We take a deliberately broad approach to the term ‘archival’ in this chapter, by embracing the sources used to generate research based on historical documents, texts, journal articles, corporate annual reports, company disclosures etc. The associated research approaches may therefore range from the fundamental analysis of accounting numbers, through to the content analysis of narratives and critical approaches to the development of accounting theory.

Searching for information can be a time-consuming and expensive exercise so it is important that researchers quickly develop the skills necessary to locate and use sources effectively. Such sources can usually be classified as **primary** (e.g., original research results published for the first time) or, more usually, **secondary** (e.g., information that has been disclosed by third parties – like that in corporate reports and press releases) and sometimes **tertiary** (e.g., for data which have been aggregated, categorised and/or reworked in databases). However, such a classification may not be clear-cut because a company annual report may be deemed a primary or secondary source depending on the identity of the user! Such sources can usually be accessed directly, or relevant references sought, through keyword and author searches of library catalogues, abstracts or internet databases. As we suggested in Chapter 1, a critical attitude should be adopted towards the research process, and this should apply just as much to accessing data sources as to subsequent stages. We need to be able to evaluate the suitability for purpose of the data set: Is it up to date? Is it from a reputable and authoritative source? Has it been gathered using reliable methods? Can we access the material in a timely and economic manner, given the constraints of our research budget? The latter is becoming increasingly problematical for extensive online databases, for without generous educational discounts many such sources would remain inaccessible to academic researchers.
Foster (1986) identifies a number of problems associated with data collection from secondary sources, in both cross-section and time-series studies.

Cross-section data

1. Data may exclude some current companies. This may be a particular problem if multiple databases are being used which do not overlap completely, so that some companies fall ‘between the cracks’. In any case, small companies may not be included if there are size ‘hurdles’ specified for their inclusion. The same principles would apply to those companies which are not actively traded on stock markets. These conditions may also lead to the exclusion of private or foreign-owned companies. A common reason for such exclusions is the non-availability of the data. Particularly annoying in this respect is the absence of data for subsidiary companies where there is no requirement for them to report separately from the parent.

2. Data may exclude non-surviving firms. Merged, acquired and bankrupt firms will normally be omitted from current databases, necessitating searches from other sources if these are the subject of the research. Much past research in the failure prediction area has been criticised for suffering from a survivorship bias because, by definition, failed companies tend to be omitted from the analysis due to unavailable information.

3. Data may not be right up to date in that the most recent data may not have been incorporated. This is becoming less of an issue with more online and web-based databases operating either in a real-time mode or being capable of uploading information on a daily basis.

4. Data may be incomplete in that they omit some financial items. For example, earnings forecasts, or ‘notes to the accounts’, may not be there, necessitating the use of alternative sources.

5. There may be inconsistent classification of some financial items across firms. If the database comprises other than camera copies of original documents, then some assumptions are inevitable in order to produce systematic cross-company classifications. For example, where firms are permitted differences in reporting line items, there will be different levels of aggregation, which may only be separable with arbitrary decisions. Thus, one firm might include overhead expenses in ‘costs of goods sold’, while another might include overheads in expenses attributable to ‘marketing, administrative and general’. Unreliable entries may thus result for items such as ‘overhead’ where disaggregation assumptions have to be made. These kinds of problems are exacerbated by non-synchronous reporting periods (resulting in large differences both within and between countries) and the non-uniformity of accounting methods, especially across industries, which makes comparisons difficult because different choices may still be consistent with accounting standard compliance.

6. There may be recording errors, necessitating checks against other comparable databases where feasible, and necessitating the use of simple internal validity checks.
For example, computing the mean and standard deviation of items allows all of those outside the range of two standard deviations, either side of the mean, to be identified and questioned. Similarly, simple comparisons of quick assets with current assets may reveal basic errors. Industry classification poses a particular problem here because there is no single, accepted definition of ‘industry’ and different databases may adopt alternative classifications. Although ‘product group’ or ‘production process’ would normally form the basis of classification, without reference to some external regulatory classification, problems may occur.

7. The nature of disclosure is expanding all the time, making it more and more difficult for researchers to be confident that they have captured the most reliable and comprehensive sources. In the financial reporting environment most studies still rely on the content of the corporate report, but increasingly newspaper sources are being used because they provide a more timely medium. Reuters Business Briefing (RBB) is probably the most detailed source of company news items available in the UK, though it is not widely used for academic purposes. The Financial Times Index (UK) and Wall Street Journal Index (USA) provide popular alternatives (see also www.bloomberg.com). Brookfield and Morris (1992) use the McCarthy Information fiches (now available on CD-ROM). Internet and e-mail disclosures represent additional, relatively untapped sources, potentially important because there is a wealth of evidence that companies are disclosing information through these means to investment analysts prior to its availability to the stock market. The use of e-mail content, however, remains relatively restricted because of the commercial and personal sensitivity of the disclosures. COMPUSTAT is prominent among the databases commonly used for the analysis of financial information. Accounting and market data, including multiple financial ratios, are readily available for most companies in the developed world for periods extending over 20 years. Friendly interfaces permit the researcher to examine single companies at a point in time, or multiple companies over many years, embracing many possible variables. (The latter example is often termed panel data and its analysis is examined in detail in Chapter 6).

With share price data of high validity now accessible through the CRSP/COMPUSTAT database, shareholder return studies have substantially replaced those using accounting returns. However, this has not been accomplished without some difficulty; Magenheim and Mueller (1988) identify the flaws that need to be eradicated when using shareholder gains to measure firm value.

Trimbath (2006) identifies the particular problems associated with adopting return on equity (ROE) as a measure of firm performance – notably where negative income and negative equity combine to indicate a positive ROE measure! She identifies similar problems when using debt/equity ratios in conditions of negative equity. Overcoming the problem may create more problems: Trimbath suggests that we may create serious sample bias if we simply treat cases of negative equity and/or negative income as outlier measures of ROE to be eliminated from the analysis – since the poorest performers will then all be considered outliers.
Trimbath (2006: 421) notes that ‘we have demonstrated that there is no mathematical, statistical or econometric adjustment that makes return on equity a useable measure of firm performance. It simply should not be used in large sample econometric models.’ However, she notes that, despite this evidence, there is editorial pressure in some accounting/finance journals to conform to precedent and use equity measures of performance.

Time-series data

1. Structural changes may have taken place in the company or the industry, making comparisons between time periods fraught with danger. Internally, these may be due to mergers, acquisitions or divestments; externally, they may be attributable to new government policy, deregulation, new products, new competitors or technological change.

2. Accounting method changes, particularly those associated with voluntary choices or switches, may make the financial numbers from successive periods difficult to reconcile. Where this constitutes deliberate obfuscation, it is a particular cause for concern.

3. Accounting classification issues may occasion different corporate interpretations being placed on particular items, perhaps again to cloud the communication issue. Thus, a firm may elect to consolidate the results of a subsidiary in one year, but not the next, even though there appears to have been no material change in circumstances between periods. Similarly, the flexibility in reporting the timing and amounts associated with accounting for ‘extraordinary items’ and ‘goodwill write-downs’ frequently necessitates adjustments being made in data if a comparative base is to be maintained.

Even if the research project being conducted would not normally be termed ‘archival’, the points above have implications for the use of any documentary materials to be used to support the other research methods addressed in earlier chapters:

1. Where the database is in the form of a mailing list to support survey research, failure to update it regularly will mean that the list both excludes some target persons and includes some who are either dead or have moved away. Such errors and omissions can cause both bias and irritation.

2. Where the database is a journal listing that forms the basis of our literature review, we have a number of potential problems. The journal may not be available online at all, and will be excluded from all databases; this still applies to many accounting journals which are published by individual universities rather than through professional publishers. Even where they are available, online selected journals may only appear in specific databases – we may need to access multiple databases to track down the required references. ‘Old’ papers may still not be readily available in an electronic form through most databases, although the databases are becoming more comprehensive in their coverage, with deep back-runs. If we need to access seminal works then they may be subject to restricted access, or we may still have to resort to a hardcopy print format.
Archival research

(see the literature search discussion in Chapter 3). Similarly, the most recent of papers may not be immediately available either; there is nothing quite so frustrating as having access to a title, and perhaps even the abstract, of a must-read paper only to realise that the whole paper will not be available for months. Beware, too, of the existence of the notion of a ‘whole’ paper because sometimes the online version will omit all the figures and references (fortunately this is becoming less of a problem with the predominance of PDF files).

3. We have to beware of making unwarranted inferences from archival sources, especially where there is the danger that we may not be comparing like with like. Context differences may explain many of the apparent contradictions and inconsistencies in the findings of comparative pieces, making it imperative that we return to the original sources wherever possible. Indeed, Brownell (1995: 140) attributes many of the problems of accounting research to the fragmentation that means comparisons are difficult to make with confidence: namely, different studies using different methods and instruments in different locations.

The validity trade-off in archival research

An archival study will normally have more external validity than experimental or simulation approaches because of its reference to empirical data. But dangers will arise if our selection process (e.g., for company data) is flawed, so that it results in the generation of an unrepresentative sample. This situation will be exacerbated if we employ ‘matching’ procedures in the research design (typically matching on size and industry) because there will be no guarantees that the findings are not industry-specific, or that they may even be case-specific to the group of companies selected.

Libby (1981) suggests that econometric studies using archival data are essentially experimental in nature. They may be used to answer similar questions to those addressed by experimental studies, even though the opportunities for variable manipulation are limited. While laboratory experiments often manipulate treatments and infer causality, many archival studies search for association and systematic movement between variables of interest. Although an association, rather than causation, is being observed, internal validity concerns still exist. For example, Wallace (1991) specifies the internal validity problems associated with financial statement research, particularly those concerned with ‘instrumentation’ and ‘history’ – concerns which will also be relevant in other financial accounting fields.

With respect to instrumentation, Wallace suggests that there are always questions of what exactly constitutes an ‘accounting change’. Technical details become critical in the instrumentation process. If different information sources are used or even different personnel to collect data from annual reports, measurement differences may arise which threaten the validity of outcomes. Similar problems of instrumentation arise in failure prediction research, since a variety of definitions of ‘bankruptcy’ have been used in past research. As Wallace observes, not only are there different types of bankruptcy, but there are questions as to how
reorganisations, restructuring of debt and technical non-compliance with loan covenants are to be treated. If different definitions are being used in the source data or by fellow researchers then internal validity threats will arise. Houghton and Smith (1991) provide an excellent example of why researchers should be wary of comparing the findings of different studies if they are not prepared to check the detailed definitions employed. The definition of failure in their study included ‘subject to stock exchange investigation’ – a very wide definition, which is unlikely to coincide with that used in most other associated studies.

With respect to history effects, changes in bankruptcy law, reporting requirements and accounting policy over the period of interest would all affect the comparative findings from archival searches of company data. The absence of adequate controls for the impact of such changes is a cause for concern. The response of researchers is often to use a matched sample that tries to control for extraneous factors. But which factors do we match on? Another problem with this approach is that the selection process precludes any assessment of the importance of, say, size, industry or capital structure, where we have chosen to match on these factors. In addition, measurement issues mean that we are not sure we have matched correctly. For example, do we match size on assets or number of employees? If we select assets, just how close does the match have to be to be ruled acceptable – $1k, $10k, $100k, $1m, $10m? Such measurement issues may prove material.

Fogarty (2006) warns against over-reliance on publicly available databases, since there will be enormous pressures on researchers to find a ‘scoop’ publication when there will inevitably be many researchers using the same data and working on similar topics. He recommends the hand-collection of data for at least one variable in the study in order to provide a point of differentiation. This provides us with further opportunities for triangulation (in addition to those detailed in Chapter 10, particularly for management accounting): corporate governance research is one such opportunity. Most of the existing published research on corporate governance is based on archival data, but there is a limit to the number of proxy variables (and associated indices) that can be constructed when using secondary data, usually drawn from annual corporate disclosures. Thus, we have seen the emergence of survey-based studies seeking to elicit additional ‘governance’ information directly from corporate respondents. We still await the inevitable growth of field-based studies, which seek to observe how governance-based issues are dealt with in practice at board level, and how individual decision makers respond to organisational changes.

Content analysis

Content analysis allows us to make valid inferences from texts, and has been considered in detail in Chapter 7 as an analytical tool for qualitative data, in particular that sourced from interview transcripts.

But content analysis (e.g., Krippendorff, 2004) has traditionally been applied to the analysis of archival data, hence its inclusion here too. Typically, quantitative methods have been applied to archival data transcripts, usually through the measurement of key features – normally the
number of occurrences of words, or the number of words relating to particular themes. These results can then be transformed into ‘word-based’ or ‘theme-based’ variables for subsequent statistical analysis. Much of this work has resembled a ‘data mining’ exercise, where theory has, at the least, been assigned a subordinate role. Thus, Smith and Taffler (2000) follow Krippendorff (1980) to develop simple variable definitions in their conduct of both form-oriented (word-based) and meaning-oriented (theme-based) analyses; the qualitative content of the archival narrative is transformed into quantitative variables for subsequent analysis with simple formulae. Jones and Shoemaker (1994) provide a general overview of empirical accounting narrative analytic studies, and note the focus on the corporate report, directors report and shareholders letters as narrative sources.

The ready availability of suitable narrative sources means that content analysis studies remain popular, and have been widely extended to studies in corporate social responsibility (e.g., Schreck, 2013; Gray et al., 2014). Many recent publications have also become concerned with the analysis of narratives that have moved beyond ‘words’ and ‘themes’ to address alternative stylistic features in corporate statements: Amernic and Craig (2006, 2008) rhetoric; Merkl-Davies and Brennan (2007) impression management; Jones and Smith (2014) understandability.

Further reading


