

Why are longitudinal studies desirable and why are they difficult to undertake?

Longitudinal studies provide data about the same individual at different points in time allowing the researcher to track change at an individual level. Furthermore it could be argued that longitudinal studies can also be used to study change in the lives of organisations and institutions as well as individual people. In this essay I will be focusing on why longitudinal studies may be difficult to undertake and whether they are desirable. I will also mention the different types of longitudinal studies and why longitudinal studies are conducted. (Hakim: 1987)

There are many different types of longitudinal studies. One of these would be individual level panel surveys where samples of individuals are tracked and interviewed. Another type of longitudinal study is household panel surveys. This is where individuals are monitored within the contexts of the household where they live. Additionally, in this type of survey, information is normally collected about the whole household at each wave. Furthermore cohort studies can be categorised as one of the types of longitudinal studies. This consists of studies where samples from a particular age variety are followed to investigate their different trajectories as they age. Also, longitudinal studies which are linked across time can be record linkage studies and administrative or census data. (Hakim: 1987) (Miles et al: 1994)

Many argue that the United Kingdom has always taken a prominent role in the development of longitudinal studies and this can be reflected through the numerous types of longitudinal studies such as the Official for National Statistics, Longitudinal Study of the Census and the British Household Panel Survey to just name a few. It could be argued that these studies provide an understanding of social change, of the trajectories of individual life histories and the dynamic processes that underlie social and economic life. Furthermore many claim that their important role in social science and policy research is the core for the continued investment in longitudinal studies in the U.K. This can be seen as one of the main reasons why longitudinal studies are desirable to undertake. Many argue that longitudinal studies are desirable to undertake as they can address issues and support methods in ways that are not possible with traditional cross-sectional approaches. In addition it's particularly important and valuable in research areas where the emphasis is directly on change and the occurrence are themselves intrinsically longitudinal such as poverty, employment instability and social attitudes. Also longitudinal studies may be desirable when investigating causal process as determining whether or not certain factors affect a variable for example the effects of unemployment on mental health. Furthermore, supporters of the longitudinal design argue that longitudinal studies are desirable in the area when controlling for the effects of unmeasured fixed differences between subjects and also is valuable when studying social change and needing to separate out age, period and cohort effects. Lastly favourites of the longitudinal design claim that longitudinal studies are desirable in a number of research areas where establishing the effect of treatment by following an experimental design or quasi-experimental design or for example comparing periods before and after the introduction of public policy. Evidence illustrates that these advantages have been used for a wide range for important research findings. The first can be in finding the effects on children of school and family background in order to

understand social mobility and the effectiveness of educational interventions as well as to identify the key points for intervention. Secondly the longitudinal studies have been able to examine the effects of changing patterns of marriage, cohabitation and childbirth on the time children are likely to spend in lone parent families and furthermore the effects on their later lives. Moreover the features of longitudinal studies have been able to illustrate the defining characteristics of people who experience repeated spells of unemployment and poverty. And also highlight their effects which many argue make it difficult for people to find work and or maybe escape poverty in the future. As it has been argued, longitudinal studies collect data about different times in individuals' lives, and across generations, linking evidence from different points in the lives of parents and children. Furthermore this capacity to follow individuals through time and observe how experiences and behaviour is influenced by the wider social and economical contexts in which they find themselves. (Hakim: 1987) (Miles et al: 1994) (Phillips: 1966) (Vaus: 2001)

Regardless the advantages of the longitudinal design, critics suggest that longitudinal studies are very difficult to undertake and the disadvantages outweigh the benefits. It has been suggested that many issues may arise when conducting a longitudinal study and these can be in the form of methodological issues, practical and ethical issues. Firstly in terms of methodological issues, many claim that the issue of internal validity may be possible. It may be possible that the absence of randomised control groups and it is further argued that to overcome this problem, multivariate analysis needs to be introduced as it allows the researcher to control for known difference between groups. Secondly it could be argued that history may be an issue for a longitudinal study to be conducted. This may be because in a study that extends over time, many events may take place in the world in which people live in, and it can be difficult to distinguish which events are having an impact and which ones are not. Maturation can also be seen as another issue which might make longitudinal studies difficult to undertake. This means that changes can also be due to people simply growing older and lastly issues may emerge in testing or panel conditioning. Panel conditioning occurs when panel participants respond to questions in ways that are influenced by their previous exposure to the same questions. It might be that when people remember how they previously answered questions it may influence the way they respond on subsequent occasions. It could be that participants respond the same each time that questioned is asked. Critics suggest that panel participants can underestimate or overestimate the degree of real change over time. Instrumentation can alter the changes over time as the data may be collected in different ways. It could be the changing of word order or types of methods can produce apparent but not actual changes in attitudes. Many claim the experimenter bias is likely to influence the result. A final issue of internal validity would be morality and dropout, where it might be difficult to undertake a longitudinal study because the issue of dropping out will alter the results. To minimize the impact of dropout, many argue the biases should be removed. Issues such as external factors such as panel attrition, panel conditioning and immigration and outmigration may emerge while conducting a longitudinal study and hence it can be argued that they are difficult to undertake. In both the design and conduction of longitudinal studies, there are many practical matters to solve. Some of these consist of maximising internal and external

validity whereas others have more to do with the cost of implementing different designs and the physical constraints of getting the study finished. Many argue cost is a big issue as panel studies are much more expensive than a single cross-sectional study. These consist of maintaining the panel and collecting data. However many argue techniques such as telephone interviews are the best way to collect data. The ethical issues such as matters of voluntary participation, informed consent, no harm to participants and confidentiality/anonymity must be implemented and these issues are difficult to implement and therefore can be seen as to why longitudinal studies may be difficult to undertake. (Vaus: 2001) (Miles et al: 1994) (Rose et al: 1993)

Many argue that longitudinal studies may be difficult to undertake because there may be deficits in the data analysis. Firstly it could be that some data may be missing and some see that this is especially a problem in panel analysis. There are two types of missing data: item non response and unit non response. The first is where participants do not respond to a particular question and the latter is when participant's dropout. It has been argued that missing data represents a problem for two main reasons. For example, it has been proved that item non response data can lead to a huge amount of loss of available sample size for data analysis. Additionally, this may lead to the problem that when forming scales of multivariate analysis where missing data on any one of a set of variables leads to the loss of that case analysis. It has been seen that this problem may quickly lead to produce immense loss of cases. Many argue that missing data may be a problem as it introduces bias into the sample. This can be seen where item non response is systematic rather than random as certain sorts of people are likely than others to refuse to answer questions and therefore unrepresentation is a likely outcome. To overcome the deficit of missing data, many claim that solving the problem will depend partly on what that is trying to be minimized. Even though the problem should be minimized at the data collection stage; there are three ways into tackling the problem during data analysis. First is imputation, which is constructing responses for questions that people don't answer; weighting, which is a way of adjusting a sample to allow for possible bias due to a unit non response and lastly statistical controls which enables us to look at relationships with the effect of other variables removed. (Vaus: 2001) (Miles et al: 1994) (Rose et al: 1993)

In the final analysis, it is clearly evident that in conducting longitudinal studies there are substantial problems. The most notable ones being sample attrition and non response. Furthermore, there is the danger that the questions addressed at the start of the study are overtaken by events, are dealt with by the results of other studies completed in the meantime, or simply just to cease to attract the same degree of interest. Critics such as Rutter suggest, (Rutter, 1981, pg 334) "all too often longitudinal studies have been planned without any clear aims or hypothesis in mind, have involved a mindless collection of large amounts of data which are never adequately analysed, and which continue over so many years that by the end of the original measures are hopelessly inappropriate for the purpose for which they are used". Therefore it can be argued that longitudinal studies are difficult to undertake and that shorter durations are preferred because technical problems increase and multiply over longer durations. On the other hand longitudinal studies are considered to be desirable because they come up with surprises and unexpected discoveries, by their unique ability to identify sleeper effects

which is the connection between events that are widely separated in time. (Miles et al: 1994) (Rose et al: 1993) (Hakim: 1987)

Bibliography

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