Macroeconomic fluctuations in home countries and immigrants' well-being: New evidence from Down Under

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Abstract

In this paper we provide the first solid empirical evidence that improvements in home countries' macroeconomic conditions, as measured by a higher GDP per capita or lower price levels, increase immigrants' subjective well-being. We demonstrate this by using 12 years of data from the Household Income and Labour Dynamics in Australia panel, as well as macroeconomic indicators for 59 countries of origin, and exploiting exogenous changes in macroeconomic conditions across home countries over time. Controlling for immigrants' observable and unobservable characteristics we also find the positive GDP impact is statistically significant and economically large in size. Furthermore, the GDP and price impact erodes when immigrants get older, or when they stay in the host country beyond a certain period of time. However, home countries' unemployment rates and exchange rate fluctuations have no impact on immigrants' well-being.

Key words: GDP, unemployment, inflation, exchange rate, well-being, immigrants, Australia.

JEL classification: I31, J15, F22.

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1. Introduction

It is well established that macroeconomic conditions in the place where people live have an impact on their well-being[1] (Di Tella *et al.*, 2001; Di Tella *et al.*, 2003; Welsch, 2011; Blanchflower *et al.*, 2014). However, little is known about how and to what extent macroeconomic movements in the place where people may not live but are, in some way, connected to can affect their well-being. This paper contributes to the existing body of economics literature by exploring the impact of macroeconomic conditions in home countries on well-being of international immigrants.

From a theoretical perspective, it is not clear what impact an improvement of macroeconomic conditions in home countries has on the well-being of immigrants. On the one hand, an improvement in macroeconomic conditions in home countries can make immigrants feel happier due to emotional or altruistic links with their home (Becker, 1974; Schwarze and Winkelmann, 2011). Immigrants, on the other hand, may feel worse off if they view home countries as a natural point of comparison, and feel that the benefits they receive from migration are reduced when their home countries' economies perform better (Stark and Taylor, 1991; Ferrer-i-Carbonell, 2005; Luttmer, 2005). The combination of these opposite predictions leaves the impact of macroeconomic fluctuations in home countries on immigrants' well-being to be an empirical issue. While the topic is important to understand factors contributing to individual well-being as well as assimilation of immigrants, there has been no published empirical evidence on this specific subject. So far, there is only one working paper by Akay *et al.* (2013) which provides empirical evidence observed from immigrant communities in Germany. Using 26 years of data from the German Socio-Economic Panel and macroeconomic variables for 24 countries of origin, Akay *et al.* (2013) show that German immigrants feel less happy when their home countries' Gross Domestic Product (GDP) per capita increases. They also find weak evidence that immigrants display a higher level of SWB when their home countries' unemployment rates increase.

Our paper contributes to the literature by providing the first empirical evidence from Australia. Australia is an interesting study case for two reasons. First, Australia has the third largest share of residents born overseas, behind Switzerland and Luxemburg (OECD, 2013). Second, unlike German immigrants who mainly originate from Europe, Australian

[1] Following the literature, we use subjective well-being (SWB), happiness and life satisfaction terms interchangeably in this paper.

immigrants come from almost all continents (DIBP, 2014). The diversity of Australian immigrants thus allows us to study immigrants from a sizable number of countries of origin with wide-ranging sources of macroeconomic fluctuations.

Using 12 years of data from a nationally representative longitudinal dataset from Australia, we are able to make three contributions to the existing literature on the subject. First, this study is the first to use Australian data to examine the impact of macroeconomic conditions in home countries on well-being of immigrants. Second, unlike the work for Germany (Akay *et al.*, 2013) which only uses one indicator for each macroeconomic variable, this paper uses several alternative measures for each macroeconomic variable where possible. Our results show that this empirical approach sheds additional light on which macroeconomic variable matters more to immigrants. Third, to our knowledge, this is the first paper to consider the impact of exchange rate fluctuations on immigrants' well-being.

We are able to provide the first robust evidence that improvements in home countries' macroeconomic conditions (as measured by a higher GDP per capita or lower price levels) increase the well-being of immigrants. We achieve this by exploiting exogenous changes in macroeconomic conditions across 59 home countries over 12 years as a source of identification and controlling for immigrants' observable and unobservable characteristics. The GDP impact is strongly statistically significant when GDP is measured in nominal US dollar (USD) and economically large in magnitude. We additionally show that, consistent with the disintegration theory, the GDP and price impact declines after immigrants spend a certain amount of time in the host country. However, we do not find any significant impact of home countries' unemployment rates or exchange rates on immigrants' well-being.

The remainder of the paper proceeds as followings. Section 2 briefly reviews related literature. Section 3 describes the data and Section 4 presents our empirical models. Section 5 presents empirical results, while Section 6 reports heterogeneous macroeconomic impact by immigrants' background. Section 7 reports results from several sensitivity tests and Section 8 concludes the paper.

2. Literature review

This paper is related to two extant strands of literature. The first and most extensive body of work is devoted to examining economic aspects of subjective well-being. This literature shows the validity and reliability of this measure as well as the large range of factors that contribute to subjective well-being (see, for example, Frey and Stutzer (2002), Di Tella and

MacCulloch (2006), Kahneman and Krueger (2006), Clark *et al.* (2008), and Ferrer-i-Carbonell (2013) for reviews). The current literature, however, remains contentious about empirical impacts of income on well-being (Easterlin, 1974, 1995; Ferrer-i-Carbonell and Frijters, 2004; Frijters *et al.*, 2004; Gardner and Oswald, 2007; Di Tella and MacCulloch, 2008; Stevenson and Wolfers, 2008; Powdthavee, 2010; Baird *et al.*, 2013). Similarly, while a large body of literature has demonstrated that the income of others matters to individuals' well-being, extant empirical results from this literature on such an impact are mixed. For example, some studies (Ferrer-i-Carbonell, 2005; Luttmer, 2005; Clark *et al.*, 2009b; Clark and Senik, 2010; Daly *et al.*, 2013) find that individuals feel happier when their earnings are higher than their neighbours', a finding consistent with the relative income hypothesis where individual utility function depends on absolute consumption as well as relative consumption. By contrast, some studies (Stutzer, 2004; Clark *et al.*, 2009a) find that respondents' well-being increases with the average income in the community they live in, a finding which was explained by these authors as respondents viewing their community's local income as a signal for their future income.

This strand of literature also provides empirical evidence on the impact of macroeconomic fluctuations in the environment where individuals live on their well-being. For instance, studies have constantly found that inflation and unemployment have a negative impact on well-being (Frey and Stutzer, 2000; Di Tella *et al.*, 2001; Graham and Pettinato, 2001; Di Tella *et al.*, 2003; Wolfers, 2003; Alesina *et al.*, 2004; Welsch, 2007; Clark *et al.*, 2010; Ochsen, 2011; Ruprah and Luengas, 2011; Welsch, 2011; Deckers *et al.*, 2013; Blanchflower *et al.*, 2014).[2] In addition, the majority of studies have found that unemployment depresses well-being more than inflation (Di Tella *et al.*, 2001; Wolfers, 2003; Welsch, 2007; Blanchflower *et al.*, 2014).[3] Studies have also uncovered that national GDP per capita (Di Tella *et al.*, 2003; Welsch, 2011) and GDP growth (Di Tella *et al.*, 2003; Welsch, 2007) is positively associated with individual life satisfaction.

This paper also examines the impact of macroeconomic conditions on well-being, but diverts from the current literature by investigating how macroeconomic conditions in the place individuals do not live but may have some relation with can affect their well-being. By doing

[2] The study by Alesina et al. (2004) is an exception because these authors don't find any significant impact using European data. In addition, using Russian data, Eggers et al. (2006) reveal a positive and small impact of local unemployment rate on well-being of people in the region.

[3] A study by Welsch (2011) is an exception where unemployment and inflation are found to equally reduce the well-being of Europeans. In addition, Welsch (2011) also finds that GDP per capita has no significant impact on Europeans' life satisfaction.

so, we mitigate the roles of unobservable macroeconomic conditions in which individuals live that may have an impact on their well-being. In addition, we are able to observe the same individuals at different points in time, giving us an effective control for unobservable individual time invariant characteristics that most of the prior literature, using data from multiple countries, could not (Di Tella *et al.*, 2001; Di Tella *et al.*, 2003; Wolfers, 2003; Welsch, 2007, 2011; Blanchflower *et al.*, 2014).

The second, and developing, strand of literature examines the impact of macroeconomic conditions (either at home or host countries) on immigrants' decisions. For example, studies find that exchange rate shocks (Faini, 1994; Gordon and Spilimbergo, 1999; Yang, 2006, 2008; Abarcar, 2013; Nekoei, 2013; Nguyen and Duncan, 2015) have an impact on some behaviours such as migration, work and transfer of international immigrants. As already mentioned above, Akay *et al.* (2013) provide evidence that immigrants in Germany feel less happy when their home countries' macroeconomic conditions improve (as measured by a higher GDP per capita or a lower unemployment rate). Akay *et al.* (2013) interprete these "unexpected" findings in the light of relative deprivation motive: immigrants view their home countries as natural points of comparison, and perceive that they benefit less from migration when their home countries have better macroeconomic performance.

3. Data and sample

3.1. Data

Our data for this study is drawn from several sources. The first data source is the Household Income and Labour Dynamics in Australia (HILDA) survey. HILDA is an annual nationally representative longitudinal survey of private households in Australia. In addition, HILDA contains rich information at the individual and household level, including data on socio-demographic variables, income, labour market conditions, and individual well-being. We use the first 12 waves of data which covers a period from 2001 to 2012 for this analysis. The second data source for macroeconomic variables such as GDP, Consumer Price Index (CPI), and unemployment rates are from the World Bank's World Development Indicators database. The third data source is for historical daily exchange rates taken from the resources available at the Oanda website.

3.2. Macroeconomic variables

Microeconomic theory suggests what matter to an individual is "real" value of their income (i.e. the amount of goods or services that can be purchased with their income or "nominal" income adjusted for purchasing power), not "nominal" income. In this paper, we measure macroeconomic variables in both nominal and real terms for several reasons. First, there is no empirical consensus about whether "nominal" or "real" value matters (Deckers *et al.*, 2013). Second, we are interested in the possible impact of macroeconomic conditions where individuals do not live and it is unclear what types (i.e. real or nominal) of home country's macroeconomic indicators immigrants receive. Furthermore, by construction, some macroeconomic variables are derived from several other macroeconomic indicators. For example, real[4] Purchasing Power Parity international dollar (PPP USD)[5] GDP figures are constructed using nominal GDP, exchange rate, and inflation figures. To get a separate impact of each macroeconomic variable where possible, we use several measures for each macroeconomic indicator. In particular, we measure GDP per capita in nominal and real terms. We also include GDP per capita indicators measured in two alternative currencies: USD and PPP USD,[6] as well as measuring GDP in terms of growth rate (%).

To measure price fluctuations in home countries, we use GDP deflator and CPI. While GDP deflator and CPI are highly correlated (in our data, their correlation coefficient is 0.87 and statistically significant at the 1 % level: see Table A3), these price measures are not the same, and as such may influence the well-being of immigrants in different ways. We also analyse the impact of home countries' unemployment rates on immigrants' well-being by including these indicators in the regressions.

Finally, we examine the impact of exchange rate fluctuation on immigrants' SWB. Similar to our earlier treatment of GDP indicators, we use both nominal and real exchange rates. In particular, nominal exchange rate is measured as the number of foreign currency per unit of Australian dollar (AUD). For each country and in each year, we construct the yearly nominal exchange rate as the average of daily exchange rates over the calendar year. In turn, daily exchange rates are derived from the mid-point between the "buy" and "sell" rates from global currency markets. These yearly nominal exchange rates are then used in conjunction with

[4] Real GDP equals to nominal GDP divided by GDP deflator.
[5] An international dollar has the same purchasing power over GDP as the US dollar has in the United States. See http://data.worldbank.org/indicator for details.
[6] Akay et al. (2013) use GDP deflator to proxy for price fluctuations and real PPP GDP per capita (measured at 2005 PPP international dollars) to proxy for income.

yearly CPI to calculate yearly real exchange rates[7] and link to the year that the individuals are surveyed in the HILDA data. From a theoretical point of view, an appreciation of the Australian dollar against a home country's currency is viewed as a favourable change to immigrants from that country. For example, they could potentially be able to go to their home countries for holidays more often, or they make more home currency transfers with a given amount of AUD earnings. However, given a lack of consensus on an empirical impact of income on individual SWB (Easterlin, 1995; Ferrer-i-Carbonell and Frijters, 2004; Di Tella and MacCulloch, 2008) it is unclear how this relative increase in immigrants' earnings affects their SWB. To our knowledge, the impact of exchange rate fluctuations on immigrants' SWB has not been empirically examined before.

3.3. Sample

We focus on first generation immigrants who were born outside Australia. We restrict the empirical sample to countries with enough observations and to countries with macroeconomic data available in any year.[8] We further restrict the sample to individuals of age 15 or over.[9] We also exclude individuals with missing information on any variable used in our empirical model. These sample restrictions result in a sample of 32,195 individual-year observations from 5,545 unique individuals obtained over 12 years of data and immigrants from 59 countries (See Table A2 for summary statistics by countries).

3.4. Summary statistics

Australia is a nation of immigrants from a wide variety of countries. Table A2 displays the distribution of countries of birth of Australian immigrants, the majority of whom come from the following countries: United Kingdom, New Zealand, the Philippines, Italy, Vietnam, Germany, Netherlands, India, China, South Africa, and the USA. The geographical diversity of Australian immigrants means that there were large differences in levels of economic development, as well as a considerable source of macroeconomic fluctuations across home

[7] Real exchange rate is defined as $e_c = E_c * (P_{AUS}/P_c)$, where E_c is yearly nominal exchange rate and P_c (P_{AUS}) is the yearly CPI for home country c (Australia). See Nguyen and Duncan (2015) for more information about this variable.

[8] In particular, we focus on countries with at least 50 observations surveyed in all years covered in our study period. The results are not sensitive when we increase the number of observations per country to 100 (See Panel D in Table 9). We exclude ex-Yugoslavia because the country was separated into several countries before or during our study period and we do not know which new country the Australian immigrants come from. We also exclude Taiwan because macroeconomic data for Taiwan are not available at the World Bank's database. We additionally exclude 84 individual-year observations from Zimbabwe because the country experienced very large macroeconomic fluctuations during the study period (for example, its CPI was above 24,000 % in 2007). Excluding immigrants from Zimbabwe does not change the results of this paper (See Panel C in Table 9).

[9] In HILDA, only individuals aged 15 or more are asked to return an individual questionnaire.

countries during the study period. For example, Table A2 Column 8 shows that, over the study period, GDP per capita (2011 PPP USD) is as little as 1,900 for Bangladesh, Nepal and Papua New Guinea and up to 63,000 for Singapore. Table A2 also shows a large variation in yearly growth rate of GDP per capita in real USD (Column 12) during the period, ranging from minus 0.1 % for Italy to positive 9.1 % for China. Note that we observe large variations in GDP per capita and GDP per capita growth among home countries regardless of measurement units (i.e. nominal/real or currency) and samples used (see summary figures for all included countries in Table A2 and 10 major home countries in Table 1). We also observe huge differences in all considered macroeconomic indicators between home countries and Australia during the study period (See the last row of Table 1).

We also notice considerable fluctuations in other macroeconomic indicators (unemployment, prices and exchange rates) across all included countries over the period (Columns 9 to 13 in Table 1 and Columns 13 to 18 in Table A2). For instance, yearly unemployment rate is as low as 1.3 % for Thailand and up to 25 % for South Africa. Furthermore, GDP deflator is as low as minus 1.3 % for Japan and up to 17 % for Iran. Similarly, CPI varies widely among countries, ranging from minus 0.2 % (Japan) to positive 17 % (Turkey). We additionally observe huge fluctuations in yearly real exchange rate growth of the AUD versus home countries' currencies, ranging from minus 2 % (Croatia) to positive 38 % (Iran). We also notice a considerable variation in self-reported life satisfaction across home countries (See mean figures for each country in Table A2 – Column 19) and within the same countries (See Standard Deviation (S.D.) figures in Table A2). These large fluctuations in the macroeconomic conditions and SWB between countries over the study period and within countries overtime validate our empirical strategy of exploiting the changes in macroeconomic conditions across home countries over time to identify the casual impact of macroeconomic conditions on immigrants' SWB.

[Table 1 and Table A2 around here]

Table A3 shows the correlation among home countries' macroeconomic indicators and immigrants' SWB. As expected, macroeconomic indicators are highly correlated since their correlations are all statistically significant at the 1 % level. Furthermore, SWB is highly statistically significantly (at the 1 % level) and positively correlated with all GDP per capita

indicators. By contrast, the correlation between SWB and GDP growth, GDP deflator, CPI and exchange rates is negative and strongly statistically significant (at the 1 % level).[10]

4. Empirical framework

4.1. Econometric models

We first follow Di Tella *et al.* (2003) to estimate the well-being Y of immigrant i from home country c at time t as follows:

$$Y_{cti} = \alpha_c + \alpha_t + \alpha_{ct} + \beta Z_{ct} + X_{cti}\gamma + \varepsilon_{cti} \qquad (1)$$

In equation (1), Z is a vector of macroeconomic variables; X is a vector of individual time-variant characteristics; and ε_{cti} is a zero-mean error term. Equation (1) includes home country fixed effects (α_c) to remove time-invariant heterogeneity in immigrants' countries of origin. Equation (1) additionally includes time fixed effects (α_t) to control for any shock that are the same for all countries each year. As noted by Di Tella *et al.* (2003) and Di Tella and MacCulloch (2005) since macroeconomic variables are highly correlated intertemporrally across countries, we also include country-specific time trend (α_{ct}) to capture any different time trend in SWB by country. The resulting identifying variation thus comes from changes in macroeconomic variables (say, GDP per capita) across home countries over time. We apply equation (1) to a pooled sample of all immigrants and call results from these regressions as "pooled" results. We then exploit the panel nature of our data to include individual fixed effects (α_i) in the equation (1) to estimate the following regression:

$$Y_{cti} = \alpha_t + \alpha_i + \beta Z_{ct} + X_{cti}\gamma + \varepsilon_{cti} \qquad (2)$$

Note that equation (2) which controls for individual time-invariant heterogeneity (α_i) also captures unobservable country fixed effects (α_c). Equation (2) is our preferred specification because it controls not only for time and country fixed effects, but also for time invariant unobservable individual characteristics (such as work ethic, ability, neuroticism, or optimism). In our case, controlling for individual fixed effects helps mitigate the possible endogeneity of some common control variables such as marital status, health status, the

[10] Other summary statistics reported in Table A2 reveal that about 48 % of our sample is male. On average, immigrants in the sample are around 50 years old and have lived in Australia for about 29 years. We also notice that an average immigrant is about 8 years older that a representative native. This could be a result from the sampling of the HILDA. In particular, as Watson (2012) notes the first 10 waves of HILDA (from 2001 to 2010) include a representative sample of immigrants permanently settling in Australia since 2001. Newly immigrants who are presumably younger are thus under-representative in more recent waves of the first ten waves. The lack of recent immigrants was a motivating factor for the inclusion of the top-up sample in 2011 which makes the sample of the Australian immigrants to be representative to the whole immigration population.

duration of stay in Australia, income or labour market status in the well-being equations. Failing to control for endogeneity of these variables may result in a biased estimate not only for these variables but also for other exogenous variables (Wooldridge, 2010). Although macroeconomic variables are reasonably considered as exogenous in the above equations, controlling for unobservable characteristics of immigrants thus allows one to get unbiased estimates for these macroeconomic variables. To distinguish with "pooled" results from equation (1), we call the regression results estimated using equation (2) "Fixed Effects" (FE) results.

4.2. Other variables

Other control variables include gender, age (and its square), duration of stay in Australia (and its square), education, English Speaking Background (ESB),[11] marital status, labour market status and health status of the individual immigrants. We also include household income (in log form) and home ownership status to control for any income or wealth effect on the immigrant's SWB.[12] Household characteristics in the models also include the number of co-residing members of various age cohorts. We additionally control for differences in socio-economic conditions across regions by including the regional unemployment rate, regional relative socio-economic advantage index, and state dummies[13] in the SWB equations. We also control for the heterogeneity in the time of survey by controlling for year and month fixed effects.[14] To capture assimilation profile of the immigrants, in regression (1), we additionally include dummy variables for various groups of immigrants with time of arrival in five-year-bands.[15] Macroeconomic variables such as GDP per capita, unemployment rates, exchange rates are introduced in a log form to capture any non-linear impact. The coefficient

[11] ESB countries include the United Kingdom (UK), New Zealand, Canada, USA, Ireland and South Africa. Note that time invariant variables such as gender or ESB will be dropped in FE regressions.

[12] We use household disposal income derived by the data provider (see Wilkins (2014) for more information). We exclude a small number of observations (about 100 individual x year observations) because their derived household disposal income is non-positive. Excluding these individuals allows us to include household income in a log form in regressions. Log of income has been shown to fit the data better than level of income (Layard *et al.*, 2008). Household income is adjusted for CPI, using the 2001 CPI as the base. See Table A1 for details of variable definition.

[13] The inclusion of state/territory dummies also accounts for possible internal migration patterns. Our data show that about 12 % of immigrants moved interstates each year.

[14] In HILDA, the interviews are conducted annually with most of interviews occurring in August (14 % of our sample), September (51 %) and October (23 %).

[15] Note that all variables representing duration of stay in Australia are not identified in the FE models (i.e. regression (2)) since our FE empirical models have already included other three time-dimension variables (i.e. immigrant's age, year dummies, and individual FE). We choose to include age (and its square) instead of duration of stay in our FE regressions because the former has been shown to be important in explaining individual SWB (Frijters and Beatton, 2012). Note also that our FE models which control for individual-specific heterogeneity associated with arrival cohorts also capture cohort-specific unobserved characteristics affecting immigrant's SWB (Borjas, 1999).

estimates of these variables can thus be interpreted as changes in SWB with respect to percentage changes in any of the above mentioned macroeconomic variables. However, other macroeconomic variables such as GDP growth rates, GDP deflator or CPI cannot be included in a log form because they entail non-positive values.

As already mentioned, we use self-reported life satisfaction as the main outcome of interest. This outcome is constructed from a question asking "all things considered, how satisfied are you with your life?". Respondents are asked to choose one point on a scale from 0 to 10 where higher scale indicates a higher level of life satisfaction. For ease of interpretation, we use Ordinary Least Squared (OLS) method to estimate all equations.[16] Due to the panel nature of our data, standard errors are clustered at the individual level to account for any serial correlation.

5. Empirical results

5.1. Home countries' GDP and immigrants' SWB

5.1.1. Which GDP measures matter?

Table 2 presents regression results for two main GDP variables of interest: levels and growth of GDP per capita. For each variable, we report results for two currencies (USD and PPP USD), two value terms (nominal and real) and two specifications (pooled and FE). We first discuss estimates for GDP per capita level variables (Panel A in Table 2).[17] Estimates for all GDP per capita variables point to a positive impact of these variables on immigrants' SWB. Furthermore, pooled results show all measures of home country's GDP per capita have a statistically significant (at least at the 10 % level) impact on immigrants' SWB. In addition, controlling for individual FEs while reduces the statistical significance level (i.e. from statistically significant to insignificant) for estimates of GDP per capita in real USD, nominal and real PPP USD increases the significance level of GDP per capita in nominal USD from the 5 % level to the 1 % level. As such, controlling for individual FEs, only GDP per capita in nominal USD statistically significantly increases the immigrants' SWB. Finally, regression

[16] Studies evaluating performance of several alternative models for modelling SWB show the FE OLS model is appropriate for modelling SWB (Ferrer-i-Carbonell and Frijters, 2004; Riedl and Geishecker, 2014).

[17] Results for other variables (reported in Table A4 in the Appendix) show that the impact of other commonly controlled variables like age, income, health, marital status, and labour market status is largely similar to that reported in other studies (e.g. age has a U-shape impact on SWB, SWB is positively correlated with income and better health, individuals are more satisfied when working or being together with their spouse/partner). Local unemployment rates are found to marginally (at the 10 % level of significance) reduce immigrants' well-being. We also note that the inclusion of macroeconomic variables basically does not affect the signs, magnitudes and significances of all individual characteristic variables.

results also show that controlling for individual FEs largely does not affect the sign and magnitude of the impact for all GDP per capita level variables.

[Table 2 around here]

FE estimate for GDP per capita in nominal USD suggests that an increase in home countries' GDP per capita by 1 % leads to an increase of 1.9 % (=0.15/7.9) in mean SWB or an increase of 10 % (=0.15/1.5) of a standard deviation in SWB. To have another sense about the magnitude of the impact, we calculate an "equivalent income measure" as the ratio of the coefficient of log GDP per capita and the coefficient of log household income. Results for equivalent income ratios for all GDP estimates are reported in lower part of Panel A in Table 2. An equivalent income for the FE estimate of GDP per capita in nominal USD is 2.5, suggesting that a 1 % increase in home country's GDP per capita is equivalent to a 2.5 % increase in household income. This impact is quite substantial in size given that household income is considered to have a more direct effect on immigrants' well-being than their home country's income level.

We also note that while the magnitude of the estimates for GDP level variables is largely unchanged, the income equivalent ratio increases substantially from pooled to FE regressions. This pattern is consistent with reduction of the role of income from pooled to FE regressions as shown in the literature (Ferrer-i-Carbonell and Frijters, 2004; Di Tella *et al.*, 2010). In particular, estimates for log of household income variables drop by about 2.5 times from pooled to FE regressions (See Table A4 in the Appendix). It also highlights the importance of controlling for individual heterogeneity in SWB literature. Indeed, the F test statistics confirm that FE models are preferred to pooled models.[18] These test results suggest that there are some unobservable time-invariant individual characteristics that are correlated with other commonly controlled variables such as marital status, labour force status, education, and home ownership in the well-being equations. Failing to control for these unobserved characteristics results in biased estimates for these variables as demonstrated by noticeable changes in both the magnitude and statistical significance of their estimates from pooled to FE regressions (Appendix Table A4).

We next turn to the impact of GDP growth on immigrants' SWB (Panel B in Table 2). For all measures of GDP growth, pooled results show a positive impact of GDP growth on immigrants' SWB while FE results suggest a negative impact. However, in both

[18] For brevity, F statistics are not reported here but they will be available upon request.

specifications, the impact is statistically insignificant and economically small in magnitude (as can be seen from income equivalent ratios reported at the bottom of Panel B in Table 2). In line with Akay *et al.* (2013), we also find that GDP growth in home countries does not affect well-being of immigrants.

5.1.2. Impact of GDP per capita in nominal USD on immigrants' SWB

Since we only observe a statistically significant impact of GDP per capita in nominal GDP, in this sub-section, we focus on this GDP measure and examine whether introducing other macroeconomic variables together with this GDP measure in the regressions affects our findings.[19] Regression results (Columns 4 to 9 in Table 3) demonstrate that incorporation of GDP per capita growth rates, unemployment rates, GDP deflator, CPI, and nominal and real exchange rates does not affect our earlier findings in any significant way. In particular, estimates for GDP per capita in nominal USD remain statistically significant (at least at the 5 % level). Moreover, the magnitude of the impact is quite stable, with income equivalent ratios ranging from 2.2 (with inclusion of nominal exchange rates) to 3.6 (with inclusion of unemployment rates). These results suggest that levels of GDP per capita in nominal USD do indeed matter and its impact is not removed by the inclusion of other macroeconomic variables, including GDP deflator and exchange rates, in the regressions.

[Table 3 around here]

To account for the dynamics of GDP per capita in nominal USD and to check robustness of our results, we introduce their lags to the equation (2). Estimates for different lags of GDP per capita in nominal USD, reported in Column 2 and 3 in Table 3, show a well-determined GDP impact: the impact remains highly statistically significant (at the 1 % level) and economically important in size (income equivalent ratio is 3.0 for 1-year lag of GDP and 3.1 for 2-year lag).

5.1.3. Discussion

Above, we consistently found a positive impact for all GDP per capita variables (including the GDP per capita in real PPP USD as used by Akay *et al.* (2013)) on immigrants' SWB. This finding is new to the literature since Akay *et al.* (2013) find a negative and statistically significant GDP impact for German immigrants. Our finding of a positive impact of home

[19] We repeat this exercise for other GDP per capita variables (both levels and growth) and found that none of the impact is statistically significant. Results from these exercises will be available upon request. Because macroeconomic variables are highly correlated both temporally and inter-temporally, to get a separate impact of each macroeconomic variable, we include each macroeconomic variable or its lags separately.

country's GDP per capita on immigrants' SWB is thus consistent with the view that immigrants in our sample may be linked to their home countries altruistically or emotionally. It is also in line with a possible explanation that Australian immigrants may view an increase in their home countries' GDP per capita as an improvement in national prestige (Di Tella *et al.*, 2001; Di Tella *et al.*, 2003).

It is interesting to observe that using the same measure of immigrants' well-being and a largely similar empirical approach, Australian and German studies come up with findings that give support to different theories. Besides differences in our treatment of macroeconomic variables as discussed in Section 3.2, another possible explanation for our differences in findings is that as immigrants in the two countries are not the same, neither are their behaviours (Antecol *et al.*, 2003; Antecol *et al.*, 2006; Chiswick *et al.*, 2008; Clarke and Skuterud, 2013). Relative to Germany, Australia maintains a skilled immigrant selection policy producing immigrants with different human capital characteristics. Furthermore, differences in the socio-economic environment that immigrants live in may be another factor contributing to the differences in our findings. One of the noticeable differences between Germany and Australia is their physical position to the rest of the world. In particular, Germany is in the centre of Europe where most of its immigrants come from. By contrast, Australia with its immigrants from all over the world is "down under" many other countries on the globe.

The above FE results also reveal that immigrants in our sample are statistically significantly responsive to GDP per capita in nominal USD only. It is likely that this GDP measure is more popular among Australian immigrants than other measures, and as a result they respond strongly to only using this measure of GDP. This prediction is supported by a well-established empirical finding that agents are less responsive to information that is not salient (Chetty *et al.*, 2009; Finkelstein, 2009; Blumkin *et al.*, 2012; Almenberg and Karapetyan, 2014).

Having established that levels of GDP per capita are positively associated with SWB, we turn to other macroeconomic variables to investigate whether they have any impact on immigrants' SWB.

5.2. Impact of home country's prices on immigrants' SWB

Table 4 turns our attention to the impact of home countries' prices on immigrants' SWB. Pooled and FE estimates all suggest a negative effect of both price measures: GDP deflator

(Panel A) and CPI (Panel B). In addition, the impact is statistically significant (at the 5 % level) for the current GDP deflator variable only (Panel A – Column 2). The estimate for current GDP deflator conveys that an increase of 1 % (or by 27 percentage points of mean of GDP deflator of 3.7 % in our sample) in home countries' GDP deflator is associated with a decrease by 0.08 % (=0.006/7.9) in mean SWB. This impact while statistically significant is economically insignificant in size as its income equivalent ratio is only around 0.1. We also observe that estimates for both GDP deflator and CPI are largely unchanged when we include other macroeconomic variables (Columns 5 to 8 in Table 4) in the regressions. Furthermore, turning to the dynamics of price impact, only estimate for one-year lagged CPI is found to be negative and marginally statistically significant (at the 10 % level – see Panel B - Column 3).

[Table 4 around here]

Again, our estimate is new to the literature since Akay *et al.* (2013) find that home countries' price levels as measured by GDP deflator have a positive and weakly statistically significant (at the 10 % level) impact. Our estimates of a negative impact of home countries' prices on immigrants' SWB further suggest that Australian immigrants do indeed respond differently from their German counterparts to the fluctuations in their home countries' GDP per capita and price levels. Our results on GDP per capita and prices are thus supportive of the idea that better economic performances in home countries increase Australian immigrants' SWB.

5.3. Impact of exchange rates on immigrants' SWB

We next turn to the impact of exchange rate fluctuations on immigrants' SWB. Almost all estimates[20] of both nominal (results reported in Panel A in Table 5) and real exchange rates (Panel B) point to a negative impact of an AUD appreciation on immigrants' SWB. We also observe that the estimated negative impact of exchange rate is quite stable when we introduce its lags (Columns 3 and 4) or include other macroeconomic variables (Columns 5 to 8) in addition to the existing exchange rate variable in the regressions. However, in all cases,

[20] An exception is a positive estimate for real exchange rate variable in pooled regression (Panel B - Column 1). In addition, the estimate is unexpectedly large. This would be resulted from our inclusion of home country specific time dummies together with the real exchange rate variables, which are already highly correlated over time in the pooled regressions. To test this hypothesis, we experiment with excluding home country specific time FEs from the pooled regressions but still keep home country FEs and year FEs and get a negative and insignificant estimate for the real exchange rate variable (an estimate of -0.053 with a standard deviation of 0.098).

exchange rate impact is statistically insignificant, suggesting that SWB of immigrants in our sample is not affected by exchange rate fluctuations.[21]

[Table 5 around here]

5.4. Impact of home country's unemployment rates on immigrants' SWB

We finally turn to the influence of home country's unemployment rates on immigrants' SWB (Table 6). Pooled estimate (Column 1) suggests a negative and statistically significant (at the 1 % level) impact. In addition, pooled estimate shows the impact is economically large in size with income equivalent ratio of minus 2.1.[22] FE estimates (Column 2), on the contrary, point to a positive and statistically insignificant effect. FE estimates also show that immigrants' SWB is not statistically significantly affected by 1-year and 2-year lags of their home countries' unemployment rates (Columns 2 and 3). Similarly, FE results suggest our finding of no significant impact of unemployment is robust to the inclusion of GDP per capita in real USD, prices and exchange rates (Columns 5 to 9). Results are thus in line with those found in the FE micro-econometric models presented in the study for Germany.[23]

[Table 6 around here]

6. Heterogeneity among immigrants

Above, using FE models, we found that immigrants as a whole did respond strongly (mildly) to their home countries' GDP per capita in nominal USD (GDP deflator). We next investigate the heterogeneity of the impact by linearly interacting these two macroeconomic variables[24] with a series of variables that represent socio-economic background of the immigrants, their ties with home countries, or return probabilities. We might expect a larger impact for immigrants with closer ties or a higher chance of return. These variables include age (and its

[21] Previous work has found that exchange rate fluctuations influence immigrants' labour market behaviours (Nekoei, 2013; Nguyen and Duncan, 2015). To guard possible problems of simultaneity of labour market outcomes and SWB, we have experimented with excluding labour market outcome variables from the list of control variables and found results very similar to those reported in Table 5.

[22] A 1 percentage (or a 0.068 % decrease from the mean unemployment rate of 6.8 %) decrease in home country's unemployment rate is equivalent to a 2.1 % increase in household income in improving the immigrants' SWB.

[23] It is noteworthy that Akay et al. (2013) only find a positive and statsitically significant impact for unemployment in aggregate models and in micro-econometric models which do not control for individual FEs.

[24] We also experiment interacting age (or years since arrival) with other macroeconomic variables. However, like the main results presented in Section 5, the impact is not statistically significant for the majority of individuals along age or migration duration profiles. Results for these experiments are thus not reported for brevity but will be available upon request.

square), the duration of stay in Australia (and its square), gender[25], education level, household income, home ownership, marital status, the number of children, citizenship status,[26] whether the immigrant is the oldest child, the number of siblings, the presence of a close family member (i.e. parents and siblings) overseas, whether the immigrant speaks a language other than English at home, and whether the immigrant reports that he or she speaks English very well. In addition to the above individual characteristics, we also include the immigrant's home country characteristics such as whether the country is an English speaking country, the air distance between the home country and Australia, whether the country is classified as a high income country by the World Bank, whether the country allows its citizens to hold multiple citizenships, the home country's democracy index, and the country's remittance/GDP ratio.[27]

We first look at the impact of home country GDP per capita in nominal USD on immigrants' SWB by their age profiles (Figure 1 – Panel A). Panel A – Figure 1 shows a positive and statistically significant (at the 5 % level) GDP impact on SWB of immigrants aged between 30 and 67. Since immigrants aged between 30 and 67 account for about 70 % of our sample, Figure 1 Panel A provides another robustness check for our earlier finding of a statistically significant GDP impact. Additionally, it shows an interesting pattern: the GDP impact first increases with age, reaches its peak when immigrants are around 50-53 years old, before declining.[28] Because we only observe a statistically significant impact among individuals aged between 30 and 67, it is possible that these individuals receive more information about macroeconomic conditions from their home countries than those from other age groups. This prediction is supported by another finding by this paper that immigrants with higher education are also happier when their home countries' GDP per capita increases as they

[25] It should be noted that estimates for time invariant variables such as gender, whether the migrant is the oldest child, or the immigrant's home country characteristics are not identified in our fixed effect models because the fixed effect estimator cannot distinguish them from fixed effect α_i. However, estimates for interaction terms between such time invariant variables and time variant macroeconomic variables are identified and a statistically significant estimate for the interaction term would indicate a differential impact of macroeconomic variables for immigrants with and without that characteristic.

[26] Questions about citizenship are only asked once for all respondents, starting from wave 2 for all respondents and only for new entrants from wave 3. Similarly, questions about residential locations of parents and siblings are only surveyed in Waves 8 and 12. We use the panel nature of our data to fill in missing information for these variables in other waves. It is possible that these variables change overtime that our data cannot capture. Unfortunately, HILDA does not provide enough information about exact overseas locations of family members as well as individual migration visa types for us to further investigate the heterogeneous impact.

[27] The remittance/GDP ratio is averaged over the study period (i.e. 2001-2012) because, for some countries, data are not available for all years studied. Similarly, the democracy index, which is provided by the Economic Intelligent Unit with a higher index representing a higher level of democracy, is averaged over the 2006-2012 period.

[28] After the age of 80, the confidence intervals of estimates fan out since immigrants aged 80 or over represent only 4 % of our sample.

presumably have more information about their home countries' macroeconomic conditions or are better able to understand it (See Table 7). The finding that the GDP impact starts to decline when immigrants reach the age of 53 and the impact becomes statistically insignificant for immigrants aged 68 or over can be explained in the light of the disintegration theory (Stark, 1978; Nekoei, 2013). In our case, older people tend to spend a longer time in Australia, are less connected to their home countries, and thus are less affected by their home countries' macroeconomic fluctuations. This claim is also supported by the GDP impact according to migration duration we examine right below.

[Figure 1 and Table 7 around here]

Figure 1 – Panel B shows that the GDP impact also varies by years since arrival, increasing up to about 30 years after arrival before declining. Figure 1 – Panel B additionally conveys that the impact of GDP is statistically significant (at the 5 % level) for immigrants who have stayed in Australia for a period from 5 to 48 years. The fact that we do not find a statistically significant impact for individuals who arrived recently (less than five years) can possibly be explained by their being younger, and the GDP impact by age profiles as found above.[29] Furthermore, the GDP impact is not statistically significant for those who arrived more than 48 years ago, as for them the confidence intervals of estimates spread out[30] and include zeros. Our estimate on the GDP impact of length of stay is also consistent with the "disintegration" theory that we discussed above. It is interesting to note that while our work finds an opposite GDP impact as found in the work by Akay *et al.* (2013), both work find evidence supporting the "disintegration" theory.

Turing to the GDP deflator impact by either age (Figure 2 – Panel A) or length of stay (Figure 2 – Panel B) profiles we also find support for the negative impact of GDP deflator on immigrants' SWB and the "disintegration" theory. In particular, Figure 2 – Panel A shows a negative and statistically significant (at the 5 % level) impact of GDP deflator on SWB of immigrants aged between 34 and 59 (accounting for 43 % of our sample). Furthermore, the U-shape pattern of GDP deflator impact by age profiles suggests the impact first increases (i.e. more negative) with age before starting to decline (i.e. less negative) when immigrants

[29] Unfortunately, as explained above at footnote 15, we cannot include both age and duration of stay variables at the same time to explore the interaction between macroeconomic variables and these two variables at the same time.

[30] This is mostly likely due to the small number (about 13 % of our sample) of individuals who have stayed in Australia for more than 48 years.

reach the age of 52. The GDP deflator impact by length of stay also presents a similar but less clear pattern.

[Figure 2 around here]

Results in Table 7 additionally show that the impact of macroeconomic fluctuations is not statistically significantly different by most of other characteristics, however some exceptions are observed. For example, single immigrants feel happier when the Australian dollar appreciates against their home countries' currencies, possibly due to the fact that single immigrants are more mobile than married immigrants and are able to take advantage of the Australian dollar appreciation to travel to their home country. Similarly, married immigrants or immigrants with more children have a higher level of life satisfaction when their home countries' GDP per capita increases, possibly because they may see better opportunities for their children from their home countries. Unexpectedly, compared to immigrants without Australian citizenship, those with Australian citizenship are found to have a higher level of SWB when their home countries' GDP per capita increases. Immigrants from English speaking countries, more democratic countries or high income countries express a higher level of well-being when their home countries' GDP per capita growth increases. Interestingly, immigrants who live further away from their home countries are found to be happier when their home countries have higher GDP per capita in nominal USD. Finally, immigrants from countries with a higher ratio of remittance/GDP are found to be less happy when their home countries' incomes (as measured by the level or growth of GDP per capita) increase.

7. Robustness checks

7.1. Return immigrants

Exactly 0.95 % of immigrants in our sample moved overseas during the study period. We investigate whether panel attrition, caused by returning immigrants, leads to selectivity bias by employing Verbeek and Nijman (1992)'s method of adding a selectivity dummy to equation (2). The selectivity dummy for individual i in year t equals 1 if an individual participates to the survey in year t and $t+1$, whereas it takes the value of zero if that individual moves overseas (and hence is not surveyed) in year $t+1$. The p value from an F test for the statistical significance of the selectivity dummy is 0.19, suggesting that attrition bias due to return immigrants is not an issue in this study.

7.2. Other robustness checks

We also examine the robustness of our results to alternative selections of country, year, and age. First, UK immigrants represent the largest share (32 % as can be seen in Table A2) of all immigrants in Australia. We gauge whether the results change when UK immigrants are excluded from the regression. Results of this experiment (reported in panel B in Table 8) are very similar to the baseline results (re-reported in panel A in Table 8 for ease of comparison), suggesting that our results for all macroeconomic variables are not driven by the UK immigrants. Second, including 84 individual-year observations from Zimbabwe in the regressions is found to change the sign of the estimate for CPI only (from negative to positive but the estimate is still statistically insignificant). This change is consistent with the hyperinflation occurring in the country during the study period and lends support to our earlier sample choice. Third, using a sample of 43 countries with 100 or more year-individual observations we get results (reported in Panel D in Table 8) similar to the baseline results. Fourth, we check the sensitivity of our results to the recent global financial crisis. Results (panel E in Table 8) do not greatly vary from the baseline after excluding the years 2008 and 2009 from our sample. Fifth, our prior findings are largely unchanged when we apply the regression (2) to a sample of working age (between 24 and 64) Australian immigrants (Panel F in Table 8). Overall, results produce evidence of little sensitivity among the alternative scenarios outlined above.

[Table 8 around here]

8. Conclusion

This paper has presented the first robust evidence that improvements in home countries' macroeconomic conditions as measured by a higher GDP per capita or lower price levels increase well-being of Australian immigrants. Furthermore, the GDP impact is highly statistically significant, especially when GDP per capita is measured in nominal USD. Our estimates suggest that the GDP impact is economically sizable as a 1 % increase in home country's GDP per capita is equivalent to more than a 2 % increase in household income in improving immigrants' well-being. We additionally find that the price impact is mild in terms of statistical significance and economic magnitude. Yet, unemployment and exchange rate fluctuations are found to have no impact on immigrants' well-being.

Our findings of a positive impact of home country's better economic performances on immigrants' well-being add new factors to the list of factors contributing the individual well-

being. These findings also give support to the theory that immigrants have emotional or altruistic links to their home countries (Becker, 1974; Schwarze and Winkelmann, 2011). We also provide additional evidence that the GDP and price impact tends to fade away as immigrants get older or stay longer in Australia, a finding that is consistent with the disintegration theory.

As some of our findings are in contrast to those reported in the work by Akay *et al.* (2013) and their work on immigrant communities in Germany, there is a clear need for future work that extends the topic to other countries. There are also venues for future research to examine the impact of macroeconomic fluctuations on other aspects of immigrant behaviour such as consumption, saving and transfers.

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Table 1: Summary statistics for main countries of origin

Country	GDP per capita in nominal USD (10,000)	GDP per capita in real USD (10,000)	GDP per capita in nominal PPP USD (10,000)	GDP per capita in real PPP USD (10,000)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in nominal PPP USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Yearly real exchange rate growth (%)	SWB
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
United Kingdom	3.64	3.76	3.31	3.46	4.17	0.90	2.48	0.90	6.01	2.33	2.36	4.00	8.06
New Zealand	2.82	2.73	2.78	3.10	9.61	1.36	3.46	1.36	5.25	2.28	2.60	0.05	7.83
Philippines	0.17	0.13	0.48	0.51	8.12	2.93	5.05	2.93	8.59	4.27	4.46	4.37	8.03
Italy	3.08	3.04	3.07	3.53	5.22	-0.08	2.52	-0.08	8.31	2.17	2.35	1.62	7.66
Vietnam	0.10	0.08	0.35	0.38	12.03	5.22	7.40	5.22	2.25	10.07	8.38	7.06	7.47
Germany	3.55	3.49	3.37	3.84	5.58	1.38	4.16	1.38	8.22	1.10	1.65	2.04	8.16
Netherlands	4.08	3.99	3.76	4.17	5.90	0.66	3.14	0.66	3.76	2.01	2.15	2.01	8.25
India	0.11	0.09	0.38	0.40	9.13	5.44	7.59	5.44	3.82	6.39	7.31	7.82	7.57
China	0.34	0.23	0.72	0.75	16.68	9.14	11.40	9.14	4.30	4.28	2.70	2.13	7.20
South Africa	0.55	0.54	1.03	1.10	7.31	1.95	4.07	1.95	24.55	6.90	5.87	7.40	7.77
United States of America	4.57	4.38	4.57	4.91	3.00	0.91	3.00	0.91	6.81	2.06	2.42	5.03	7.93
All immigrants	***2.40***	***2.39***	***2.44***	***2.64***	***7.24***	***2.05***	***4.18***	***2.05***	***6.84***	***3.73***	***3.67***	***3.87***	***7.86***
Natives	***4.14***	***3.47***	***3.56***	***3.96***	***10.71***	***1.53***	***4.16***	***1.53***	***5.32***	***3.86***	***2.92***		***7.94***

Notes: Sample of individuals age 15 or older. Countries are ordered in a descending order according to the size of Australian immigrants originating from that country in our sample.

Table 2: Home country's GDP and immigrants' SWB - Results from various specifications

GDP per capita indicators	GDP in USD				GDP in PPP USD			
	Nominal		Real		Nominal		Real	
	Pooled	FE	Pooled	FE	Pooled	FE	Pooled	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Level of GDP (Log)								
Coefficient	0.153**	0.150***	0.139*	0.186	0.229**	0.157	0.237**	0.186
	(0.072)	(0.056)	(0.072)	(0.123)	(0.112)	(0.107)	(0.117)	(0.123)
Income equivalent GDP	0.981	2.500	0.891	3.100	1.468	2.617	1.519	3.100
Number of observations	32195	32195	32195	32195	32195	32195	32195	32195
R2	0.121	0.015	0.121	0.014	0.121	0.014	0.121	0.014
Panel B: GDP Growth (%)								
Coefficient	0.003	-0.001	0.020	-0.004	0.011	-0.003	0.020	-0.004
	(0.007)	(0.001)	(0.014)	(0.004)	(0.011)	(0.003)	(0.014)	(0.004)
Income equivalent	0.019	-0.016	0.127	-0.066	0.070	-0.049	0.127	-0.066
Number of observations	32195	32195	32195	32195	32195	32195	32195	32195
R2	0.121	0.014	0.121	0.014	0.121	0.014	0.121	0.014

Notes: Pooled results are from the regression (1) while FE results are from the regression (2). Each coefficient is estimated from a separate regression.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies. Pooled regressions also include gender, ESB, duration of stay in Australia, migration cohort fixed effects, home country fixed effects and home country specific time fixed effects.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3: Impact of home country's GDP per capita in nominal USD on immigrants' SWB

GDP per capita in nominal USD (log)				With inclusion of					
				GDP per capita in nominal USD growth (%)	Unemployment rates (log)	GDP deflator (%)	CPI (%)	Nominal exchange rate (log)	Real exchange rate (log)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Current	0.150***			0.176***	0.218***	0.138**	0.145**	0.133**	0.136**
	(0.056)			(0.059)	(0.065)	(0.057)	(0.058)	(0.063)	(0.062)
One year lag		0.180***							
		(0.057)							
Two year lag			0.187***						
			(0.060)						
Income equivalent	2.500	3.000	3.117	2.933	3.633	2.300	2.417	2.217	2.267
Number of observations	32195	32195	32195	32195	32195	32155	32195	32195	32195
R2	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015

Notes: Results from FE regression (2). Each coefficient is estimated from a separate regression.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, year and month dummies.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Impact of home country's prices on immigrants' SWB

Price indicators	Pooled	FE	FE	FE	FE with inclusion of			
					GDP per capita in nominal USD (log)	Unemployment rates (log)	Nominal exchange rate (log)	Real exchange rate (log)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: GDP deflator (%)								
Current	-0.009	-0.006**			-0.005*	-0.006**	-0.005*	-0.005*
	(0.009)	(0.003)			(0.003)	(0.003)	(0.003)	(0.003)
One year lag			0.000					
			(0.002)					
Two year lag				-0.003				
				(0.002)				
Income equivalent	-0.057	-0.098	0.000	-0.050	-0.083	-0.098	-0.082	-0.082
Number of observations	32155	32155	32195	32195	32155	32155	32155	32155
R2	0.12	0.014	0.014	0.014	0.015	0.014	0.014	0.014
Panel B: CPI (%)								
Current	-0.013	-0.003			-0.002	-0.003	-0.002	-0.003
	(0.011)	(0.003)			(0.003)	(0.003)	(0.003)	(0.003)
One year lag			-0.005*					
			(0.003)					
Two year lag				-0.001				
				(0.002)				
Income equivalent	-0.083	-0.049	-0.082	-0.016	-0.033	-0.049	-0.033	-0.049
Number of observations	32195	32195	32139	32075	32195	32195	32195	32195
R2	0.121	0.014	0.014	0.014	0.015	0.014	0.014	0.014

Notes: Pooled results are from the regression (1) while FE results are from the regression (2). Each coefficient is estimated from a separate regression.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies. Pooled regressions also include gender, ESB, duration of stay in Australia, migration cohort dummies, home country fixed effects and home country specific time fixed effects.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Impact of exchange rates on immigrants' SWB

Exchange rate indicators	Pooled	FE	FE	FE	FE with inclusion of			
					GDP per capita in nominal USD (log)	Unemployment rates (log)	GDP deflator (%)	CPI (%)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Nominal exchange rate (log)								
Current	-0.160	-0.139			-0.078	-0.145	-0.100	-0.128
	(0.103)	(0.100)			(0.109)	(0.100)	(0.103)	(0.103)
One year lag			-0.099					
			(0.093)					
Two year lag				-0.048				
				(0.090)				
Income equivalent	-1.013	-2.279	-1.623	-0.800	-1.300	-2.377	-1.639	-2.098
Number of observations	32195	32195	32195	32189	32195	32195	32155	32195
R2	0.12	0.014	0.014	0.014	0.015	0.014	0.014	0.014
Panel B: Real exchange rate (log)								
Current	1.500	-0.133			-0.074	-0.139	-0.108	-0.128
	(1.224)	(0.104)			(0.112)	(0.105)	(0.104)	(0.103)
One year lag			-0.075					
			(0.096)					
Two year lag				-0.042				
				(0.089)				
Income equivalent	9.554	-2.180	-1.230	-0.689	-1.233	-2.279	-1.770	-2.098
Number of observations	32195	32195	32139	32069	32195	32195	32155	32195
R2	0.121	0.014	0.014	0.014	0.015	0.014	0.014	0.014

Notes: Pooled results are from the regression (1) while FE results are from the regression (2). Each coefficient is estimated from a separate regression.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies. Pooled regressions also include gender, ESB, duration of stay in Australia, migration cohort dummies, home country fixed effects and home country specific time fixed effects.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Impact of home country's unemployment rates on immigrants' SWB

Unemployment rates (%, log)	Pooled	FE	FE	FE	FE with inclusion of				
					GDP per capita in real USD (log)	GDP deflator (%)	CPI (%)	Nominal exchange rate (log)	Real exchange rate (log)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Current	-0.328***	0.016			0.071	0.014	0.016	0.026	0.026
	(0.088)	(0.045)			(0.053)	(0.045)	(0.045)	(0.045)	(0.045)
One year lag			0.026						
			(0.045)						
Two year lag				-0.017					
				(0.048)					
Income equivalent	-2.116	0.262	0.426	-0.279	1.183	0.230	0.262	0.426	0.426
Number of observations	32195	32195	32195	32195	32195	32155	32195	32195	32195
R2	0.122	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014

Notes: Pooled results are from the regression (1) while FE results are from the regression (2). Each coefficient is estimated from a separate regression.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies. Pooled regressions also include gender, ESB, duration of stay in Australia, migration cohort dummies, home country fixed effects and home country specific time fixed effects.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: Heterogeneity among immigrants

Interaction variable	GDP per capita in nominal USD (log)	GDP per capita in real USD (log)	GDP per capita in nominal PPP USD (log)	GDP per capita in real PPP USD (log)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment rates (log)	GDP deflator (%)	CPI (%)	Nominal exchange rate (log)	Real exchange rate (log)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Individual characteristics												
Male	0.076	0.301*	0.175	0.301*	0.000	-0.003	-0.005	-0.072	0.006	0.002	0.091	0.093
	(0.060)	(0.176)	(0.110)	(0.176)	(0.001)	(0.005)	(0.006)	(0.076)	(0.005)	(0.006)	(0.102)	(0.105)
Bachelor or higher degree	0.136***	0.128***	0.215***	0.217***	-0.001	-0.005	-0.003	0.079	-0.003	-0.006	-0.030	-0.030
	(0.040)	(0.045)	(0.065)	(0.071)	(0.001)	(0.005)	(0.006)	(0.074)	(0.005)	(0.006)	(0.027)	(0.027)
Log of household income	0.018	0.013	0.027	0.023	-0.001	-0.005**	-0.005*	0.029	-0.001	0.002	-0.003	-0.003
	(0.011)	(0.011)	(0.018)	(0.019)	(0.001)	(0.002)	(0.003)	(0.027)	(0.003)	(0.003)	(0.006)	(0.006)
Home owner	0.022	0.031	0.044	0.049	-0.002	-0.005	-0.009	-0.010	0.002	0.002	0.004	0.003
	(0.022)	(0.022)	(0.036)	(0.037)	(0.002)	(0.005)	(0.007)	(0.059)	(0.005)	(0.005)	(0.012)	(0.013)
Single	-0.079**	-0.070*	-0.109*	-0.110*	0.001	-0.003	0.005	-0.041	0.006	0.002	0.051**	0.052**
	(0.035)	(0.036)	(0.058)	(0.059)	(0.002)	(0.008)	(0.009)	(0.083)	(0.007)	(0.007)	(0.021)	(0.021)
Number of children	0.040***	0.047***	0.072***	0.080***	-0.001	-0.001	-0.002	0.000	-0.002	-0.001	-0.011	-0.012
	(0.014)	(0.016)	(0.024)	(0.026)	(0.000)	(0.002)	(0.002)	(0.024)	(0.002)	(0.002)	(0.009)	(0.009)
Speak other language at home	0.010	0.013	0.013	0.011	-0.003**	-0.011**	-0.013**	0.110*	-0.002	-0.007	-0.004	-0.004
	(0.023)	(0.023)	(0.038)	(0.038)	(0.001)	(0.005)	(0.006)	(0.057)	(0.005)	(0.005)	(0.014)	(0.014)
Speak English very well	-0.025	-0.033	-0.036	-0.041	0.003	0.005	0.007	-0.096	0.005	0.008	0.021	0.021
	(0.027)	(0.027)	(0.041)	(0.041)	(0.002)	(0.006)	(0.007)	(0.062)	(0.005)	(0.006)	(0.013)	(0.013)
Australian citizen	0.162**	0.597**	0.321**	0.597**	-0.001	-0.003	-0.003	0.071	-0.005	-0.003	0.145	0.155
	(0.075)	(0.236)	(0.149)	(0.236)	(0.001)	(0.006)	(0.007)	(0.090)	(0.007)	(0.008)	(0.140)	(0.145)
Number of siblings	0.017	0.015	0.024	0.015	0.000*	-0.001	0.000	-0.015	-0.002*	-0.001	-0.008	-0.009
	(0.012)	(0.036)	(0.022)	(0.036)	(0.000)	(0.001)	(0.001)	(0.016)	(0.001)	(0.001)	(0.022)	(0.023)
Oldest child	0.080	0.222	0.116	0.222	-0.002	-0.002	-0.002	-0.041	0.007	0.009	0.106	0.102
	(0.069)	(0.215)	(0.129)	(0.215)	(0.001)	(0.005)	(0.006)	(0.084)	(0.006)	(0.006)	(0.115)	(0.119)
Any close relative overseas	0.073	0.330*	0.184	0.330*	0.002	0.000	0.003	0.068	-0.001	0.002	0.090	0.087
	(0.061)	(0.181)	(0.112)	(0.181)	(0.001)	(0.005)	(0.006)	(0.077)	(0.006)	(0.006)	(0.099)	(0.102)
Home country's characteristics												
English speaking country	-0.006	0.026	-0.030	0.026	0.003**	0.009*	0.011*	-0.152*	0.003	-0.006	0.035	0.035

Interaction variable	GDP per capita in nominal USD (log)	GDP per capita in real USD (log)	GDP per capita in nominal PPP USD (log)	GDP per capita in real PPP USD (log)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment rates (log)	GDP deflator (%)	CPI (%)	Nominal exchange rate (log)	Real exchange rate (log)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	(0.072)	(0.340)	(0.176)	(0.340)	(0.001)	(0.005)	(0.006)	(0.091)	(0.010)	(0.010)	(0.102)	(0.106)
Distance to home countries	0.014**	0.028	0.018	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.010
	(0.007)	(0.027)	(0.014)	(0.027)	(0.000)	(0.001)	(0.001)	(0.007)	(0.001)	(0.001)	(0.011)	(0.012)
High income country	0.012	-0.213	-0.103	-0.213	0.002*	0.009*	0.012*	-0.112	0.001	0.002	-0.086	-0.104
	(0.072)	(0.250)	(0.138)	(0.250)	(0.001)	(0.006)	(0.007)	(0.118)	(0.007)	(0.009)	(0.107)	(0.110)
No dual citizenship country	0.035	0.192	0.119	0.192	-0.003	-0.014**	-0.016**	0.049	0.005	0.002	0.109	0.115
	(0.068)	(0.205)	(0.125)	(0.205)	(0.002)	(0.006)	(0.007)	(0.154)	(0.006)	(0.006)	(0.116)	(0.121)
Democracy index	-0.009	-0.056	-0.039	-0.056	0.001*	0.005***	0.006***	-0.052*	0.000	0.000	-0.018	-0.022
	(0.017)	(0.047)	(0.032)	(0.047)	(0.000)	(0.002)	(0.002)	(0.031)	(0.001)	(0.002)	(0.030)	(0.032)
Remittance/GDP ratio	-0.031***	-0.093***	-0.052***	-0.093***	-0.001**	-0.002*	-0.002**	0.023	-0.001	-0.001	-0.020	-0.018
	(0.010)	(0.029)	(0.018)	(0.029)	(0.000)	(0.001)	(0.001)	(0.016)	(0.001)	(0.001)	(0.017)	(0.017)

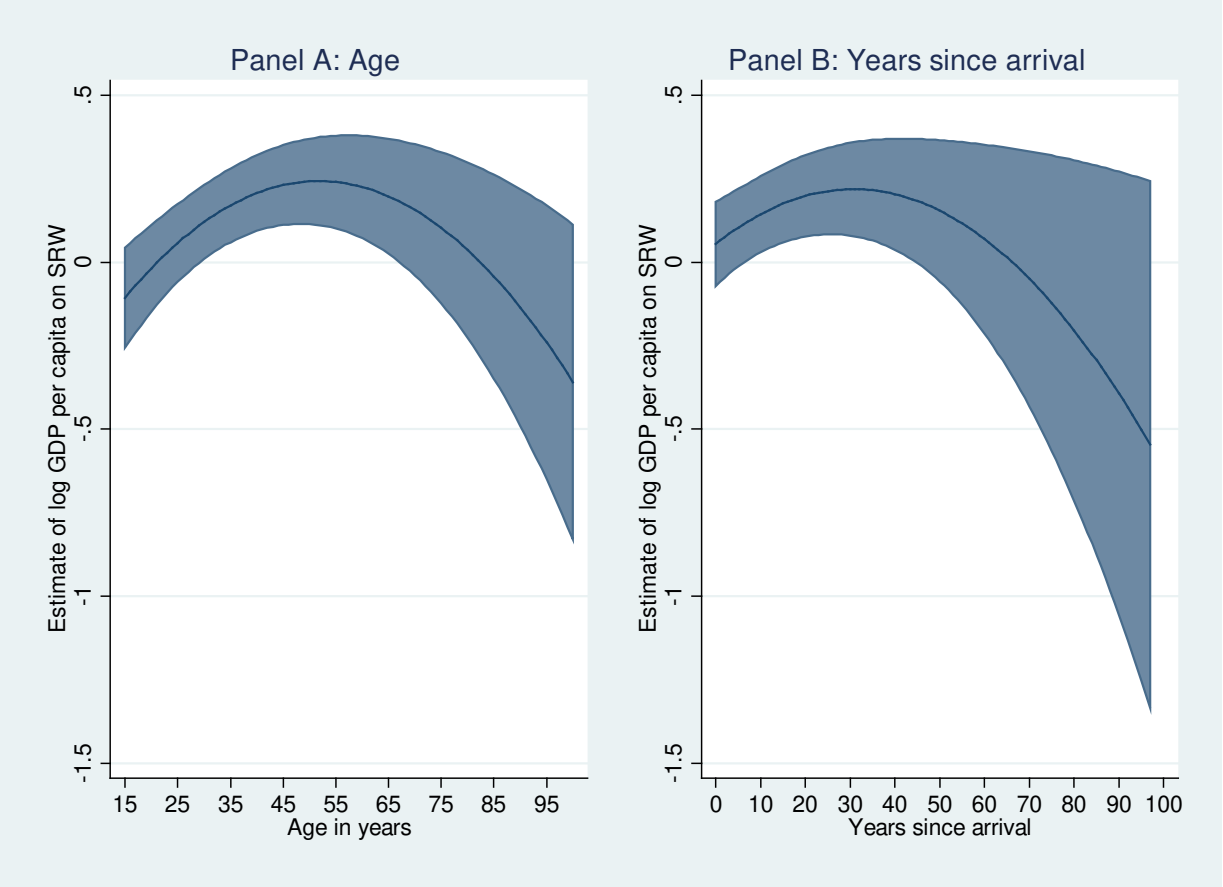
Notes: FE results are from the regression (2). Estimates for different variables are obtained from separate regressions.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, year and month dummies. Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 8: Other robustness checks

	GDP per capita in nominal USD	GDP per capita in real USD	GDP per capita in nominal PPP USD	GDP per capita in real PPP USD	Growth of GDP per capita in nominal USD (%)	Growth of GDP per capita in nominal PPP USD (%)	Growth of GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: Baseline												
	0.150***	0.186	0.157	0.186	-0.001	-0.003	-0.004	0.016	-0.006**	-0.003	-0.139	-0.133
	(0.056)	(0.123)	(0.107)	(0.123)	(0.001)	(0.003)	(0.004)	(0.045)	(0.003)	(0.003)	(0.100)	(0.104)
Panel B: Excluding UK												
	0.220***	0.205	0.202	0.205	-0.001	-0.005	-0.006	0.036	-0.006**	-0.003	-0.155	-0.144
	(0.071)	(0.139)	(0.137)	(0.139)	(0.001)	(0.004)	(0.005)	(0.051)	(0.003)	(0.003)	(0.112)	(0.115)
Panel C: Including Zimbabwe												
	0.147***	0.179	0.152	0.179	-0.001	-0.002	-0.003	0.017	-0.006**	0.000	-0.138	-0.077
	(0.056)	(0.120)	(0.105)	(0.120)	(0.001)	(0.003)	(0.004)	(0.045)	(0.003)	(0.000)	(0.099)	(0.069)
Panel D: Countries with at least 100 obs.												
	0.143**	0.151	0.121	0.151	-0.001	-0.003	-0.003	0.022	-0.008***	-0.005*	-0.154	-0.137
	(0.057)	(0.125)	(0.108)	(0.125)	(0.001)	(0.004)	(0.005)	(0.045)	(0.003)	(0.003)	(0.101)	(0.105)
Panel E: Exclude 2008 and 2009												
	0.109*	0.163	0.125	0.163	-0.002	-0.004	-0.003	0.06	-0.005	-0.003	-0.099	-0.093
	(0.059)	(0.126)	(0.109)	(0.126)	(0.001)	(0.004)	(0.006)	(0.048)	(0.003)	(0.004)	(0.104)	(0.108)
Panel F: Working age population												
	0.130*	0.154	0.117	0.154	-0.002	-0.006	-0.005	0.017	-0.009***	-0.005	-0.151	-0.136
	(0.068)	(0.143)	(0.129)	(0.143)	(0.001)	(0.004)	(0.005)	(0.055)	(0.003)	(0.003)	(0.120)	(0.125)

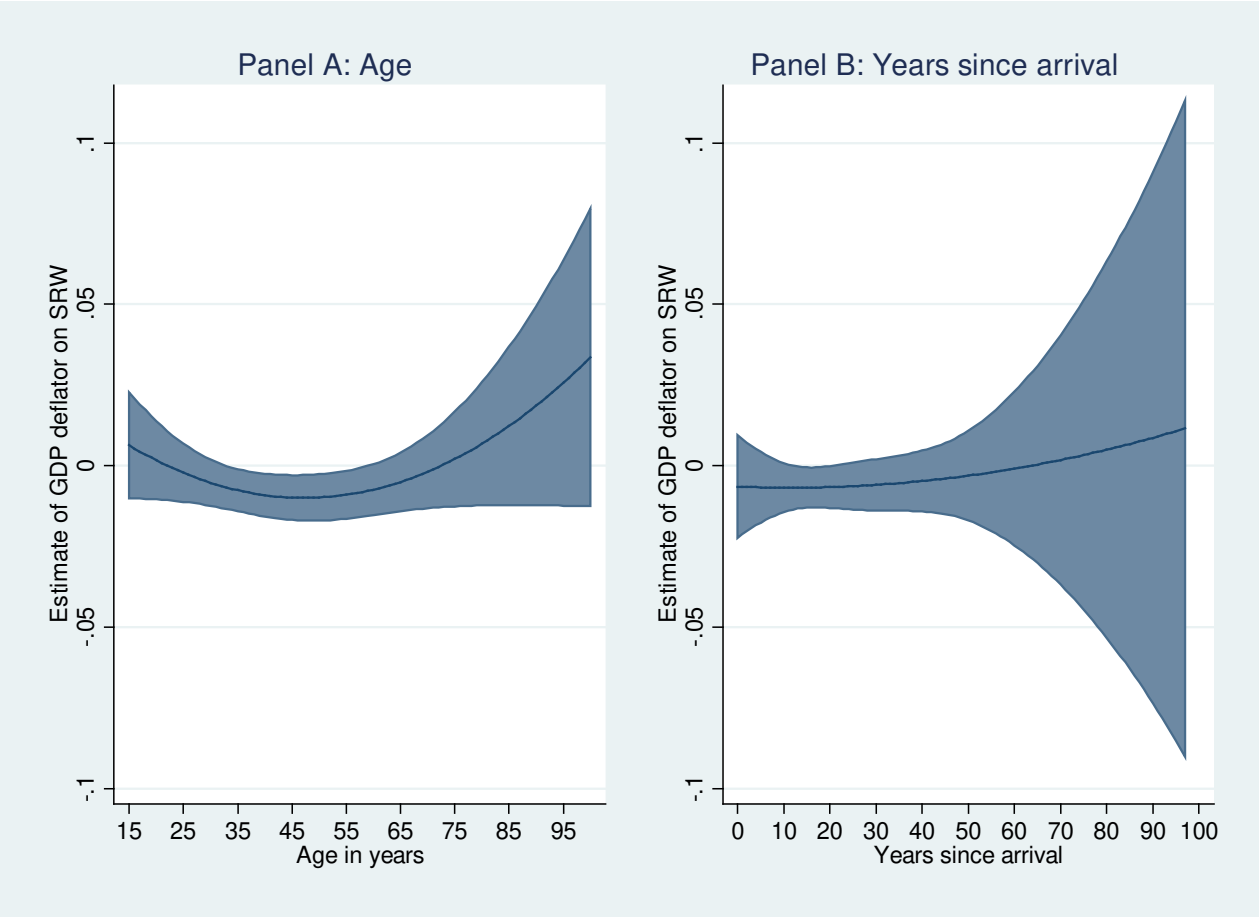
Notes: Results from FE regression (2). Each coefficient is estimated from a separate regression.
Other explanatory variables include age, education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure 1: Effects of home country's GDP per capita in nominal USD on immigrants' SWB by age and years since arrival



Notes: Shaded areas are the 95 % confidence intervals. Results are from FE regression (2). Other explanatory variables include education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies. Robust standard errors are clustered at the individual level.

Figure 2: Effects of home country's GDP deflator on immigrants' SWB by age and years since arrival



Notes: Shaded areas are the 95 % confidence intervals. Results are from FE regression (2). Other explanatory variables include education, labour market status, marital status, health status, the number of co-residing members of various age cohorts, the regional unemployment rate, regional relative socio-economic advantage index, state dummies, and year and month dummies. Robust standard errors are clustered at the individual level.

Table A1: Variable description

Variable	Definition
Dependent variable	
SWB	Self-reported well-being: scale from 0 to 10 where higher scale indicates a higher level of SWB
Independent variables	
Age	Age last birthday at June 30 (years)
Education	Dummy variables of highest education level achieved: Year 11 and below (the base group), Year 12, vocational education and training (VET) certificate, bachelor or higher
Marital Status	Dummy variables of current marital status: Never married (the base group), Married/ de facto, Separated/divorced/widowed
Work status	Dummy variables of current labour force status: economic non-active (the base group), employed full time, employed part-time, self-employed
Disable	Dummy variable: = 1 if has any long term health condition, disability or impairment, = 0 if otherwise
Household income	Disposal household income (AUD 10,000)
Home owner	Dummy variable: = 1 if the home that the respondent is living is owned or its mortgage is currently paid off by any member of the household, = 0 if otherwise
Number of residents	Number of people in the household in various age cohorts (0-4; 5-9; 10-14; 15-23;24-64; and others), excluding self (person)
Length of stay	Length of time since first arrived in Australia to live (years)
ESB	Dummy variable: = 1 if was born in a Non-English Speaking Background country, = 0 if otherwise
Urban	Dummy variable: = 1 if region of current residence is major city, = 0 if otherwise
State	Dummy variables for state of residence: NSW/ACT (the base group), VIC, QLD, SA, WA, TAS/NT
Regional unemployment rate	ABS unemployment rate in major statistical region (October of interview year) (%)
Socio-economic indicators	ABS decile of Index of relative socio-economic advantage/disadvantage
Distance to home country	The direct distance between Sydney (Australia) and the home country's capital (km)
GDP	Home country's GDP per capita (Unit of measurement is explained in the main text)
GDP growth	Home country's GDP growth rate (%)
Unemployment rate	Home country's unemployment rate (%)
GDP deflator	Home country's GDP deflator (%)
CPI	Home country's Consumer Price Index (%)
Nominal (Real) exchange rate	As defined in the main text

Table A2: Summary statistics by country of origin

Country	Number of obs.	Male (%)	Age in years	Years since arrival	GDP per capita in nominal USD (10,000)	GDP per capita in real USD (10,000)	GDP per capita in nominal PPP USD (10,000)	GDP per capita in real PPP USD (10,000)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in nominal PPP USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate	Yearly real exchange rate growth (%)	SWB
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Austria	130	43	52.02	41.4	4.04	3.81	3.70	4.10	5.61	1.18	3.49	1.18	4.37	1.72	2.13	0.63	0.64	2.44	8.13
S.D.			19.83	13.7	0.84	0.17	0.47	0.18	8.30	1.89	2.70	1.89	0.44	0.28	0.78	0.08	0.07	7.61	1.48
Bangladesh	178	60	37.28	13.0	0.05	0.05	0.18	0.19	6.57	4.65	6.78	4.65	4.30	5.95	6.87	56.07	53.72	8.69	7.33
S.D.			9.72	9.9	0.01	0.01	0.04	0.03	5.09	0.81	1.19	0.81	0.44	2.10	2.42	17.25	15.85	7.76	1.72
Belgium	52	42	40.12	28.5	3.64	3.59	3.41	3.87	6.27	0.65	3.07	0.65	7.61	2.05	2.31	0.63	0.64	1.68	7.52
S.D.			14.18	10.7	0.87	0.11	0.41	0.12	8.77	1.43	1.94	1.43	0.70	0.26	0.98	0.08	0.08	6.68	1.55
Bulgaria	68	62	60.26	28.8	0.47	0.39	1.15	1.33	13.53	4.43	7.97	4.43	11.62	5.25	5.31	1.23	1.20	2.49	7.29
S.D.			14.52	13.1	0.20	0.06	0.32	0.21	11.58	3.93	4.52	3.93	4.13	2.01	2.52	0.15	0.16	6.37	1.68
Cambodia	127	39	35.92	14.6	0.07	0.06	0.22	0.23	11.36	6.84	9.27	6.84	1.77	4.95	4.02	2792.75	2758.79	4.79	6.95
S.D.			12.09	6.6	0.02	0.01	0.05	0.04	5.35	3.33	4.19	3.33	0.10	2.96	5.76	631.64	568.96	11.72	1.73
Canada	297	39	43.51	22.0	4.07	3.61	3.75	4.03	7.14	0.92	3.09	0.92	7.17	2.36	2.07	0.93	0.94	1.83	7.99
S.D.			11.95	11.3	0.99	0.12	0.40	0.13	8.06	1.53	2.40	1.53	0.67	1.51	0.68	0.07	0.07	4.68	1.37
Chile	78	46	46.14	21.1	1.43	0.91	2.00	2.02	13.68	4.68	9.36	4.68	7.10	4.03	2.69	492.77	492.29	2.32	7.54
S.D.			18.78	12.9	0.10	0.03	0.11	0.07	8.02	0.20	4.30	0.20	0.68	3.06	0.80	15.13	10.63	2.67	1.90
China	921	40	41.84	13.7	0.34	0.23	0.72	0.75	16.68	9.14	11.40	9.14	4.30	4.28	2.70	5.93	5.93	2.13	7.20
S.D.			15.52	9.6	0.19	0.08	0.28	0.25	6.31	1.70	2.20	1.70	0.19	2.86	2.08	0.76	0.67	7.42	1.42
Colombia	145	41	33.11	9.0	0.52	0.38	0.98	1.03	10.46	2.87	4.89	2.87	11.71	5.27	4.64	1747.79	1718.28	3.51	7.23
S.D.			9.2	7.6	0.20	0.04	0.17	0.11	10.26	1.74	2.25	1.74	1.29	1.59	1.68	188.28	193.98	9.81	1.58
Croatia	255	48	53.64	30.8	0.95	1.07	1.93	2.03	15.50	0.87	4.52	0.87	13.49	2.72	3.05	4.37	4.38	-2.00	7.44
S.D.			14.05	14.2	0.34	0.03	0.13	0.06	6.69	3.79	5.59	3.79	3.67	1.69	1.27	0.11	0.11	4.36	1.77
Cyprus	107	56	57.5	29.5	2.33	2.25	2.66	3.10	5.70	0.24	3.62	0.24	5.57	2.68	2.64	0.63	0.64	2.14	7.65
S.D.			13.61	13.6	0.57	0.08	0.42	0.12	10.03	2.41	4.30	2.41	2.56	1.49	0.95	0.08	0.08	7.06	1.38
Czech Republic	169	53	55.8	34.5	1.42	1.29	2.25	2.43	11.81	2.85	4.97	2.85	7.02	1.46	2.62	17.78	17.85	-1.37	7.89

Country	Number of obs.	Male (%)	Age in years	Years since arrival	GDP per capita in nominal USD (10,000)	GDP per capita in real USD (10,000)	GDP per capita in nominal PPP USD (10,000)	GDP per capita in real PPP USD (10,000)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in nominal PPP USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate	Yearly real exchange rate growth (%)	SWB
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
S.D.			17.21	20.3	0.54	0.15	0.39	0.28	11.19	2.89	3.41	2.89	1.09	1.59	1.63	1.59	1.62	9.54	1.29
Denmark	83	41	56.8	30.9	4.89	4.69	3.61	4.21	5.15	0.12	3.07	0.12	5.37	2.33	2.20	4.71	4.75	1.73	8.29
S.D.			14.52	14.6	1.12	0.14	0.47	0.13	8.37	2.11	3.06	2.11	1.51	1.05	0.57	0.60	0.58	7.54	1.53
Egypt	306	49	52.69	31.1	0.19	0.14	0.85	0.93	6.49	2.53	4.69	2.53	10.25	8.70	8.07	4.39	4.15	10.65	7.82
S.D.			16.84	15.7	0.07	0.02	0.16	0.11	10.99	1.74	2.10	1.74	1.09	3.72	4.33	1.24	1.11	15.36	1.56
Fiji	457	55	37.53	15.9	0.36	0.36	0.69	0.74	7.80	0.86	2.96	0.86	7.40	4.72	4.40	1.46	1.43	2.88	7.79
S.D.			12.45	11.8	0.08	0.01	0.06	0.02	10.59	1.77	2.12	1.77	1.55	2.25	2.26	0.26	0.24	5.89	1.54
Finland	50	20	48.7	41.8	3.95	3.73	3.36	3.70	4.84	1.07	2.99	1.07	8.14	1.83	2.05	0.66	0.66	2.62	8.56
S.D.			12.07	7.1	0.90	0.21	0.49	0.21	9.29	3.13	3.69	3.13	0.76	1.27	1.17	0.09	0.09	6.91	1.25
France	189	57	51.95	29.6	3.47	3.38	3.14	3.56	5.27	0.58	3.13	0.58	8.84	1.81	1.80	0.63	0.64	2.08	7.71
S.D.			14.78	12.1	0.72	0.07	0.36	0.08	8.47	1.33	2.48	1.33	0.61	0.52	0.54	0.08	0.08	7.42	1.47
Germany	1108	44	58.6	41.8	3.55	3.49	3.37	3.84	5.58	1.38	4.16	1.38	8.22	1.10	1.65	0.63	0.64	2.04	8.16
S.D.			14.81	16.4	0.74	0.18	0.52	0.20	7.95	2.29	2.64	2.29	1.68	0.34	0.58	0.08	0.07	7.60	1.49
Greece	351	48	63.1	42.5	2.15	2.08	2.50	2.79	5.58	0.23	2.84	0.23	12.33	2.44	3.08	0.63	0.63	1.71	7.57
S.D.			12.69	12.0	0.59	0.17	0.32	0.23	12.15	4.69	5.61	4.69	5.05	1.37	0.91	0.08	0.08	6.86	2.08
Hong Kong	492	45	39.54	18.2	2.94	2.79	3.99	4.29	3.07	3.19	5.34	3.19	5.02	-0.14	1.23	6.15	6.22	3.96	7.49
S.D.			15.77	12.0	0.42	0.38	0.82	0.59	4.19	3.15	3.73	3.15	1.46	2.95	2.62	1.27	1.14	8.93	1.12
Hungary	211	40	59	37.5	1.06	1.06	1.79	2.13	10.69	2.17	5.83	2.17	7.76	5.24	5.62	161.90	157.94	2.59	7.24
S.D.			16.65	16.5	0.31	0.08	0.30	0.16	13.07	3.19	3.80	3.19	2.01	2.82	1.78	25.65	25.30	8.20	1.72
India	1003	52	45.54	20.0	0.11	0.09	0.38	0.40	9.13	5.44	7.59	5.44	3.82	6.39	7.31	39.67	37.84	7.82	7.57
S.D.			15.81	15.0	0.04	0.02	0.11	0.09	9.09	2.15	2.44	2.15	0.37	1.90	2.72	9.98	8.74	7.70	1.53
Indonesia	320	38	42.68	21.7	0.21	0.14	0.67	0.72	12.71	4.01	6.14	4.01	8.36	9.66	7.70	7451.31	7151.34	5.96	7.93
S.D.			17.4	18.0	0.10	0.02	0.15	0.11	9.88	0.98	1.19	0.98	1.42	4.12	3.04	1559.43	1609.98	7.33	1.34
Iran	120	68	42.94	18.5	0.44	0.28	1.26	1.37	9.51	3.67	5.78	3.67	12.05	17.09	14.91	6530.31	5825.13	38.36	6.97
S.D.			10.35	10.5	0.17	0.04	0.25	0.17	15.50	2.02	2.24	2.02	1.06	7.48	4.39	2922.98	2581.82	88.12	1.82
Ireland	509	53	57.45	35.0	4.48	4.64	3.87	4.39	6.14	0.96	3.70	0.96	7.56	1.84	2.64	0.63	0.63	1.90	8.04

Country	Number of obs.	Male (%)	Age in years	Years since arrival	GDP per capita in nominal USD (10,000)	GDP per capita in real USD (10,000)	GDP per capita in nominal PPP USD (10,000)	GDP per capita in real PPP USD (10,000)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in nominal PPP USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate	Yearly real exchange rate growth (%)	SWB
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
S.D.			15.62	15.1	0.98	0.23	0.46	0.22	11.03	3.15	4.36	3.15	4.52	2.97	2.51	0.08	0.08	6.44	1.59
Italy	1157	49	63.05	45.4	3.08	3.04	3.07	3.53	5.22	-0.08	2.52	-0.08	8.31	2.17	2.35	0.63	0.63	1.62	7.66
S.D.			12.28	9.3	0.63	0.08	0.30	0.09	8.71	2.05	3.01	2.05	1.27	0.77	0.65	0.08	0.07	7.33	1.92
Japan	231	17	39.07	14.4	3.83	3.58	3.16	3.39	2.24	0.73	2.65	0.73	4.60	-1.34	-0.22	80.61	83.12	2.35	7.53
S.D.			10.27	9.1	0.54	0.11	0.29	0.10	6.76	2.23	2.51	2.23	0.47	0.43	0.65	9.04	8.90	7.48	1.53
Korea, Republic of	53	34	35.32	10.6	1.89	2.00	2.63	2.73	4.62	3.33	4.12	3.33	3.50	2.42	3.39	928.66	925.34	5.01	6.77
S.D.			13.33	8.8	0.56	0.31	0.54	0.43	8.40	1.63	2.51	1.63	0.29	1.03	0.78	216.28	213.26	5.15	1.87
Latvia	74	42	77.51	57.2	0.96	0.72	1.55	1.82	13.77	6.00	9.02	6.00	12.26	6.10	4.82	0.64	0.63	2.24	8.76
S.D.			7.55	4.4	0.42	0.13	0.42	0.32	15.39	7.30	6.10	7.30	3.91	5.78	3.88	0.08	0.09	8.98	1.32
Lebanon	72	56	49.35	30.1	0.85	0.69	1.54	1.58	12.78	7.14	8.21	7.14	8.90	5.19	2.63	1289.85	1285.66	13.95	7.49
S.D.			16.78	13.7	0.02	0.02	0.05	0.04	7.21	1.54	1.32	1.54	0.00	5.21	1.41	95.62	84.21	0.00	2.17
Malaysia	540	38	48.37	22.7	0.68	0.58	1.73	1.87	8.53	2.87	5.00	2.87	3.38	3.45	2.21	2.72	2.74	3.18	7.66
S.D.			15.03	10.3	0.23	0.06	0.32	0.21	8.96	2.43	2.75	2.43	0.19	4.02	1.25	0.39	0.37	7.93	1.51
Malta	197	39	58.11	46.5	1.65	1.53	2.32	2.67	5.79	0.49	3.07	0.49	6.85	2.92	2.47	0.63	0.63	1.59	7.77
S.D.			11.51	9.6	0.41	0.08	0.36	0.14	8.35	2.69	3.54	2.69	0.42	0.83	0.80	0.08	0.08	7.76	1.84
Mauritius	214	35	47.19	23.4	0.64	0.55	1.29	1.38	7.49	3.05	5.17	3.05	7.92	5.10	5.67	23.97	23.34	5.91	7.85
S.D.			14.06	11.3	0.18	0.07	0.25	0.16	8.98	1.38	1.61	1.38	0.76	2.73	2.29	5.15	5.03	6.01	1.57
Nepal	106	70	28.36	6.0	0.05	0.04	0.18	0.19	7.93	2.68	4.71	2.68	2.67	8.15	7.82	67.05	63.50	8.58	7.60
S.D.			5.83	5.9	0.02	0.00	0.03	0.02	7.61	1.39	1.46	1.39	0.34	3.70	2.84	17.01	14.83	6.67	1.33
Netherlands	1044	52	61.63	44.4	4.08	3.99	3.76	4.17	5.90	0.66	3.14	0.66	3.76	2.01	2.15	0.63	0.64	2.01	8.25
S.D.			13.21	13.6	0.89	0.16	0.48	0.17	8.79	1.97	3.44	1.97	0.96	1.37	0.92	0.08	0.08	7.75	1.36
New Zealand	3457	53	44.21	22.3	2.82	2.73	2.78	3.10	9.61	1.36	3.46	1.36	5.25	2.28	2.60	1.20	1.21	0.05	7.83
S.D.			14.9	13.1	0.77	0.10	0.35	0.12	11.43	1.59	1.91	1.59	1.17	1.46	1.06	0.07	0.07	3.80	1.47
Pakistan	81	56	38.19	11.3	0.10	0.07	0.38	0.40	7.72	1.82	3.86	1.82	5.98	10.23	8.56	68.08	63.78	9.58	7.86
S.D.			12.27	10.5	0.03	0.01	0.07	0.04	8.79	1.51	1.86	1.51	1.15	6.44	4.03	27.37	24.32	5.69	1.86
Papua New Guinea	300	47	41.21	30.3	0.11	0.09	0.18	0.19	12.09	2.20	4.37	2.20	2.50	5.95	6.34	2.24	2.17	3.14	8.08

Country	Number of obs.	Male (%)	Age in years	Years since arrival	GDP per capita in nominal USD (10,000)	GDP per capita in real USD (10,000)	GDP per capita in nominal PPP USD (10,000)	GDP per capita in real PPP USD (10,000)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in nominal PPP USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate	Yearly real exchange rate growth (%)	SWB
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
S.D.			12.54	13.0	0.05	0.01	0.03	0.02	12.54	3.12	3.05	3.12	0.18	5.53	4.42	0.19	0.22	10.12	1.27
Peru	67	46	50.54	21.5	0.40	0.31	0.83	0.88	10.93	4.46	6.54	4.46	4.56	3.47	2.67	2.48	2.48	2.98	8.03
S.D.			15.28	10.0	0.16	0.06	0.21	0.16	6.67	2.53	2.77	2.53	0.71	2.41	1.29	0.31	0.29	7.86	1.42
Philippines	1256	30	39.05	16.2	0.17	0.13	0.48	0.51	8.12	2.93	5.05	2.93	8.59	4.27	4.46	38.18	37.60	4.37	8.03
S.D.			13.85	8.9	0.06	0.01	0.09	0.06	8.18	1.83	2.14	1.83	1.88	1.52	1.61	5.68	5.47	8.38	1.38
Poland	483	38	53.24	30.5	0.93	0.86	1.60	1.81	9.78	3.65	6.33	3.65	13.90	2.44	3.05	2.53	2.53	3.02	7.51
S.D.			18.16	17.1	0.33	0.13	0.40	0.28	11.02	1.83	2.37	1.83	4.77	1.17	1.41	0.38	0.36	10.29	1.76
Portugal	99	36	36.48	21.4	1.72	1.82	2.18	2.55	5.40	-0.12	2.78	-0.12	7.95	2.29	3.02	0.63	0.63	0.43	7.48
S.D.			11.67	10.1	0.42	0.03	0.31	0.04	9.40	1.64	2.54	1.64	3.72	1.45	1.23	0.08	0.08	6.78	1.93
Romania	251	44	48.42	20.6	0.61	0.50	1.23	1.48	15.11	4.66	9.76	4.66	7.08	13.48	10.83	0.63	0.59	4.84	7.55
S.D.			17.29	12.8	0.28	0.08	0.40	0.24	17.28	4.81	6.29	4.81	0.54	9.65	8.65	0.08	0.10	6.64	1.71
Russian Federation	199	54	57.19	20.0	0.77	0.57	1.56	1.93	19.22	4.74	10.70	4.74	7.23	14.09	11.54	23.09	21.47	7.31	7.46
S.D.			16.85	14.4	0.43	0.10	0.58	0.32	16.80	4.36	7.56	4.36	1.03	5.02	4.30	5.21	5.47	8.90	1.37
Singapore	152	55	45.28	25.3	3.62	3.06	5.87	6.33	6.60	2.86	5.01	2.86	3.72	0.90	2.28	1.18	1.18	1.61	7.45
S.D.			13.08	13.7	1.19	0.43	1.26	0.89	8.86	4.78	5.05	4.78	0.78	2.41	2.11	0.13	0.11	6.53	1.52
South Africa	888	50	39.67	18.0	0.55	0.54	1.03	1.10	7.31	1.95	4.07	1.95	24.55	6.90	5.87	6.19	6.01	7.40	7.77
S.D.			15.66	9.7	0.18	0.04	0.16	0.09	16.56	1.73	2.36	1.73	1.45	1.69	2.36	1.32	1.25	8.22	1.33
Spain	100	66	42.05	21.8	2.61	2.54	2.87	3.20	5.77	0.28	3.09	0.28	14.79	2.46	2.80	0.64	0.64	2.58	7.82
S.D.			16.5	11.9	0.59	0.07	0.36	0.09	10.75	1.92	3.70	1.92	5.94	1.96	1.01	0.08	0.08	7.12	1.21
Sri Lanka	566	52	46.43	19.4	0.17	0.14	0.61	0.66	10.70	5.07	7.26	5.07	6.55	10.13	10.02	85.76	80.54	9.19	7.96
S.D.			17.19	12.7	0.08	0.03	0.16	0.13	7.56	2.48	2.65	2.48	1.48	3.18	4.85	25.71	24.97	8.18	1.46
Sudan	56	68	38.02	10.9	0.10	0.07	0.28	0.30	13.69	3.55	5.73	3.55	14.86	13.39	12.53	0.78	0.71	3.13	7.16
S.D.			14.83	4.7	0.05	0.01	0.06	0.04	8.92	2.60	3.08	2.60	0.07	10.10	8.62	0.17	0.12	9.80	2.01
Sweden	89	53	44.21	25.8	4.18	4.08	3.50	3.89	5.52	1.49	3.19	1.49	6.86	1.62	1.53	5.83	5.91	2.20	8.13
S.D.			17.53	15.0	1.05	0.25	0.50	0.24	12.15	2.90	3.82	2.90	1.24	0.72	1.08	0.60	0.60	4.37	1.23
Switzerland	87	45	49.36	27.1	6.26	5.33	4.41	4.97	6.27	0.81	3.98	0.81	3.92	0.79	0.48	0.93	0.95	1.09	8.36

Country	Number of obs.	Male (%)	Age in years	Years since arrival	GDP per capita in nominal USD (10,000)	GDP per capita in real USD (10,000)	GDP per capita in nominal PPP USD (10,000)	GDP per capita in real PPP USD (10,000)	Growth in GDP per capita in nominal USD (%)	Growth in GDP per capita in real USD (%)	Growth in GDP per capita in nominal PPP USD (%)	Growth in GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate	Yearly real exchange rate growth (%)	SWB
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
S.D.			16.58	22.6	1.54	0.20	0.70	0.18	7.98	1.60	3.37	1.60	0.56	0.89	0.72	0.05	0.05	6.35	1.07
Thailand	129	16	34.21	10.4	0.39	0.29	1.11	1.17	7.69	3.65	5.70	3.65	1.26	2.48	2.71	28.60	28.61	2.72	7.81
S.D.			11.57	8.6	0.14	0.04	0.23	0.16	7.48	3.18	3.36	3.18	0.58	1.64	1.57	3.18	2.84	4.85	1.37
Turkey	155	43	40.63	23.4	0.77	0.73	1.35	1.56	8.69	3.08	5.75	3.08	10.35	15.92	17.27	1.23	1.12	21.01	7.83
S.D.			11.13	9.5	0.28	0.10	0.37	0.21	16.29	4.84	6.69	4.84	1.25	14.71	15.87	0.39	0.42	21.64	1.55
Ukraine	124	37	56.56	31.4	0.24	0.19	0.69	0.74	18.65	5.01	7.28	5.01	8.11	14.71	9.66	5.13	4.85	9.86	7.56
S.D.			23.92	22.6	0.11	0.03	0.15	0.11	16.17	6.27	6.81	6.27	1.32	6.80	6.40	2.08	2.10	13.59	1.40
United Kingdom	10377	50	55.11	35.3	3.64	3.76	3.31	3.46	4.17	0.90	2.48	0.90	6.01	2.33	2.36	0.47	0.47	4.00	8.06
S.D.			16.07	15.5	0.60	0.16	0.28	0.14	9.31	2.35	3.09	2.35	1.36	0.53	1.02	0.11	0.10	6.39	1.47
United States of	569	45	48.65	25.4	4.57	4.38	4.57	4.91	3.00	0.91	3.00	0.91	6.81	2.06	2.42	0.81	0.81	5.03	7.93
S.D.			15.31	15.4	0.47	0.15	0.47	0.16	2.18	1.68	2.18	1.68	1.85	0.69	1.05	0.17	0.17	8.11	1.46
Uruguay	89	43	43.99	26.9	0.78	0.57	1.28	1.39	6.60	2.72	4.90	2.72	8.16	8.03	8.69	16.92	16.01	12.26	8.25
S.D.			11.74	10.2	0.38	0.10	0.32	0.24	18.76	4.90	5.21	4.90	1.37	4.01	4.19	4.57	4.30	21.54	1.63
Vietnam	1115	43	41.83	18.7	0.10	0.08	0.35	0.38	12.03	5.22	7.40	5.22	2.25	10.07	8.38	13657.75	12837.04	7.06	7.47
S.D.			13.91	7.7	0.04	0.01	0.09	0.07	5.86	0.70	1.31	0.70	0.23	5.83	6.19	4689.75	3975.29	9.53	1.49
Zambia	92	51	39.99	20.9	0.09	0.07	0.24	0.25	14.38	3.04	5.18	3.04	14.82	14.49	13.45	0.80	0.74	6.58	7.11
S.D.			9.13	8.6	0.04	0.01	0.04	0.03	15.59	0.89	1.12	0.89	1.10	4.75	5.65	0.16	0.17	10.08	1.60
All immigrants	32195	48	50.08	28.8	2.40	2.39	2.44	2.64	7.24	2.05	4.18	2.05	6.84	3.73	3.67	604.15	569.60	3.87	7.86
S.D.			16.99	16.7	1.65	1.59	1.30	1.37	10.43	3.05	3.73	3.05	4.13	4.02	3.66	2770.47	2581.83	9.77	1.53
Australia	129150	47	42.33		4.14	3.47	3.56	3.96	10.71	1.53	4.16	1.53	5.32	3.86	2.92				7.94
S.D.			18.55		1.57	0.20	0.51	0.22	12.21	0.99	2.60	0.99	0.71	1.47	0.83				1.50

Notes: Sample of individual age 15 or older. Standard Deviations (S.D) are reported right below each country.

Table AA3: Correlation matrix of macroeconomic and self-reported well-being variables

	GDP per capita in nominal USD	GDP per capita in real USD	GDP per capita in nominal PPP USD	GDP per capita in real PPP USD	Growth of GDP per capita in nominal USD (%)	Growth of GDP per capita in nominal PPP USD (%)	Growth of GDP per capita in real PPP USD (%)	Unemployment (%)	GDP deflator (%)	CPI (%)	Nominal exchange rate	Real exchange rate	SWB
GDP per capita in nominal USD	1.00												
GDP per capita in real USD	0.96	1.00											
GDP per capita in nominal PPP USD	0.96	0.94	1.00										
GDP per capita in real PPP USD	0.93	0.95	0.98	1.00									
Growth of GDP per capita in nominal USD (%)	-0.24	-0.25	-0.27	-0.22	1.00								
Growth of GDP per capita in nominal PPP USD (%)	-0.46	-0.45	-0.45	-0.41	0.55	1.00							
Growth of GDP per capita in real PPP USD (%)	-0.48	-0.48	-0.48	-0.46	0.64	0.88	1.00						
Unemployment (%)	-0.16	-0.18	-0.13	-0.14	-0.09	-0.16	-0.18	1.00					
GDP deflator (%)	-0.54	-0.54	-0.55	-0.55	0.28	0.34	0.32	0.08	1.00				
CPI (%)	-0.46	-0.50	-0.48	-0.49	0.16	0.19	0.20	0.10	0.87	1.00			
Nominal exchange rate	-0.30	-0.31	-0.33	-0.34	0.11	0.17	0.21	-0.17	0.40	0.34	1.00		
Real exchange rate	-0.30	-0.31	-0.33	-0.34	0.11	0.17	0.21	-0.18	0.39	0.33	1.00	1.00	
SWB	0.10	0.11	0.09	0.09	-0.03	-0.07	-0.07		-0.06	-0.06	-0.05	-0.05	1.00

Notes: All listed correlation coefficients are statistically significant at the 1 % level. Unlisted correlation coefficient is statistically insignificant at any conventional level.

Table A4: Self-reported well-being estimates with alternative specifications

	Pooled 1	Pooled 2	FE 1	FE 2
Variables	(1)	(2)	(3)	(4)
Log of household disposal income	0.158***	0.156***	0.061***	0.060***
	(0.021)	(0.021)	(0.017)	(0.017)
Age	-0.070***	-0.069***	-0.024**	-0.039***
	(0.007)	(0.007)	(0.010)	(0.012)
Age squared	0.001***	0.001***	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Length of stay in Australia	0.026*	0.025*		
	(0.014)	(0.014)		
Length of stay in Australia squared	-0.000**	-0.000**		
	(0.000)	(0.000)		
Male	-0.110***	-0.109***		
	(0.038)	(0.038)		
Married/de facto [(a)]	0.363***	0.359***	0.149**	0.148**
	(0.063)	(0.063)	(0.059)	(0.059)
Separated/divorced/widowed [(a)]	-0.058	-0.059	-0.263***	-0.261***
	(0.084)	(0.084)	(0.087)	(0.088)
English Speaking country immigrant [(a)]	0.216	0.035		
	(0.151)	(0.167)		
Year 12 [(b)]	-0.071	-0.067	-0.271***	-0.267***
	(0.060)	(0.060)	(0.081)	(0.081)
Vocational education training [(b)]	-0.029	-0.031	-0.191**	-0.188**
	(0.049)	(0.049)	(0.088)	(0.088)
Bachelor or honours or higher [(b)]	-0.136**	-0.136**	-0.297***	-0.306***
	(0.055)	(0.055)	(0.101)	(0.101)
Disable	-0.593***	-0.593***	-0.140***	-0.140***
	(0.038)	(0.038)	(0.023)	(0.023)
Employed full-time [(c)]	0.030	0.028	0.122***	0.120***
	(0.045)	(0.045)	(0.037)	(0.037)
Employed part-time [(c)]	0.161***	0.159***	0.143***	0.142***
	(0.044)	(0.044)	(0.033)	(0.033)
Self-employed [(c)]	-0.003	-0.005	0.120**	0.118**
	(0.063)	(0.062)	(0.053)	(0.053)
Home owner	0.166***	0.165***	0.054	0.052
	(0.041)	(0.041)	(0.035)	(0.035)
Unemployment rate in major statistical region	-0.005	-0.005	-0.022*	-0.024*
	(0.018)	(0.018)	(0.012)	(0.012)
Nominal GDP (per capita, USD, log)		0.153**		0.150***
		(0.072)		(0.056)
Observations	32,195	32,195	32,195	32,195
R-squared	0.120	0.121	0.014	0.015

Notes: Pooled results are from the regression (1) while FE results are from the regression (2).
Other explanatory variables include the number of co-residing members of various age cohorts, regional relative socio-economic advantage index, state dummies, and year and month dummies. Pooled regressions also include migration cohort fixed effects, home country fixed effects and home country specific time fixed effects.
[(a)] Being single is the base group; [(b)] Year 11 and below is the base group; and [(c)] "Economic inactive" is the base group.
Robust standard errors clustered at the individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.