# Occupational Mobility in the ALife data: how reliable are occupational patterns from administrative Australian tax records?

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### Key findings

We compare the occupation variable in two widely-used data sets, the Australian Taxation Office's (ATO) ALife data and the Household Income and Labour Dynamics in Australia (HILDA) data.

- the distribution of occupation and the relationship between occupation and other key variables such as gender, age, income and wages are similar across the two datasets; and

- both datasets capture key trends in occupation, such as the falling number of Labourers, Technicians and Trade Workers and increasing number of Professionals and Managers; and

- both datasets show decreasing occupational mobility over time; however

- the two data sets show large differences in the level of yearly occupational change with HILDA (22.1%) showing more than twice as much occupational change as ALife (9.7%).

- Tax is not occupation dependent. Individuals have little incentive to update their occupation on their tax return.

- Validation based on other datasets suggests that the HILDA data better capture true occupation change than the ALife data.

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## What we knew

- Both HILDA and ALife are used by researchers to study wages, work, incomes and their evolution over time. Occupation is a key explanatory variable in many studies.

- Administrative data, such as ALife, are particularly good at capturing data which directly relate to program implementation. However, they often do not capture other variables of interest (such as education) which may be unrelated to program parameters.

- Survey data are designed to capture a wide range of socio-demographic information from respondents. However, respondents may struggle to recall precise figures for items such as tax paid or benefits received from government.

- While these general points are well understood, researchers often lack detailed information about the relative quality of variables across datasets.

## What we do

- We compare occupation, its correlation with other variables and its evolution over 2001 - 2017 in ALife and HILDA.

- We check our results by comparing them to the Australian Census and the Labour Force Survey, both obtained from the Australian Bureau of Statistics (ABS). None of these data sources perfectly capture occupational change, but overall, the ABS data suggest that the HILDA data more accurately reflect occupational change than the ALife data.

## What we know now

- Low levels of occupational change recorded in the ALife data reflect the fact that this variable is not important in tax system administration. Managers and labourers face the same tax schedule and have access to the same tax deductions. The ATO has no reason to audit or validate the occupation information provided by taxpayers and taxpayers have no reason to worry about what occupation is recorded on their tax return.

- When looking at tax return lodgement channel, we find much lower rates of occupational change amongst those who file electronically in consecutive years. This suggests that individuals are likely to simply accept whatever is pre-filled from the previous year.

- In ALife, occupational changes are most frequent when individuals change how they lodge their tax return (self-prepared vs. agent-prepared and/or electronic vs. paper). This suggests that people may only update their occupation when there is a major change in the processing of their tax affairs.

- We observe a larger increase in occupational change in the ALife data during the global financial crisis. This phenomena is much less present in HILDA. This again suggests that the tax return label may only change when some other major change is happening.

## What this means for researchers and policy-makers

- Using ALife for research which exploits cross-sectional variation in occupation by income, sex or age should produce analysis that is fairly representative of Australia.

- Analysis that relies on changes over time, such as fixed effects analysis, will suffer from reduced variation in the data and may be influenced by biases in the types of occupational changes captured. The quality of analysis may suffer if unobserved factors impact on reporting occupational change in ALife and those factors correlate with unobservables which influence outcomes of interest.

- Administrative data collections, such as single touch payroll, could be made much more valuable by adding variables on hours worked, occupation and education.

- Declining occupational mobility, visible in both datasets, aligns with previous work on low job mobility and further highlights the decreasing dynamism of the Australian economy.

## Where to now?

- Further comparative research on other variables in these two datasets can help researchers better understand data quality and can help policy-makers uncover data features only visible in some collections.

- Of particular interest would be comparative study of items such as wages, income from assets and gross income across these two datasets.

## More information

- Get the full working paper here

- We would welcome the opportunity to present our research to your team and to discuss potential joint research projects on related or similar topics.

- Contact us at `robert.breunig@anu.edu.au`