Appendix 2: Technical notes

Out-of-range dates

Out-of-range dates of birth, support withdrawal, support given, job start and job finish were corrected where possible with reference to other data of the client.

Duplicate jobs

Two job records for the one client were regarded as being duplicates of the same job if they had the same commencement date, employer, Partnership with Industry program status and occupation group, or other evidence indicated they were the same job. If only one of the job records had a job completion date then the other record was deleted from all analyses. Otherwise the job record with the earlier completion date or else the lowest job number was deleted. In total, 61 jobs were deleted.

Hours worked per week in a job

For jobs for which the recorded number of hours per week was greater than 50, the number of hours was set at 50 for the purposes of analysis. There were 34 such cases.

Job dates

Where a client had two or more jobs current as at the end of 1996–97 which totalled more than 50 hours per week, it was assumed that the end dates for one or more jobs had mistakenly not been entered. In this case, the earliest commenced job was assigned an end date one day before the commencement of the next job. If necessary this procedure was repeated until the total number of hours was 50 or less.

Each client was then checked to determine whether at any time during 1995–96 or 1996–97 they were recorded as having concurrent jobs totalling more than 50 hours per week. If one or more of these jobs did not have a recorded end date then the earliest of these was assigned an end date consistent with the client's job support records. If this was not possible, then the end date was set at one day before the commencement of the next job. If all such jobs had a recorded end date it was assumed one or more dates had been entered incorrectly. If possible one or more job commencement or end dates were altered by reference to the client's job support records. If this was not possible then, for the analyses of job tenure and client job history, measures of hours, wages and duration were averaged for such overlapping jobs for the period of overlap.

As a result of these procedures, job end dates were assigned for 235 clients and averaging of job measures occurred for 367 clients.

Withdrawal of support

A total of 5,658 clients had a date of support withdrawn recorded as sometime during 1995–96 or 1996–97. For 583 of these clients, the date of support withdrawn was before the date of the last support recorded. Such clients were not regarded as having had support withdrawn if the time between the two dates was more than 14 days (or the period between agency support records, if greater), as it was in 381 cases (207 in 1995–1996 and 131 in 1996–97).

Calculation of the support period

For each of 1995–96 and 1996–97 not all clients were receiving support for the whole year, either because their support began after 1 July 1995 or 1996, and/or because they withdrew from support before 30 June 1996 or 1997 respectively. The NIMS database does not include a date on which a client commences with an agency, so for the purposes of analysis the support period of each client in each year had to be calculated in some other way.

For clients who had no support prior to 1 July 1995 the beginning of the support period for 1995–96 was set as the first date in this financial year for which support was recorded, unless the client was recorded as being in work prior to 1 January 1995. Similarly for those clients who had no support in 1995–96 the beginning of the support period for 1996–97 was set as the first date in 1996–97 for which support was recorded. For both financial years the end of the support period is defined as 30 June of the appropriate year unless the client withdrew from support before this date.

Adjustments to wages

The NIMS system requires that the weekly wage rate be recorded for each job. For some cases it was apparent that the amount recorded could not realistically be the weekly rate. In some cases it appeared to be the hourly rate, and in other cases some constant value (for example, $1) had apparently been entered by the agency site.

To determine whether some adjustment to the recorded wage figure appeared necessary, the apparent hourly wage was calculated as the weekly wage rate divided by the number of hours worked per week. For jobs specified as being at less than 100% of award level, the apparent award wage per hour was calculated by dividing this figure by the recorded fraction of the award wage. The following adjustments were then made:

- Where the weekly wage was recorded as $0, $1, $999 or equal to the number of hours worked per week it was set to missing.

- For jobs specified at or above award level (79% of jobs in 1995–96 and 78% in 1996–97), where the apparent wage per hour was less than $4.50, then the wage rate was regarded as being per hour rather than per week. If the hourly wage was less than $2.50 and the wage recorded as $20 or more, then it was set to missing.

- For jobs specified at or above award level, where the apparent wage per hour was greater than $30 and the wage per week was greater or equal to $200, then the wage was regarded as being for a full-time week of 38 hours, and adjusted by multiplying by the number of hours worked per week divided by 38.

- For jobs specified as being at less than 100% of award level, where the resulting *award* wage per hour was less than $4.50, then the wage rate was regarded as being per hour rather than per week.
- For jobs specified as not being based on award, if the wage rate was less than or equal to $10 and the wage per hour less than $2.50, then the wage rate was regarded as being per hour rather than per week.

Wages were adjusted for 2.3% of jobs (315) in 1995–96 and 3.5% of jobs (467) in 1996–97.

Measures of job experience and support

Various measures of job experience were analysed as described in Section 5.2. The precise calculation of these measures is as follows:

For each client with k jobs we have:

P = length of the support period in weeks, where $1 \le P \le 52$

D = total hours of direct support received by client

W = total number of weeks during the support period that the client had a job,

where $0 \le W \le P$ (if client has only one job then $W = w_1$ as below with $j = 1$)

w_j = weeks of work for job j,

where $\sum w_j \le W$, since the client may have two or more jobs concurrently

s_j = salary per week for job j

h_j = hours per week for job j

Then:

D/P = support hours per week

W/P = time in work as a proportion of time in support

$$\frac{\sum h_j w_j}{W} = \text{mean hours of work per work week}$$

$$\frac{\sum h_j w_j}{P} = \text{mean hours of work per week of the support period}$$

$$\frac{\sum s_j w_j}{\sum h_i} = \text{mean wage per hour}$$

$$\frac{\sum s_j w_j}{W} = \text{mean wage per work week}$$

$$\frac{\sum s_j w_j}{P} = \text{mean income per week of the support period}$$

Each of the above can be averaged for any particular group of clients.

Finally, for any group of n working clients:

$$\frac{\sum_{i=1}^{n} D_i \times 100}{\sum_{i=1}^{n}\sum_{j=1}^{k} h_{ij} w_{ij}} = \text{support hours per } 100 \text{ hours of work}$$

$$\frac{\sum_{i=1}^{n} D_i \times 100}{\sum_{i=1}^{n}\sum_{j=1}^{k} s_{ij} w_{ij}} = \text{support hours per } \$100 \text{ of wages}$$