

Gender Equality? Approaches and Quantitative Evidence Sources For Understanding the Circumstances of Men and Women in the UK

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Abstract

To ensure equality in relation to gender such as, for example, access to healthcare, housing, criminal justice, training, employment, pay, and paternity/maternity leave quantitative evidence is essential. Such evidence has to capture the impact of policy interventions and to identify what leads to positive change in people's lives.

Data resources available for the analysis of gender-based discrimination have developed considerably in the UK in recent years. We conducted a review of the available survey data on behalf of the Task Force for the Commission for Equality and Human Rights. Our review showed specific strengths of the available data. We found 'gender' to be the best-documented of all the diverse aspects of the 'equalities' agenda though even this policy area was not without crucial evidence gaps and weaknesses. The main sections of this paper include: a rationale for using a social-exclusion approach rather than merely an 'employability' approach to gendered social exclusion and a review of available statistics and the identification of evidence gaps. It is clear that a lack of robust evidence and effective survey research methodologies pose major barriers to driving forward an agenda of social justice in relation to gender equality.

1. Introduction

The quantitative evidence and statistics on social exclusion change along with the changing discourses of our times though they can also be out of step. The driving agents in this process of change include government policy agendas, national and international changes in the law, political activism and business lobbyists. However, where is the voice of radical statistics in this process of managed, negotiated and dialogic change? This article considers the evidence base of statistics on gender in this context.

Gender is the socially ascribed and constituted version of what is thought of as ‘masculine’ and ‘feminine’, and the relations between. In gender studies, qualitative research has become much more common than “quantitative”, social-survey based research, but social survey data is absolutely essential to measuring inequalities. Survey data are used by government and many other organisations to assess change over time and to evaluate the impact of new policy initiatives.

Here we review the statistical data and evidence gaps for assessing gender equality in the United Kingdom, including a range of government and government supported surveys such as those managed by the Office for National Statistics, the Institute for Social & Economic Research and the National Centre for Social Research. Key surveys and data sources include: the Census, the Samples of Anonymised Records, the Labour Force Survey, the British Household Panel Study, the Family Resources Survey and the Time Use Survey. The points of access outside of government departments are the UK Data Archive and the Economic and Social Data Service. Another recent review has covered the whole range of “equalities strands”. See Walby, Armstrong and Humphreys (2008). Our review included consulting selected sector experts across government as well as a desk review of evidence.

We begin by looking at the theoretical context of gender equality. Social exclusion as a theory of inequality has distinct advantages over the ‘employability’ approach used in recent years in the UK (and to some extent in other countries). A close comparison of three theories – (i) social exclusion, (ii) systematic discrimination, and (iii) employability theory – helps us to see why it is preferable to ground statistical analysis in the first of these three.

Social exclusion theory approaches social-structural divisions as a feature of the underlying society and both its social and cultural norms (Pierson, 2002; Byrne, 1999). In social exclusion theory, the individual can be seen as a victim or willing participant in social inequality, but big groups of disadvantaged people are not seen merely as individuals – they are a feature of the social fabric and this shape of society results from an enduring, problematic set of social structures (Walby, 1990). The way social exclusion works is hidden by the operation of discourses of community and society which pretend to, or indeed seem to, include all people. For example, Fairclough (2000) has argued, Blair and Brown as New Labour politicians use an inclusive language but are actually serving sectional interests of a particular section of the middle class and not the general interest (Fairclough, 2000). Another example is that formal citizenship ‘includes’ women (of

course) yet in 2009 in the UK less than 20% of national politicians are female. Such low levels of presence are common across many countries though higher in Scandinavian countries (IPU 2009). The reality of exclusion is hidden by language and assumptions that seem to be inclusive. As Lister has stated

As presently constituted, the ideal of community would therefore appear inimical to the kind of politics of difference with which an inclusive approach to citizenship needs to engage. What is needed is an alternative, pluralist conception of community. Instead of obscuring diversity, division and difference, this conception would place them centre stage. (Lister, 1997: 34)

Population examples such as ethnic minorities, older people, and disabled people make it obvious that social exclusion is not 'done' by the individual, but rather occurs at a higher social level. This higher level is only visible if one has a depth ontology – i.e. a deep, complex theory of what society is like and how individuals fit within it.

Systematic discrimination theory, too, focuses on societal features such as stereotyping, job design, occupational norms, overtime norms and other social institutions. Again, the individual is not the prime mover. Instead the historical basis for systematic discrimination may be found to reside partly in historical social movements, partly in policies and welfare regimes, and partly in micro social institutions that are normative. In relation to gender this may include: workplace culture, old boys' networks, overtime habits, entertaining other managers at home, and so on. Both social exclusion theory and systematic discrimination theory can use social statistical evidence to gather up symptoms of processes, norms, structures themselves, their geographical locations, social details, and precise economic outcomes of the social structure. Social exclusion theory maps easily onto the use of survey data as long as aggregates such as class, ethnic group, or age group are taken to reflect deep underlying social structures. Many people would include gender as one of the deep social structures, and the 'sex' variable as reflecting gender.

By contrast, *employability theory* tends to focus down onto an individual and to look at all outcomes such as 'household income' and 'personal earnings' as a result of the personal human capital and endeavour involved. In recent years there has been a move to encourage unemployed people to increase their own employability (Hillage and Pollard, 1998; Pang, Chua and Chu, 2008). Increasing flexibility of hours, working outside one's own occupational identity,

taking two jobs, moving into self-employment or contracting, and getting training are all aspects of the employability policy trend. By advocating these features of a flexible economy, the UK Labour government has since 1997 consistently promoted employability. Inside this approach is a strong individualism. We call it a methodological individualism since it simply ignores the density, complexity and multiple layers that were found in the other (depth ontology) approach. It is methodological in the sense that it permeates the whole of research and tends to ignore or downplay social and cultural institutions. Explanations tend to be simple and reductionist. This approach maps rather easily onto the 'survey method', since data are often collected partly at the individual level. Employability theory, neo-liberalism, ideas of getting freedom via the market, and a slight economism (where social inequality is reduced to economic inequality) are all consistently part of the individualistic mind-set typical of some of the New Labour public policies in the UK such as New Deal Programmes targeted at specific populations including, for example, lone parents.

For social scientists and statisticians, the danger is that a neo-liberal approach might downgrade the role of social structures and social institutions. The evidence about these can be found in survey data – but if the reader is not looking for it, it can easily be overlooked. We suggest that a depth ontology is preferable to a reductionist, individualist type of theory for social statistics (Olsen and Morgan, 2005).

So far we have briefly described three theories of which we find the first – social exclusion theory – the most useful. To bolster our argument, we want to show also that it is feasible to use social exclusion as a way to study the existing survey data. The rest of this article will explore how gender and social statistics can be used from within the social exclusion theoretical framework to study the extent and nature of disadvantage arising from gender.

2. Approaches to Gender Equality and Inequality

In this section we focus first on defining gender and then review the evidence for examining equality issues. Gender is the socially ascribed and constituted version of what is thought of as 'masculine' and 'feminine', and the relations between. The female gender is often thought to act feminine, or to act appropriately only when acting

feminine (Crompton, Brockmann, and Lyonette, 2005). Debate arises about whether this is a valid assumption. Gender essentialism is the flawed reasoning that assumes women always act essentially feminine (and vice versa for men). Statements about gender often contain value judgements and involve ongoing evaluation of what people's appropriate behaviour might be. Social theorists focus our attention on the need to consider the *relations* between men and women. This difficult task is made more complex when we realise that men may often act feminine, and women may often act masculine. Most of the behaviours we call masculine and feminine are in turn delineated by each ethnic/cultural population in a complex, detailed way. Social norms are often only held tacitly or even non-cognitively.

We have not dealt here much with transgender people or the experience of having a homosexual or bisexual identity. We appreciate the important issues around gender, discrimination, exclusion and inequality that face marginalised groups like these. See Purdam, Wilson, Afkhami, and Olsen, (2008) for a review of the evidence on the circumstances of these populations. Severe problems of a lack of data about homo- and bi-sexual and trans-gender people are slowly being remedied in the UK through government action.

Three core functions of social survey data in the gender area are: (1) to reveal common behaviours, (2) to document the circumstances (3) to demonstrate the range of attitudes about appropriate behaviours. As a result, in the specific case of gender it is not defining and measuring a person's gender that is the problem. It is measuring the wide range of socially embedded institutional norms that apply to 'men and women in general' or 'men and women as thought of by each respondent'. In relation to the circumstances of women some feminists may have given up using social survey data because of the basic ambiguity about question wording. For example, is the question asking me to report on what is generally true for women, or for myself, or for women I know?

The competing view is that through good questionnaire design, clear and concise questions can be asked covering each of these, and other, angles. For a discussion along these lines see Stanley and Wise (1993), who argued that all scientific research in social science was androcentric, including all standardised data collection; versus Cathie Marsh (1982), who argued that it is a worthwhile activity to describe society's norms (and deviations from them) even whilst that society is undergoing its usual processes of change. One way to resolve this problem is to argue against having different 'knowledges' for different audiences – science for scientists, social data for government, and then qualitative data (only) for gender experts.

The argument for schisms and chasms between disciplines has been made, but an interesting argument against was presented by Walby (2001). Walby argued that there are epistemological chasms, notably between disciplines such as sociology and economics, which should be bridged by good research. A chasm in the criteria for good knowledge begins to imply that one knowledge is superior to another. The argument upon which that claim is based is, in turn, a kind of knowledge that transcends each earlier argument. Therefore, argues Walby, we need to have a set of key epistemic criteria for good knowledge that we are ready to defend across disciplines. In Walby's case, the underlying assumption that makes 'bridging the chasm' possible is a realist assumption that there is a physical as well as social reality that pre-exists our attempts to describe it. Realists are split into two – those who, like feminists, tend to reject statistical analysis as superficial (Sayer, 1992), and those who advocate statistical research as a potentially useful tool (Downward, 2003; Olsen and Morgan, 2005, for instance). We take the latter position because it is both warranted, and more useful, to do so.

To indicate or measure gender itself, one way to start is by recording the sex of each person in the survey. Sex is easily recorded in all surveys, though sometimes disputed when there is a notion that a person was/is/may be or wants to be transgender. Many users of surveys confuse sex with gender (WHO 2009). It would be unfortunate if the sex variable (often used in statistical modelling) were thought to simply reflect a person's gender. However, in interpreting the meaning of an association of sex with some outcome, for example, being likely to work in a male-dominated job, one goes beyond the recorded 'sex of respondent' and one taps into knowledge about the gender that corresponds to that sex. Men are described in society as typically X and Y. Women are described as tending to do P and Q. In that sense, knowledge about sex-related associations and tendencies may tell us about the characteristics that can be ascribed to someone's gender.

It is a big leap though (from individual sex identity to social gender identities). The leap of logic required is usually now known as *retroduction*. The statistician analyses the data and works backward, using their qualitative, theoretical, historical, and socially grounded knowledge, to what the society must be like for these patterns to have been recorded. In brief, the researcher asks why there are such patterns. They also ask why there is diversity, why groups differ, why and how men and women are differentiated.

To indicate or measure attitudes about gender is a rather different task. Plenty of data is available which measures attitudes about how

each gender appropriately engages with the family and with the labour market. In brief, attitude variables of this kind attempt to measure sexism. Scales of attitudes have been constructed using terms like ‘modern family’, ‘traditional views’, ‘conservative attitudes’ and so on to describe the overall index that is created. It is usual to measure attitudes on Likert Scales (i.e. strongly agree . . . strongly disagree) and a few related forms of social psychology measurement.

All forms of measurement using questionnaire-based surveys suffer from at least three forms of falsehood on a regular basis yet their prevalence is often unknown. These three forms are: using a question containing words and phrases, or discourse, whose meaning is not understood in the same way by the respondent as by the interviewer; using words or discourse which is understood in diverse ways in the population; and asking questions which people don’t want to answer but which they answer anyway (to satisfy the social norm of not saying no) and therefore falsify.

For instance, consider the issue of marital status - a number of complications can arise. The question asks “*Are you married?*”: (1) Respondent says “No”, but they are cohabiting. It is usual nowadays to allow cohabiting to be considered marriage, and the legal institutions are now catching up with the reality. But the respondent says “No”, because it’s not a marriage – and that’s the point (for the respondent) of cohabiting! (They resist the marriage discourse.) (2) Another person has separated from their husband or wife but they reply that they are not married, because they want to be rid of the marriage. Yet legally they are married, and the interview plan may have meant for them to respond that they are married. They certainly have a wife or a husband and they may have access to family resources or be liable to family demands, which are the realities into which the ‘marital status’ question taps. (3) Respondent does not want to answer the marital status question because they are divorced, but they do anyway. They are uncomfortable with their newish divorce so they answer married, because they have been married and have children. Their answer is technically false but it feels right for them.

3. Potential Sources for Measuring and Assessing the Causes of Detrimental Outcomes in Relation to Gender

Research on gender can attempt to identify the causes of detrimental outcomes for men and women by looking at the aggregate outcomes and *retroducting* what their real causes have been. For example, aggregate outcomes for women have included overt sexism at work, working hours inflexibility and violence against women. Below we describe some of the data resources available for looking at these diverse topics.

(i) Public Attitudes and Experiences About Gendered Behaviour

Research into discriminatory attitudes in relation to gender can draw on evidence from the British Social Attitudes Survey (BSAS). This is currently accessed in its international guise as the survey of 'Changing Gender and Family Roles'. This survey is extremely useful in charting gross changes in attitudes. Analysis suggests a considerable reduction of certain forms of sexist attitudes among the young, compared with the older generation. However, this survey has a small sample size of about 3,500 respondents per year and is intended mainly to allow international comparison. The BSAS has a small panel component over some periods as well as a youth component.

The British Household Panel Survey (BHPS) is also a valuable source of evidence in this area. There is good coverage of the attitudes of both men and women in Scotland, Wales, England and Northern Ireland. For example, a comprehensive list of outcomes among women is covered such as: caring roles, attitudes to gender, attitudes about caring, lifetime fertility and partnerships, employment histories, health, general mental health, values and opinions, involvement in voluntary organisations, and earnings. Thus the BHPS is useful not only for studying attitudes, but also for examining the apparent impact of attitudes on outcomes. Many income and employment variables are included at both the household, personal and benefit-unit (i.e. "family") level.

The British Crime Survey (BCS) is primarily a survey of perceptions and experiences of crime in England and Wales. The BCS includes questions related to whether an incident of harassment, crime or fear of crime was related to gender. The BCS provides good scope for examining issues of victimisation when using certain services, such as

public transport. The BCS also collects information on domestic violence. Evidence from the BCS has shown that around 4 per cent of women experience some form of domestic violence in any one year. 19 per cent of the domestic violence incidents were reported to be male victims, with just under half of these having a female abuser. However, the BCS is likely to under represent the extent of crime as people are often reluctant to report being a victim of crime both to the police and also in a survey. As such there is only limited evidence on domestic violence in the UK. For example, it has been widely cited including in government policy reports (for example, Home Office 2005) and the BBC News that for women in the UK aged between 19-44, domestic violence is the leading cause of mortality, greater than cancer and motor vehicle accidents. However, the provenance of this statistic is important to unravel as it provides an insight into how quantitative evidence is used and misused in the policy process. Whilst domestic violence is a serious problem it is not the leading cause of mortality. It appears the statistic has been widely quoted but rarely checked. A domestic violence incident is not always distinctly identified or recorded by the police in crime statistics. It can be pieced together from information on assault, murder and other incidents but this may not always be done. Though the police are beginning to more routinely collect and code such information. For further discussion see Harford (2009).

Other axes of equality are also related to that of gender, for example the Home Office Survey of Religious Discrimination in 2001 suggested that people have experienced discrimination because of their religious background and practices in, for example, employment and service delivery (see Weller *at al.* 2001). Specific examples include the right to religious holidays, dietary requirements and verbal and physical abuse. Muslim women have been attacked and verbally abused for wearing the hijab and Jewish cemeteries have been subject to repeated attacks and vandalism for many years in the UK. The Islamophobia Report produced by the Runnymede Trust (1997) highlighted a range of issues in relation to the discrimination faced by Muslims in the UK. Key issues included the treatment of Islam and Muslims in education and the media.

(ii) Employment Issues

Both the BHPS and the BSAS can also be used to study indirect discrimination. Research using the BHPS or its larger sister survey, the Labour Force Survey (which lacks attitude variables and household income) can identify specific factors associated with, for example, gendered pay differentials (Walby and Olsen, 2002) by examining women (as a group) vs. men (as a group), having allowed for factors

other than gender which can lead to lower pay. The use of decomposition (Dale and Egerton, 1997) in this context can also be applied to outcomes other than pay. A decomposition is a breakdown of the causes by the relative size of their impact on the pay-gap outcome. Mathematically all the causes can be shown to add up to the scale of the pay-gap itself. A breakdown by percentages can then be derived, although when there are constant terms or an unexplained gender term (the slope for being female) these generate a certain - often large - unexplained percentage. Thus for instance the relative deprivation of women vs. men, or the relative life expectancy of women vs. men, could be subjected to a decomposition analysis. A debate about decomposition has argued that policy-relevance can enter into the creation of statistical models in this context (Olsen and Walby, 2004). This debate has wider ramifications, since indirect and direct discrimination need to be disentangled from a complex context of multiple causes and associated factors such as in relation to ethnicity and age. For example, in 2002, the life expectancy at birth was 82 years for women but only 77 for men. Life expectancy for men in unskilled manual classes is over 7 years less than for professional classes, whereas for women the difference is over 5 years (ONS 2006). The Department of Health follows life expectancy and morbidity figures separately for men and women, precisely because, in general, men's experience is so different from that of women.

Direct discrimination is very hard to capture and measure. One source that can be used is the Survey of Employment Tribunal Applications 2003. This survey takes cases from the tribunal application system and traces the applicant and the employer. Phone interviews are held to fill in gaps in the information held in the administrative records. Potentially this dataset tells us a lot about the kind of tribunal cases women bring, and their outcomes. Of course women whose cases do not get taken to Employment Tribunals are much harder to locate. For example, we do not have comprehensive data for women who have complaints about being dismissed during pregnancy, for instance, because it is not illegal to make a dismissal if there is a general redundancy programme going on or other financial reasons are listed for their departure.

A number of indicators can be used to gauge the difference between men's and women's economic achievement. The European Union (EU) commonly uses: employment participation, hours of work, earnings per hour, earnings per week, productivity per worker, productivity per hour, and other indicators. Educational qualifications can be converted into equivalent years, and compared (showing that the UK

education gender gap is falling but is still large for women who work part-time).

Another valuable data source is the Workplace Employment Relations Survey (WERS). The WERS involves survey data about employers, which in turn is linked with survey data from a stratified random sample of employees and other related information (Purdon 2002)¹. The WERS would be useful in the gender context for research questions such as: *Does vertical segregation fall away as a problem, as women in general become more educated? Does payment of wages around the minimum wage level predominate in particular regions, and if so are the firms involved local, national, or multi-national firms? Which types of firm are the ones in which grievances are handled without arriving at tribunals?* (Grievances are recorded by employer reports in the WERS, and these data can be compared with, or matched to, summary data from the Employment Tribunal data set). *Does horizontal gender segregation increase with the size of firm, and if so, at what level of 'job cell' (i.e. the unit of workers working together or workers doing similar jobs)? How is seniority classified in different types of organisations, and how is it rewarded? How do personnel departments consider the pay of those who work on flexible contracts of various kinds? What pay outcomes result from these contracts?*

The WERS survey does not directly allow us to duplicate the factors leading to indirect gender discrimination, such as, for example, differentials in human capital; institutional differences between employers, and so on but it has a range of robustly measured indicators which will enable its data to be linked up with results from other surveys (e.g. on productivity at industry level within regions). Moreover, the WERS goes back a long way and has comparability of many variables over time. It can help to show how women or men are under-represented and over represented in some occupations and how the patterns are changing over time. The weaknesses of WERS include its inclusion of employers only beyond a minimum cut off level of employment (presently 5+ employees, but a higher cut off level in past years); its small sample size; and the fact that earlier rounds of the survey did not track down particular employees.

Dex and Purdam (2005) have examined the use of Census microdata for assessing the impact of equal opportunities in employment. The availability of the 2001 Census data, with its extended range of questions, has created a new opportunity for employers to be provided with data about the pool of qualified applicants for particular

¹ The WERS is relatively difficult to use, but repeated consultations with users have shown that it is popular among the few who manage to utilise its complex multi-table layout (Whitfield 2002).

vacancies, in comparison with which they could assess their own applicant and employee statistics. The methodology is derived from practices in the USA where public sector employers are required to provide annual workforce diversity and utilisation reports. The research revealed a number of census data access problems and also that in the UK many of the case study employers either did not collect necessary data, or they did not analyse the data they collected on their workforce and applicants.

The Quarterly Labour Force Survey (QLFS) offers a capacity for examining ethnic minority populations gendered employment outcomes. The QLFS has a huge sample size of approximately 11,000 people. Analysing the LFS *per se*, as contrasted with the QLFS, usually involves combining multiple samples from the QLFS into a larger sample. The LFS is then considered to adequately represent most of the main ethnic minority populations in the country at a national level (Dale *et al* 2002). Analysis of LFS data can then reveal the gender differences in economic outcomes for each of these populations however sample sizes at the local level can be small. Several rounds of the LFS can be pooled together (Lindley, Dale, and Dex, 2006). After pooling, the representation of each small minority population is robust enough that women and men of different age groups, different employment statuses and so on can be validly compared. For instance, in a single year there are 55,000 different respondents, and each year 55,000 more people join the survey. By combining three years there are approximately 165,000 respondents. A small ethnic group having 1% of the population could have (with clustered multi-stage random sampling of the appropriate areas) 1650 respondents in it. The analysis of gender inequality within sub-groups is an important research area. For instance, women who are Chinese could perhaps experience particular forms of discrimination and social exclusion which are not widespread among all ethnic minorities.

(iii) Health

Health and health care in relation to accessing services and treatment is a key aspect of gender equality. Alongside the basic questions on general health and limiting long-term illness in the Census, the Health Survey of England (HSE) is a hugely valuable and detailed resource. The HSE is a large-scale survey of medical health. It is a multi-stage random sample of around 10,000 adults and children. It covers a wide range of health issues, physical measurements, nutrition, physical fitness, alcohol consumption and treatment histories. The HSE includes a number of questions on mobility and use of transport and general questions on difficulties and limits on usual activities.

Separate national health surveys have also been conducted in Scotland and Wales.

Alongside such survey data it would also be of value to make more of administrative data such as for example electronic health care records and service use. For example, it has been shown that men are less likely to visit a GP than women. It is notable that the charity Cancer Research UK has claimed that the requirement, under the Data Protection Act, to protect confidentiality through anonymisation is having a detrimental effect on research (see The Observer 5.10.03). The organisation has campaigned for an exemption from the Data Protection Act for medical research.

In relation to health and multiple aspects of inequality in the USA Crimmins et al. (1999) found that detailed studies of demographic trends normally make careful simultaneous gender and ethnic distinctions as a matter of course. Their research assumes that men's and women's health trajectories as they reach the age of 70 are going to be differentiated. In their view, demography contributes to knowing the causes of rising employment participation in the 60-70 years age group. A UK replication of their USA research would obviously be valuable. The BHPS in 2002 contained a special module on retired people which, unlike the standard BHPS, did not assume that men aged 65 and over and women aged 60 and over would be economically inactive. A study without that restrictive assumption is needed in order to look at economic activity over age 60. However, the BHPS does not have adequate coverage of any ethnic minority population in these age ranges. Darmon and Khlal (2001) examined the circumstances of ethnic minority men and women in France. The men were shown to have better, not worse, health outcomes than male French nationals possibly it is thought because of the dietary habits the immigrants had acquired in their place of origin (i.e. the Mediterranean countries). However, among women these benefits were less noticeable. Other detrimental factors – amongst them, a lack of personal earnings – were highlighted. The EU has taken 'employment participation' to be a major indicator of the progress of women, for reasons related to these findings.

Using similar methods to Darmon and Khlal (2001) who integrated economic, dietary, and health factors in modelling life expectancies of sub-groups, for the British case would require data sources that provide enough respondents from ethnic minority populations – the Census, the Samples of Anonymised Records (SARs) and Longitudinal Study could be used, but question coverage is limited in the Census and the gaps between time points are too large for capturing rapid

changes. Other data sets with good substantive coverage lack sufficient sample size to look at small sub-groups.

Gonzalvo (2004) found ethnic differences in health as early as ages 0-8 among gypsy populations in Spain. Retrospective data were used in this study. In the small ethnic population of gypsies, specific health risks were higher than would theoretically have been predicted. The study gives a glimpse of the suffering faced by one ethnic minority population. No gender difference was found. Even when national random sampling is not possible, smaller case-studies and comparative studies can be helpful.

Hahn and Eberhardt (1995) point out strong gender differences in life expectancy in the U.S.A. Each ethnic minority population was handled separately because the life expectancy figures already vary significantly by ethnicity. Swallen and Guend (2003) showed that in the USA the mis-classification of Hispanics' ethnicity – especially on death certificates – falsely inflated their life expectancy. The misclassification was found to be similar for males and females in the particular case described by Swallen and Guend (2003), but it will not necessarily always be gender-neutral. Whilst this might seem merely a technical problem, in the UK it is a very immediate issue; the official 'names', labels and categories of each ethnic minority population are under scrutiny and undergo a process of government-mediated change. The Census itself has evolving and changing official labels for ethnic minorities in the UK (Simpson and Akinwale 2007).

(iv) Poverty

The UK Index of Multiple Deprivation (provided at Ward level in 2001 and at Small Area [neighbourhood] level in 2004 and after) cannot be directly used to study gender inequality. However, the index can be used as an explanatory variable in the context of multi-level statistical models or latent class models to study how men and women have *different outcomes in different regions* (a multi-level model) or *have different trajectories in different regions over time* (a latent class model giving a typology of types of movements). Upward and downward mobility can be studied using longitudinal – i.e. panel – data.

The UK Census is one of the few data sources to allow robust comparisons of specific populations at the local and national levels across the UK. It does not have earnings measures despite the value of such information to researchers and policy makers. However, hours of work and labour force status are measured in detail. The Census is often used for informing area based funding strategies. Therefore consideration is currently being given to including an earnings

indicator in the Census in 2011. A substitute indicator, the social status of one's occupation in waged work, is available. This indicator is known as the 'Cambridge Scale' (see Prandy, 1990; see <http://www.camsis.stir.ac.uk/> (accessed March 2009); and for an application see Holdsworth and Dale, 1997). The Cambridge Scale is also available for numerous other countries. The scale was available for the UK in 1991 and has been recalculated across the whole of the UK for 2001. The Cambridge Scale was released with the Sample of Anonymised Records (SARS). For the 2001 Census, the SARS have come to public use only in 2005. They consist of a 3% sample of individuals, with their household data attached. The SARS are continually evolving and act as a publicly available, highly detailed subset of the entire Census database. Although the information collected in the census can be the basis of exploring some key aspects of the population, the detail and coverage of the questions is limited.

The Census has a 'Longitudinal' component which is a panel data set. The Longitudinal Study is a time series of people that was recorded in 1971, 1981, 1991 and 2001. A 1% sample of 1971 respondents was taken, and tracked over time using confidential matching of the Census administrative records held by the ONS. Births to the original respondents and selected immigrants are added at each Census. The survey has all the detail we get in the Census: marital and fertility histories; relationships; housing and amenities; education; employment and social class; long-standing illnesses; births and deaths; ethnicity (since 1991) and religion (since 2001). Sex and age are present and country of birth is available. So is self-rated health. If there is one data set that would provide definitive estimates of life-expectancy across the main ethnic minority populations of the UK, broken down by gender, it is probably the ONS Longitudinal Census. The ONS Longitudinal Census is also useful in discerning 'cohort effects' – i.e. the generation gap – from the cross-sectional differences of social class and region. You need either panel data or pooled data to discern these effects. Panel data covers the same people at each point in time. Pooled data cover different cross-sections of people at each point in time. The government only allows usage of this person-linked survey through particularly rigorous entry criteria (see Celsius project's website for details, <http://celsius.census.ac.uk/>). Applications are carefully vetted since the anonymity of respondents is closely guarded.

The Family Resources Survey (FRS) is an annual survey which aims to support assessment of the social security programme. It has a sample of around 30,000 households. The survey includes questions on the use of health services, health-related restrictions on the capacity to

work and informal care. It can be used to provide breakdowns of annual spending power.

(v) The Actual and Desired Division of Labour

The BHPS is a panel data set and has covered a series of questions relating to household roles from 1990 to the present. An indication of the domestic division of labour can be obtained. Studies appear to show a gradual shift away from the traditional stereotyped gender division of labour. However, change is slow and the evidence is contested. In particular, men have been shown to exaggerate their involvement in household work (Warde and Hetherington, 1993). Though at the same time women may underestimate the housework men do. Since the BHPS asks for both partners to report their role, it is possible to do cross-checking and comparison of the results. Another range of questions, also asked of respondents year on year since 1991, covers people's opinions about the general division of labour in society. These questions, listed below, can be used to create a scale of opinion, ranging from the traditional breadwinner model (where the man has an income but the woman does household work) to a dual-earner or mixed model.

Box 1. Example BHPS questions

*A pre-school child is likely to suffer if his or her mother works?
All in all, family life suffers when the woman has a full time job?
A woman and her family would all be happier if she goes out to work?
Both the husband and wife should contribute to the household income?
Having a full-time job is the best way for a woman to be an independent person?
A husband's job is to earn money; a wife's job is to look after the home and family¹
Children need a father to be as closely involved in their upbringing as the mother?
Employers should make special arrangements to help mothers combine jobs and childcare?
A single parent can bring up children as well as a couple?*

These questions are useful in tracking the values held by UK residents. The answers are recorded using a Likert Scale. This form of scaling enables the mean value to be compared across groups within the population. Young people, for instance, express values that are less sexist on certain topics compared to the older generation in the UK.

The Time-Use Survey 2000 (ONS, 2004) provided useful, detailed illumination of how 'women do more household chores than men'. The Equal Opportunities Commission offered a summary of paid and unpaid work among part-time, full-time and non-employed men and women, showing the same thing (Hurrell and Davies, 2005). More detailed analysis of the Time-Use data could examine work and non-

work roles, activity sequences, and gender in the context of occupations and employment statuses. The time-use data is actively used, and there is an International Association for Time-Use Research (IATUR) which supports users across different countries. The UK study is one of the largest and most detailed recent studies of time-use. It breaks time down into 10-minute slots. Diaries are kept for two days in a week, for each person, giving a very credible source. For further information see 'FOCUS ON GENDER' website, run by ONS www.statistics.gov.uk/focusongender.

The Cohort Studies provide a valuable source of data on the circumstances of men and women and how they change over time, particularly the National Child Development Study (NCDS), the British Cohort Study (BCS) and the Youth Cohort Study (YCS), which covers 16–19 year olds. These surveys trace people's changing circumstances and have substantial sample sizes. The NCDS offers a cohort study alternative to the Census Longitudinal Study. The NCDS began with a sample of births in 1958 and then traced these people at five phases ending in 2000. The use of a single cohort has limitations because it doesn't give a proper representative national cross-section. However, for gender studies, the NCDS is extremely useful because it shows how the cohort changed over time (Dale and Egerton, 1997). For further information see the Centre for Longitudinal Studies. www.cls.ioe.ac.uk/

To examine stress and mental health over time, the BHPS longitudinal survey is invaluable. The BHPS data include indicators of both objective and subjective well-being. The General Health Questionnaire (also covered in other surveys) was filled out by adults each year, giving a trace over 13 years for each panel survey member.

4. Summary Table of Indicators and Key Surveys

Whilst we cannot provide an exhaustive list of the different relevant data sources we have highlighted some of the key surveys and evidence for examining issues in relation to gender equality. Below we provide a summary of key indicators and sources.

Table 1: Summary of Key Indicators Available

Theme	Measure	BHPS	ESS	ISSP	Census SARS	QLFS	WERS	BCS	SETA
Pay	Gross or net pay per hour or per week	√	√	X	X	√	√	X	√
Income	Household income, net or gross	√	√	√	X	X	X	X	X
Caring Work	Time spent on caring for children or for others	√	√	X	X	X	X	X	X
Attitudes	Attitude questions about household roles and caring labour	√	√	√	X	X	X	X	X
Attitudes	Attitude questions about the division of labour in paid work	√	√	√	X	X	X	X	X
Direct Discrimination	Harassment, victim of crime	X	√	√	X	X	X	√	X
Direct Discrimination	Cases employment of discrimination taken to court	X	X	X	X	X	X	X	√
Hours of Work	Hours of paid work	√	√	X	√	√	√	X	√
Hours of Work	Hours of unpaid work	√	X	X	X	√	X	X	X
Indirect Discrimination	Axes of differentiation of pay: ethnicity	n.a.	n.a.	n.a.	√	√	n.a.	X	X
Indirect Discrimination	Axes of differentiation of pay: religion	√	√	√	√ (since 2001)	√	X	X	X
Indirect Discrimination	Axes of differentiation of women's pay: nationality	X*	X*	X	X*@	X	X	X	X
Indirect Discrimination	Axes of differentiation of women's pay: disability	√	√	√	√ (with long term illness)	√	√	X	√

Key: BHPS - British Household Panel Survey; ESS - European Social Survey; ISSP- International Social Survey Programme (i.e. British Social Attitudes survey along with other countries' similar surveys); SARS - Samples of Anonymised Records of the Census; QLFS - Quarterly Labour Force Survey; WERS - Workplace Employment Relations Survey; BCS - British Crime Survey; SETA - Survey of Employment Tribunal Applications.

Note: n.a. = not adequate coverage in the sample for the variable to be usable.

* country of birth is given, but not the person's current nationality

@ the country of residence is provided

5. Conclusions

Evidence on people's circumstances is vital to monitoring equality issues. Social survey data is a key tool for measuring equality, for tackling disadvantage, for the assessment of change over time and for the evaluation of the impact of new policies.

The data resources about gender equality in the UK are extensive over time/space and wide-ranging in terms of topics. Moreover, innovations continue to be made in the methods used by researchers, policy makers and statisticians for analysing data and identifying associations and also causalities.

Evidence gaps do, however, exist particularly in relation to explaining how people's circumstances change over time and in identifying what leads to these changes. Lack of access to administrative data alongside survey data may also be preventing certain types of research and policy impact assessment.

A challenge for those involved in research on gender equality is to identify what counts as relevant survey data for them. It is a matter of addressing the equalities agenda at each level – data, theory, policy and generalisations about the UK as well as about diversity – in order to keep utilising this data resource in the future.

The difference between gender-neutral statistical results, vs. gender-blind results, should also be considered. A classic argument that "*gender-blind does not imply gender-neutral*" applies. If gender is ignored when looking at other forms of equality, then gender will not be found to be important – but that does not mean gender equality issues did not arise in reality. Therefore gender should be woven into each study of inequalities. The argument against gender-blindness supports the creation of umbrella management for the data and research on the achievement of equalities across the whole spectrum.

Finally a challenge for researchers and statisticians is communicating their findings to policy makers effectively. As data resources improve it can increasingly be that researchers are competing to communicate their research findings.

If the UK government, public bodies and the private sector are to meet the gender equality goals taking account of other aspects of people's identities such as age, ethnicity and disability then it is vital that the best use is made of the most robust survey and administrative data across all aspects of service provision. Without appropriate

quantitative evidence and analytical methods policy makers are operating in the dark.

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