

# WAGES, WELLBEING AND LOCATION: SLAVING AWAY IN SYDNEY OR CRUISING ON THE GOLD COAST

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## INTRODUCTION

To move or not move?  
The question of wellbeing  
Or wage, which to choose?

Economists and policy makers would like to understand why some people move to ‘unhappy places’, i.e. places where subjective wellbeing (SWB), is, on average, lower than elsewhere. This behaviour calls into question the contention that SWB is akin to utility, and poses the question of whether SWB is a useful concept for policy-makers to consider when making decisions.

To understand this behaviour, we analyse the relationships between SWB, wages and internal migration within a country.

## METHODOLOGY

Our key data source is the Household Income and Labour Dynamics in Australia survey (HILDA), a longitudinal panel dataset. Our sample includes over 16,000 Australians, including over 2,000 internal migrants across 13 Major Statistical Regions (MSRs) of Australia, for 14 annual waves from 2001 to 2014.

In this study, SWB is derived from a survey question asking respondents to rate themselves on a 0 to 10 scale for the question: “All things considered, how satisfied are you with your life?”

Throughout the study we concentrate on internal migration within Australia to avoid constraints associated with the legal and financial elements involved in moving between countries. A person in our dataset is defined as a migrant when they are observed in a different Major Statistical Region (MSR) to their location in the previous period. Our analysis enables us to recognize and deal with moving costs associated with internal migration.

## LOCATION CHOICE MODEL

We develop a theoretical model of location choice in which individuals can choose to live in places with different attributes at different stages of their life.

We show that, depending on individual characteristics, a well-informed, rational individual may:

- choose either to move to or from an area with high wages;
- choose either to move to or from an area with high non-pecuniary amenities (such as natural beauty or community facilities); and
- either increase or decrease their utility when they move locations.

Thus a well-informed rational individual may choose to move to an ‘unhappy place’, either as rated by themselves or as viewed on average by others.

The characteristics that determine individuals' choices in these regards include their personal preferences (e.g. for pecuniary versus non-pecuniary items), their age, the real interest rate, and their rate of time preference (i.e. how they value the present versus the future).

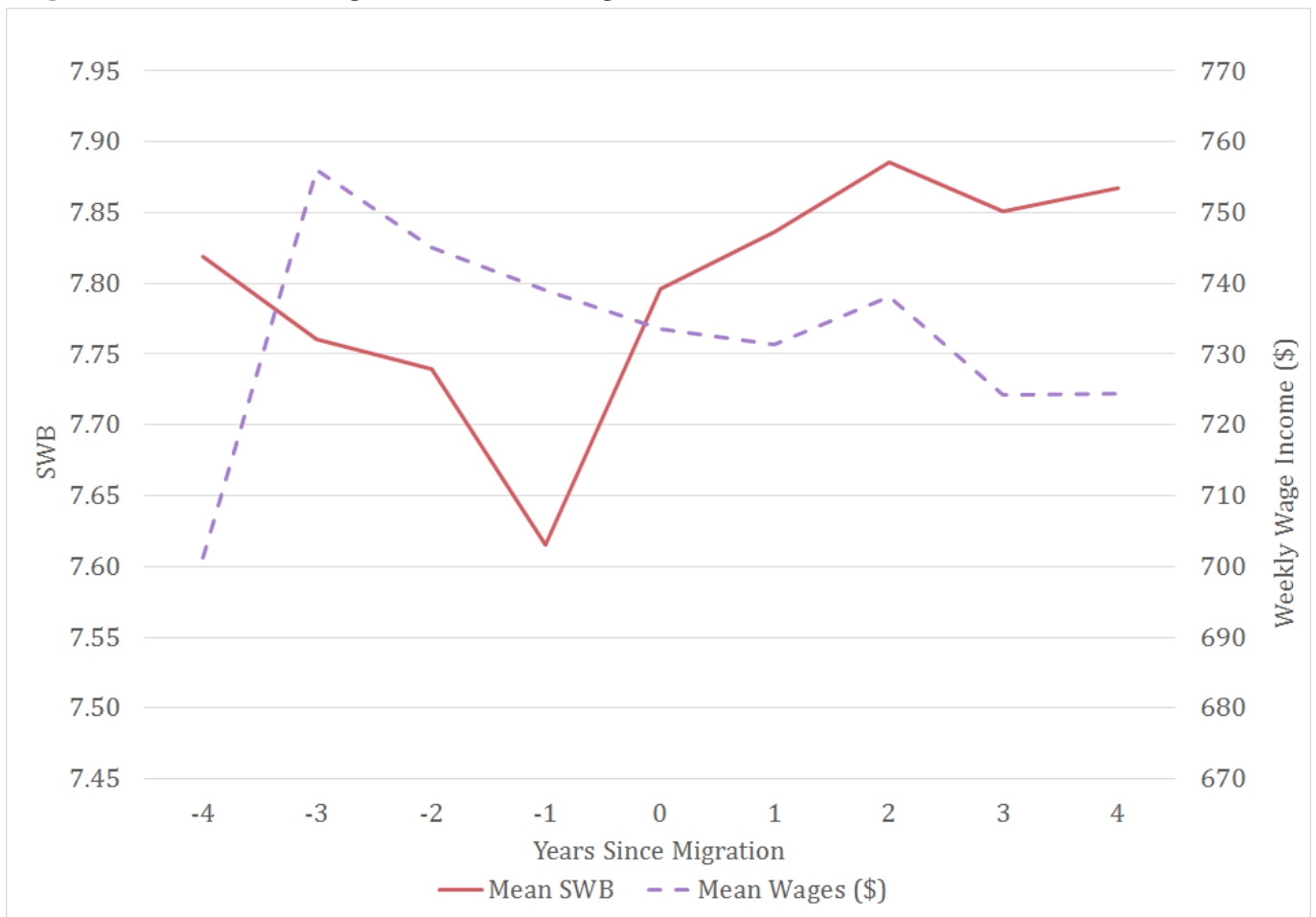
The model shows that we can expect a wide range of location and migration choices across individuals. It also helps us form predictions about the types of people who are more likely to move to 'unhappy places'.

### DESCRIPTIVE STATISTICS

We show that average wages vary considerably across regions, as does SWB and other relevant variables such as rents. The propensity to migrate also varies considerably, with a peak of 98.4% of people staying put from one year to the next in Tasmania compared with only 91.8% of people in Northern Territory.

The figure below shows the average change in wellbeing and wages for each year around migration. Years -4 through to -1 depict the four years leading up to the time of migration (year 0) while years 1 to 4 depict the four years following. SWB on average goes down before the year of migration, followed by a large and sustained jump upwards in SWB at the time of migration. By contrast, wages do not lift on average after migration.

**Figure 1: Mean SWB and Wage Incomes around Migration**





## PREDICTING LOCATION CHOICE

We both predict location choice and examine individuals' actual outcomes following migration. For the former, we use statistical analysis (discrete choice models) to predict which factors determine:

- whether an individual is likely to leave a particular location,
- in which location a migrant chooses to locate, and
- the location choice of all survey participants whether or not they migrate.

In particular, we are interested in the roles of wellbeing (measured as the average SWB of the place during the period, adjusted for population composition), and wages in location choice.

The factors determining these choices differ. The key significant 'push factors' determining emigration from a location are labour market related (wages and unemployment). We estimate that a higher rate of local SWB reduces emigration slightly, but this effect is not statistically significant.

For the typical migrant, the SWB experienced on average in prospective locations is found to be a strongly positive (and statistically significant) determinant of location choice. We estimate that preferences for SWB vary significantly among migrants: two thirds of migrants have a positive coefficient on SWB and the other third have a negative coefficient.

Perhaps surprisingly at first glance, migrants on average choose to locate in areas with relatively low wages, but again we see a wide variety of choices. Two thirds of migrants prefer areas that have lower wages and one third prefer areas with higher wages. This may reflect that some migrants (for instance retirees) are attracted to areas with low wages since the cost of living in such a location may be low, while other migrants venture to areas with high prospective wages. Distance from previous location is also important, with people being less likely to move to more distant locations.

For the full sample (including people who do not migrate as well as those who do) wages and unemployment are more important than SWB for location choice. However, we find considerable (and statistically significant) heterogeneity in the effect of SWB on location choice among individuals, with 55% of people affected positively by the average (adjusted) SWB of a place. In contrast, we do not find significant evidence of heterogeneity in preferences for wages nor the unemployment rate.

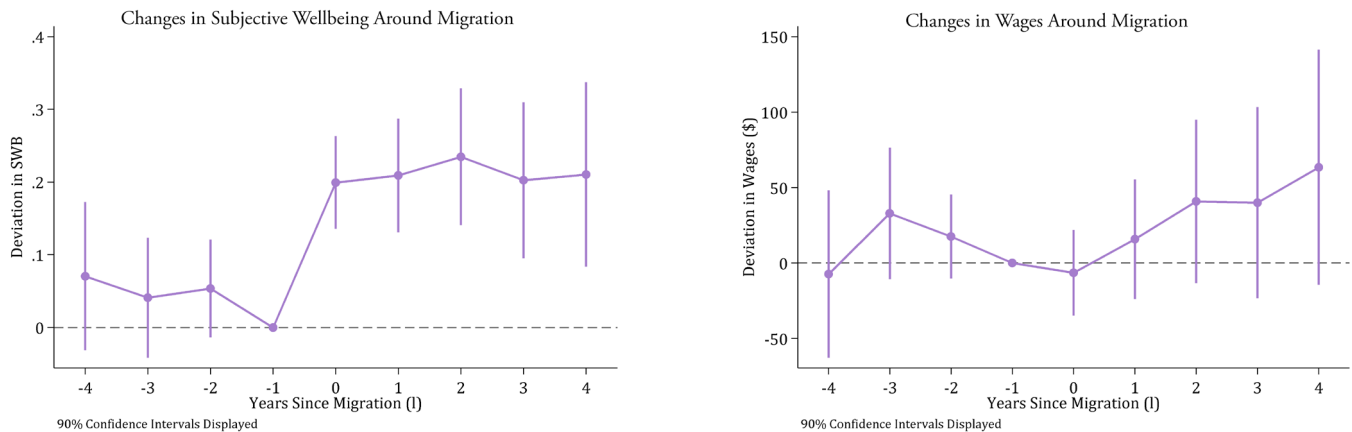
By far the most important determinant of overall location choice in any year is, not surprisingly, the location in which an individual resided over the prior year. This finding reflects the high cost of moving and the way people commonly live in a place they like already. The effect is compounded when a person lives in a home they own. As with the migrant sample, individuals in the full sample are less likely to move to locations further from their initial location.



## SWB AND WAGE OUTCOMES

We investigate this heterogeneity further by analyzing the actual outcomes for SWB and wages, for migrants as a whole and for different sub-samples, after controlling for a range of personal characteristics and national factors. We use an individual fixed effects specification to control for fixed individual differences. Estimates of the changes in SWB and wages are calculated for the years around migration relative to the year before migration.

**Figure 2: Estimated Changes in SWB and Wages around Migration**



After controlling for other factors, we estimate a downward trend in SWB prior to migration and then a large jump in SWB (even relative to the previous fall) in the year of migration; this jump is sustained over the following four years. The jump in SWB is statistically significant in each year from the time of migration onwards. Relative to other determinants of wellbeing, the jump in SWB following migration is material, being roughly equivalent to the jump experienced upon marriage (which is consistently shown across studies, including ours, to be associated with a material wellbeing boost).

On average, migrants experience a decrease in wages in the year of moving and a gradual increase in the following years. However, our estimates are imprecise suggesting the averages mask a variety of experiences across individuals. If we look at migrants as a whole we can confidently say that, on balance, migrants experience SWB gains when they migrate but we are unable to hold the same degree of certainty over the direction of their wage experience.

When we examine migrant sub-samples, we obtain similar results, especially with respect to wellbeing. Virtually all sub-samples – by age, gender, time preference, and across various reasons for moving – experience an average increase in SWB upon migrating to another location, and most of these effects are statistically significant. By contrast, the wage outcomes are decidedly heterogeneous.

Young people with high time preference (i.e. those who ‘live for the present’) experience a greater boost to SWB than do more patient young people. The opposite outcome occurs for older people, where more patient people have the higher SWB payoff. We find older people with low time preference experience a greater fall in wages immediately following migration than do those with high time preference and this difference is sustained thereafter. These findings accord with the theoretical model. Contrary to expectations, however, the wages of younger people rise immediately upon migration for both high and low time preference individuals, and wages then rise less rapidly for those with low time preference. However, none of these results show statistically significant differences.

Other sub-sample results add to the evidence that life-satisfaction improvements tend to be larger in cases where wage gains are relatively smaller or even negative. In particular, those who move for work-related reasons or for a new job tend to have smaller wellbeing gains despite a large jump in income post-migration, compared to the remaining sample. On the other hand, individuals who move because of a non-pecuniary motivation (new lifestyle; to be closer to friends/family; to live in a better area) experience larger wellbeing improvements despite initial falls in wages. These outcomes are consistent with the implications of our theoretical model.







## POLICY IMPLICATIONS

These findings substantiate the use of SWB as a useful concept for policy-makers to target. In particular, the findings indicate that local policy-makers who wish to attract migrants should consider targeting improvements in outcomes that will lead to high SWB of prospective migrants. For instance, they may act to improve non-pecuniary amenities in an area. However, if they wish to avoid the emigration of existing residents, our findings show that they also need to adopt policies that foster local employment and wages. Both labour market and subjective wellbeing variables are therefore important indicators of policy success at the local level.

From a broader perspective, this study shows that measures of SWB have real content and influence one of the most major decisions that people make in their lives – their choice of where to live. This consistency between an important revealed preference (migrant location choice) and SWB indicates that wellbeing measures – such as the life satisfaction measure used here – should be included amongst target outcomes for policy-makers.

## CONCLUSION

Overall, both the theoretical and empirical aspects of our paper show that migration decisions are considered within a life-cycle process reflecting individual characteristics. Accordingly we expect to, and do, see a wide variety of migration decisions. The heterogeneity is particularly pronounced in wage outcomes for migrants. Some migrants obtain higher wages when they relocate, while others reduce their wage earnings, especially at around retirement age.

While we find heterogeneity for wage outcomes, we see a consistent pronounced upturn in SWB for migrants in general and across almost all migrant sub-samples. Our findings therefore indicate that migrants do make location choices based on prospective wellbeing in different locations and that most achieve SWB increases upon migration which are then sustained for at least four years.

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