better understand the impact of demographic change on engagement with the culture and sport sectors.

¹ <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=8519>. Until 2006, the Government Actuary's Department was responsible for population projections.

Research findings

Overall parameters

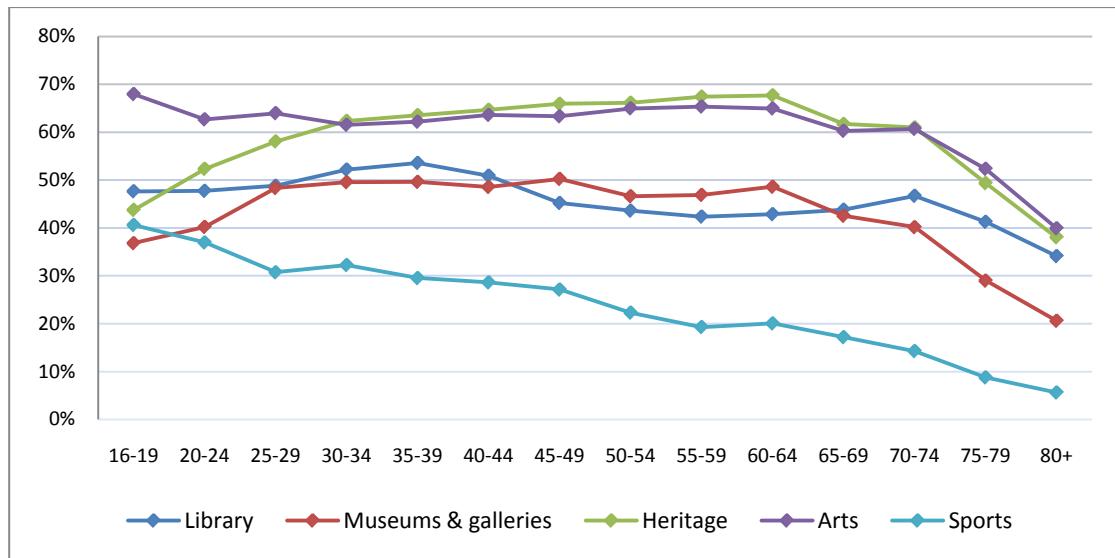
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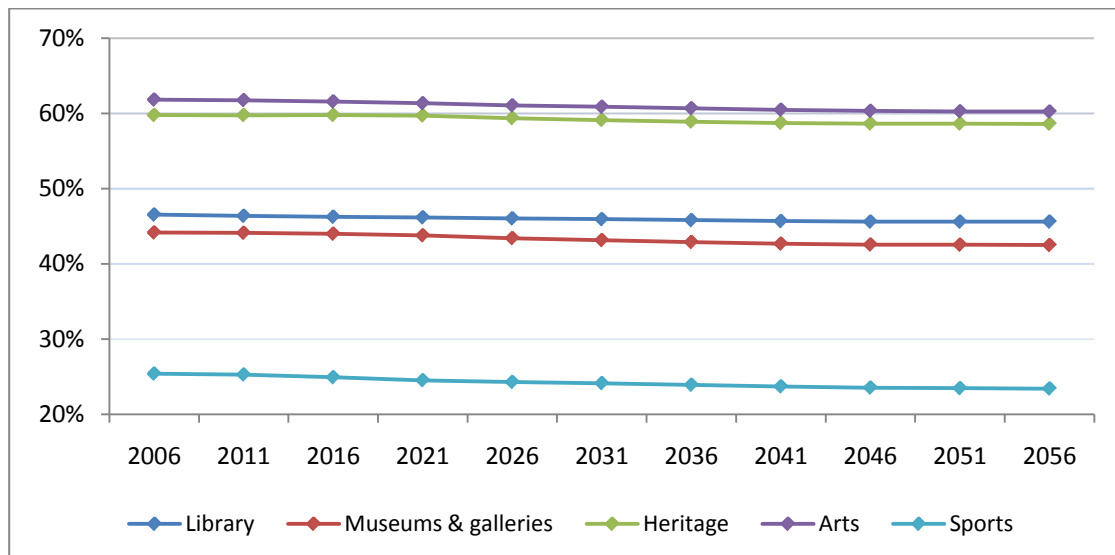
For the purposes of the PSA indicator, participation is defined as taking part in two or more different cultural or sport sectors at the required frequency of participation.

Participation levels across all sectors vary with age. For cultural activity (museums and galleries, arts, libraries and heritage), those in early middle age are more likely than others to engage but that the difference between them and those in their 20s is only marginal. Activity levels only tail off drastically among those aged 70+ years (Chart 1).

However, the pattern is different for sports activity – participation peaks among those aged 16-19 years before falling steadily for each successive age group.

Chart 1: Participation in culture and sport, by age

The 2007/08 Taking Part data is weighted to reflect the 2007 ONS mid-year population estimates. However, for the purpose of this study, TNS-BMRB separately weighted the data using the Government Actuary's Department (GAD) principle population projections for each five year band from 2006 to 2056. Projected participation levels are shown in Chart 2.

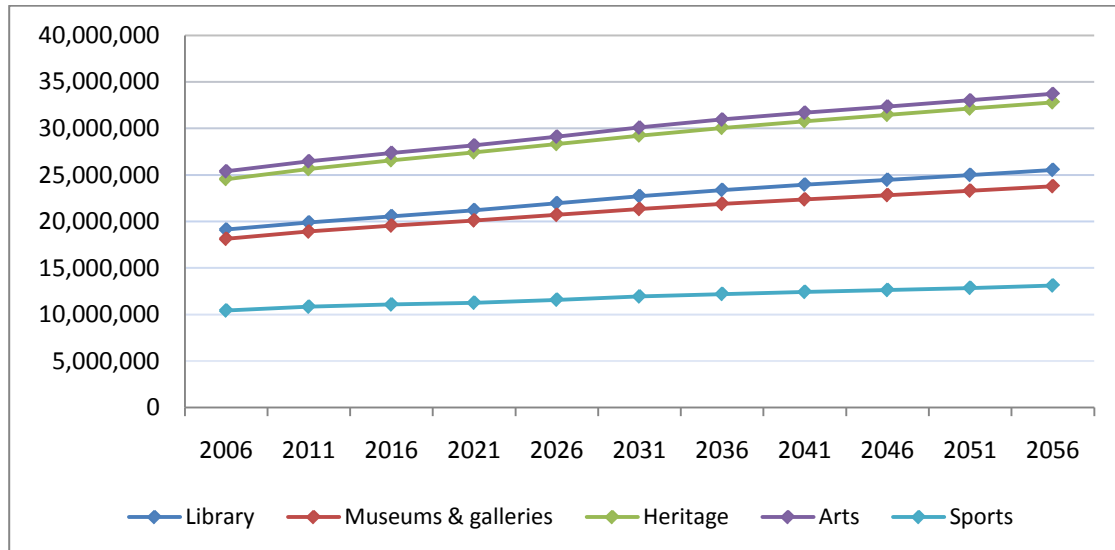
Chart 2: Projected participation in culture and sport (%), 2006 to 2056

It is immediately clear that standard demographic churn, even over a period of half a century is not likely to be a strong factor in determining performance against PSA targets. Although a downward trend is observed for every PSA, the decline ranges only from 1-2 percentage points.

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The gentle downward trend in percentage terms translates into a net *increase* in the total numbers engaging in each activity. This is because the general increase in total population outweighs the projected decrease in propensity to engage in these activities. Chart 3 illustrates this 'net' effect'.

Chart 3: Projected participation in culture and sport ('000s), 2006 to 2056



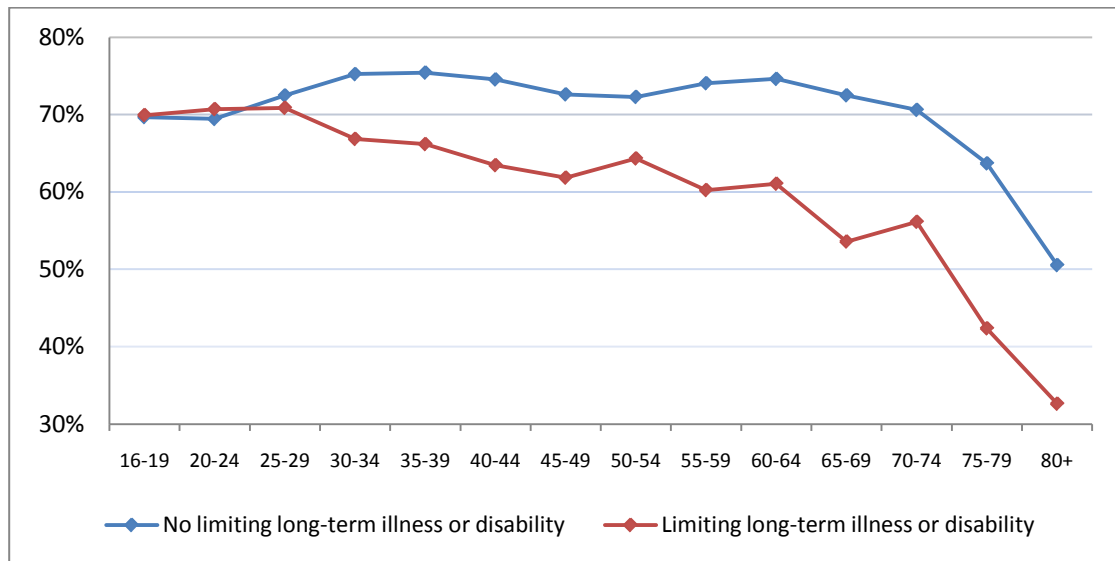
However, it is unclear whether the relationship between age and activity levels will hold over time. The opportunities for activity as well as the variety of competing alternatives are likely to be very different 20-30 years from now.

Furthermore, there is a strong interaction between age and other variables such as health and educational level when it comes to analysing activity levels. If these interactions are cohort-specific then we should expect the web of relationships between age, other demographic variables and participation to change over time as new cohorts replace old cohorts.

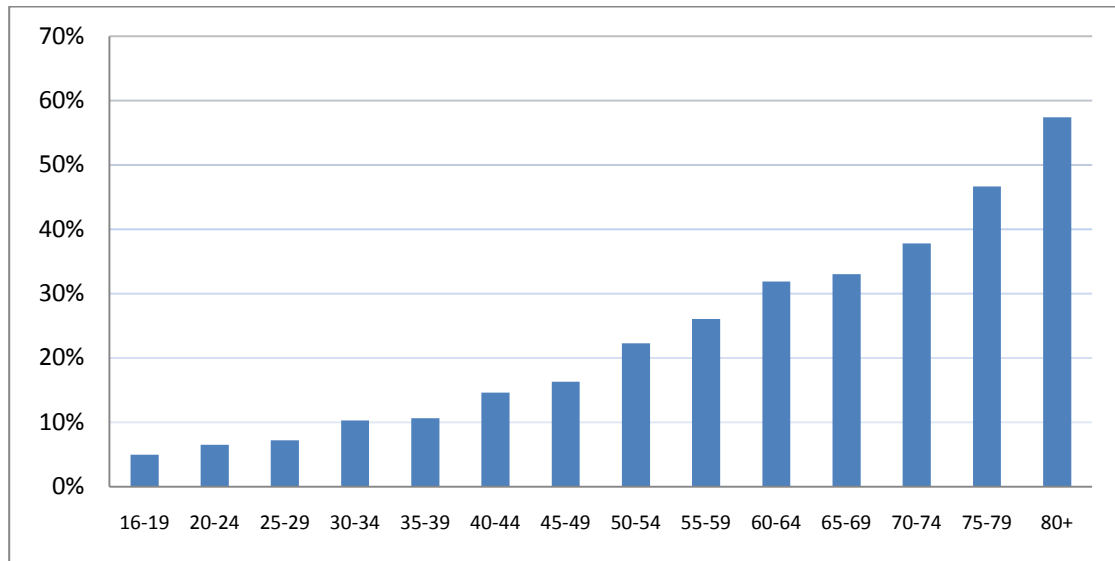
The interaction between age and health

Chart 4 illustrates impact of health status on participation in at least 2 out of the 5 sport and culture sectors (i.e. the summary PSA21 Indicator 6 measure). It shows that those with a limiting long-standing illness or disability have lower levels of participation than those without such an illness/disability. The effect of health on participation is stronger among the older age groups. This effect might well remain steady over time although efforts to improve access for disabled people might weaken it somewhat.

Chart 4: Participation in at least 2 out of 5 sectors, by age and limiting long-term illness/disability



However, the relationship between age and health is not fixed. In 2007/08, the proportion of people with a limiting long-term illness or disability among those aged 80 years (57%) was about ten times greater than the proportion for those aged 16-19 years (5%; Chart 5). We do not know to what extent that this disparity between age groups will exist in the future. Improved medical standards might reduce the proportion for all age groups and particularly the older age groups. However, this might be countered by a reduced interest in exercise or other healthy living activities. We do not know which force will be the more powerful but a change in either direction is likely to impact participation levels.

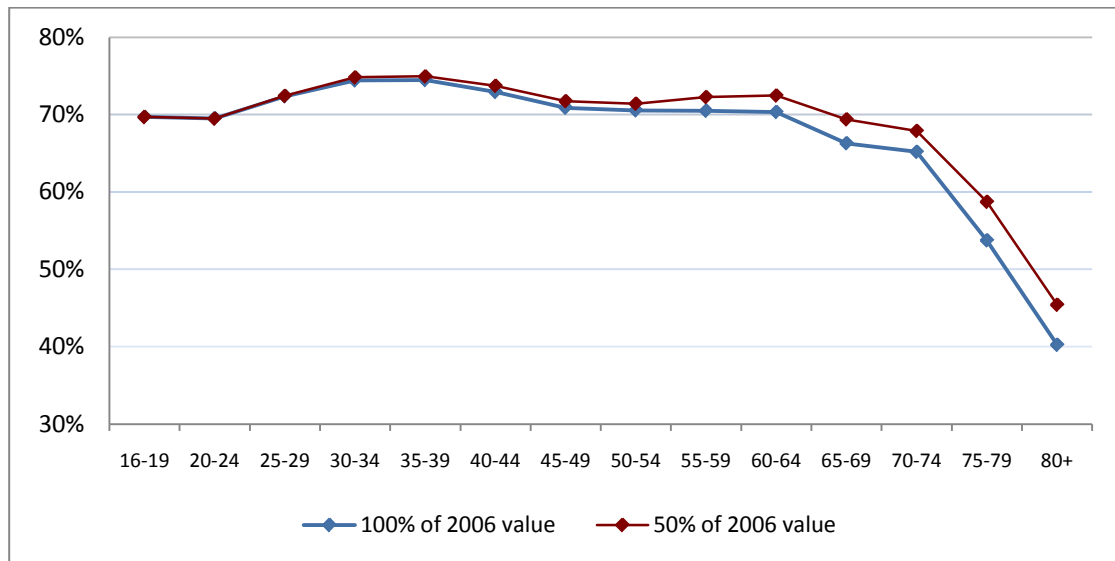
Chart 5: Limiting long-term illness/disability, by age

Although we do not know how the relationship between age and health will change, we can estimate the effects for a given degree of change.

We can do this by computing a simple regression equation which shows the combined predictive value on participation in at least two of the five sport and culture sectors of (1) age, (2) limiting long-term illness or disability and (3) the interaction between the two. We can then alter the proportion in each age group with a limiting long-standing illness and see what effect this has.

Chart 6 shows how participation rates would change if the proportion in each age group with a limiting long-term illness or disability was cut by 50%. This quite staggering improvement in health standards does not lead to an increase of more than a couple of percentage points for any age group under 70 years. The aggregate improvement across all age groups is only 1.4 percentage points.

Chart 6: Participation in at least 2 out of 5 sectors if proportion of population with a limiting long-term illness or disability halved



The interaction between age and educational level

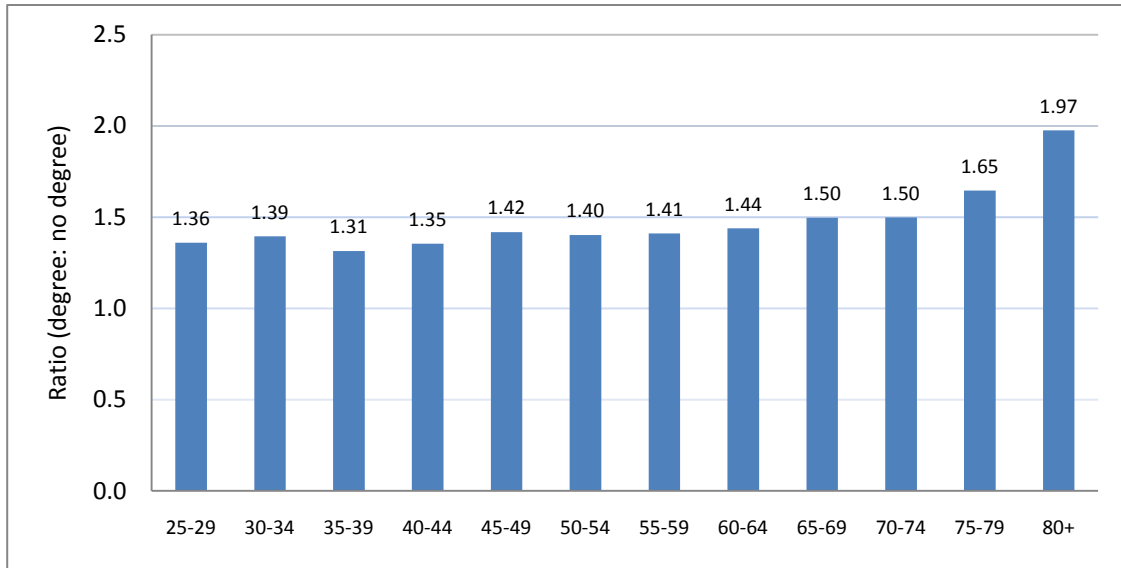
Another variable that interacts strongly with age is educational level.

Those educated to degree level tend to be more active than those who are not educated to degree level, so one might expect aggregate activity levels to increase as a more people become educated to degree level.

However, the fact that younger people are more likely than older people to hold degrees does not mean that younger people are proportionately more active than older people.

Chart 7 shows the marginal 'value' of a degree on participation in two or more sport and culture sectors. The value is somewhat smaller for younger people than it is for older people, although the key divide is between those completing their education before the end of the 1960s (i.e. people now largely of retirement age) and those completing it in the 1970s and later. Nevertheless, the fact that 41 per cent of 25-29 year olds hold a degree compared to less than 20 per cent of those aged 60+ years suggests that the future populace – being more educated than the current populace – ought to be a more active one.

Chart 7: Ratio of participation rates between those with a degree and those without a degree*



*Without a degree = 1

All other things being equal, the proportion active in at least two sport or culture sectors ought to increase by 4 percentage points if the marginal value of a degree and the proportion holding a degree is held at the level for current 25-29 year olds. However, it may be several decades before this is realised, especially if the proportion holding a degree does not increase significantly among future cohorts.

Conclusions

Both the age-health and age-education analyses demonstrate that even a radical change in the distribution of a single strong predictor such as health or educational level makes only a small difference to participation in culture and sport. Only the cumulative effect of multiple distributional changes (all in the same direction) would seriously alter the PSA score.

Change is much more likely to come via a hardening (or softening) of the causal relationship between demographic variables like age, health and educational level on the one hand and the 'dependent' variable - participation in culture and sport – on the other. For example, if the predictive power of health status was to decline, the gradual ageing of the population would be less of a factor, even if the relationship between age and health remained steady. Similarly, if the marginal value of having a degree declines, then the gradual 'educating' of the population would have less of an impact than we might expect.

Health and educational level are only two of many (often inter-connected) factors that influence the propensity to engage in one or other of these activities. Any prediction of how the current causal structure may evolve over the next fifty years is likely to be highly speculative. However, such 'future studies' are worthwhile thought experiments since they help prepare organisations for both the best and worst case scenarios. The Taking Part dataset is a useful resource for testing the range of impacts between these two extremes.

However, in summary, there is no obvious – and specifically demographic – time bomb waiting to trip up DCMS as it strives to increase engagement with its sectors. Changes in the relationship between age and other factors that influence engagement may lead to a stronger cumulative effect than demonstrated in this paper but, at this point, that is no more than speculation. Real change, if it occurs, is much more likely to be due to changing patterns of behaviour than to changing patterns of demography.

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