Session 4.2 – Third and Fourth Steps

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Step 3 – Minimization of Errors

- Most data which originate from surveys or registers are afflicted with sampling and non-sampling errors. *Through confrontation within identity relations, errors, irregularities and improbabilities are traced and corrected* in this third step.
- The correction process includes the comparisons of extrapolated sample findings with information from integral data to gain insight into the extent of under- or overestimation due to generalization of the sample. The credibility of response patterns is in fact verified against additional sources and against the predefined identities.
- Both in-depth analysis checking for breakdowns according to various characteristics and comparisons over time are used to trace irregularities.
- This stage in the procedure is iterative

Step 3 – Minimization of Errors

- Critical to work in close partnership with the survey statisticians in this step. They have the best understanding of the data and the quality assurance steps already undertaken

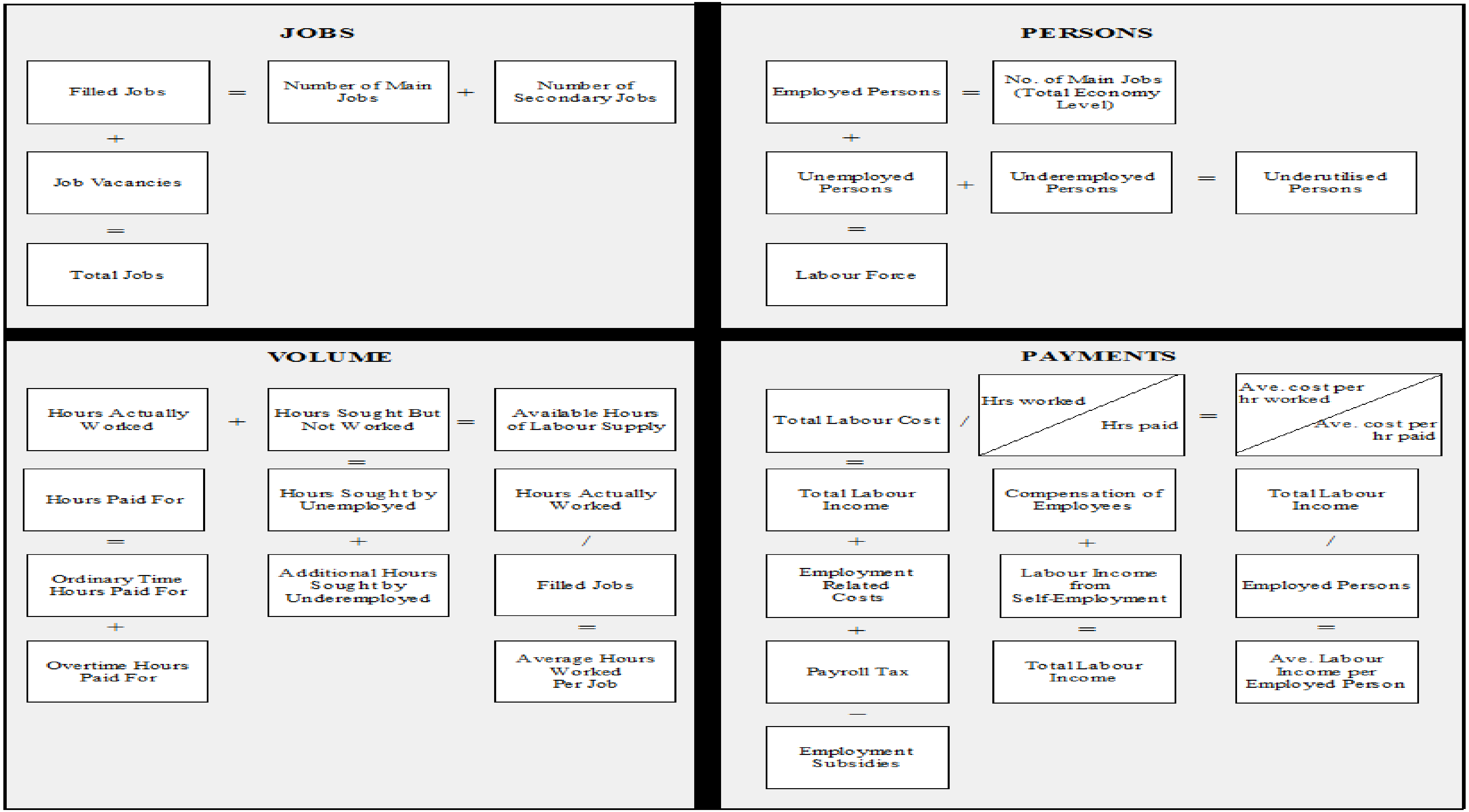
- Involve all parties with a confrontation process where different sources are compared and the accounting identities are checked. This process should be collegiate but also challenging

- Focus on the outcome we a striving to achieve: coherent, reliable, accurate information. This is not about which source is 'right' or 'wrong' but about understanding various weaknesses in the data and correcting for it.

Step 4 - Balancing

- Fundamental step in the compilation process. Usefulness of the tables is underpinned by the set of identities which allow consistently integrate component series

- To provide high level of analytical power the accounts must be balanced. We are in a better position to make these decisions than users are. We do not want individual users creating their own multiple balanced sets of accounts.


JOBS
Filled Jobs
=
Number of Main Jobs
+
Number of Secondary Jobs
+
Job Vacancies
=
Total Jobs
PERSONS
Employed Persons
=
No. of Main Jobs (Total Economy Level)
+
Unemployed Persons
+
Underemployed Persons
=
Underutilised Persons
=
Labour Force
VOLUME
Hours Actually Worked
+
Hours Sought But Not Worked
=
Available Hours of Labour Supply
Hours Paid For
=
Ordinary Time Hours Paid For
+
Overtime Hours Paid For
=
Hours Sought by Unemployed
+
Additional Hours Sought by Underemployed
Hours Actually Worked
/
Filled Jobs
=
Average Hours Worked Per Job
PAYMENTS
Total Labour Cost
/
Hrs worked
Hrs paid
=
Ave. cost per hr worked
Ave. cost per hr paid
=
Total Labour Income
+
Employment Related Costs
+
Payroll Tax
—
Employment Subsidies
Compensation of Employees
+
Labour Income from Self-Employment
=
Total Labour Income
Total Labour Income
/
Employed Persons
=
Ave. Labour Income per Employed Person

Step 4 – Balancing

- Even after making conceptual and scope adjustments between the various data sources there will remain a statistical discrepancy in the tables
- Cumulative impact of data source error - both sample and non-sample error:
  - Register and Frame
  - Estimation and imputation
  - Respondent error
  - Error in our adjustments
  - etc

Step 4 - Balancing

- Need to have a full understanding of data sources strengths and weaknesses to make informed decisions on balancing.

- Example:
  - Household labour force survey is typically the preferred data source for total employed persons as they usually have the most complete scope and large sample.
  - But what if the Labour Force Survey in a country is particularly weak? Has a small sample, has old population benchmarks etc

- Should to learn from international practice but apply it to your own specific circumstance

Step 4 - Balancing

- Follow a systematic approach, document decisions and reasons why
- Investigate longer term issues even if you can’t resolve them in the current periods balancing

Step 4 - Balancing

- Typically you will be making an informed decision on whether to balance a total to a supply side estimate, a demand side estimate, or somewhere in-between

- Often this will be followed by using a complementary data source to apportion that total to component series (such as allocating total labour to various industries)

- We will see in the ABS presentation, applied examples of these balancing decisions

Step 4 - Balancing

- It is important to consider coherency across the quadrants within the labour accounts. Balancing adjustments should not be made to one quadrant without considering implications for other quadrants

- The use of ratios (and similar calculations) can be used to analyse the coherency of balancing decisions across quadrants. For example studying average compensation per employee across industries, or ratio of hours worked to hours paid

Step 4 – Balancing

- Relationship to key aggregates already produced/published

- Compensation of employees from the National Accounts
  - Should already have been through a confrontation and balancing process
  - Not ideal to have different estimates of the same concept in the different accounts
  - Any issues identified should be fixed in the source account

- Unemployment estimates from the Labour Force Survey
  - Should be able to clearly explain differences ie scope
  - Should clearly indicate that LFS is still headline of unemployment etc as it is produced in line with ILO guidelines for these

Questions?

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