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Monthly condensed analyses of crucial real estate and economic issues offered by UCLA Anderson Forecast and UCLA Ziman Center for Real Estate. In this June 2024 Letter, UCLA Ziman Center for Real Estate Staff Economist S. Sayantani, Ph.D. examines the complex interplay between California's migration issues and its rising income inequality. The full report – "A survey of California's income inequality and migration" – is available here.

Ins and Outs of Income and Migration

The Complex Interplay Between Migration and California's Income Inequality

By S. Sayantani

According to California's 2021 Gini coefficient (measuring income inequality), California is the fourth most unequal state in the country. And while prior studies focus on recent changes in income dispersion both in the state and elsewhere in the U.S., there are few analyses exploring the trending up in California's income inequality across decades. A possible factor in explaining the upward trend in income inequality is population mobility, as California has experienced sustained net loss of domestic migrants since the late 1980s. This study examines the association between California's income inequality and migration. Specifically, it explores heterogeneity amongst emigration groups, comparing demographics of emigrants and their correlation to changing income inequality.

The study begins with assessment of income inequality for California as a whole, then delves into inequalities across smaller geographies within California. It looks at trends in in-migration to and out-migration from California over the years. The following subsection classifies emigrants into demographic groups and tracks changes over time. The final section estimates correlations between income inequality, in-migration and the various out-migration groups in order to explore how they impact one another.

SECTION 1: INCOME INEQUALITY

Our analysis employs the Coefficient of Variation (CoV) method of analysis to understand how income inequality has changed over the decades. While mean income increased over the years, the variation of income across different counties within California increased even more, leading to a substantial increase in Coefficient of Variation (the ratio of income variation to mean income). The San Francisco-Oakland-Hayward MSA (or Metropolitan Statistical Area) had the highest level of income inequality, while the Riverside-San Bernardino-Ontario MSA showed gradual improvement in inequality ending with the lowest CoV magnitude by 2019.

SECTION 2: THE STORY OF CALIFORNIA MIGRATION

This section uses yearly state-to-state migration flows from 2005 to 2019 sourced from the American Community Survey (ACS) 1-Year Estimates. Note that in-migration and out-migration all refer to movements among U.S. states.

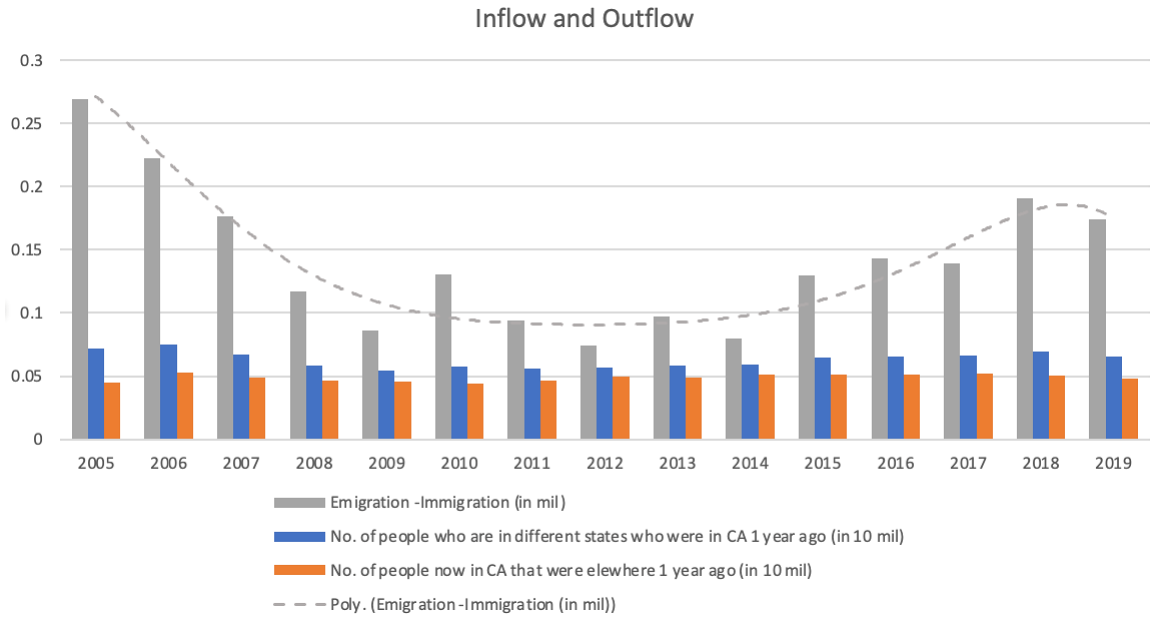

Figure: Immigration from and Emigration to CA with trendline

The blue bars in the above chart show emigration levels, while the orange bars show immigration, in tens of millions. The grey bars show how much out-migration from California consistently exceeded in-migration to California over the 2005-2019 period. Note here that the grey bars, depicting net out-migration is in millions, while the emigration and immigration numbers are in tens of millions. The grey trendline of net migration, between 2006 and 2018, exhibits a declining trend in California net out-migration, averaging 129,000 annually. Also, the blue bars show that between 2006 and 2009, there was a sustained decrease in emigration, with about half a million people emigrating out of California in 2009. The downward trend stabilizes around 2010 before increasing in 2015, at which point, emigration moved up markedly to around 800,00. Together, the difference between emigration and immigration observes a fall from 2005 to 2010, holds steady at around 90,000 and then increases till 2018, dipping slightly in 2019.

> *"There is a "back and forth" interplay between out-migration, in-migration, and income inequality: Every 2 years after an increase in immigration, a rise in emigration and a decline in income inequality seem to follow."*

We also used data from IPUMS USA to observe the demographics of California individuals who moved between California and other states. The results show consistently higher migration of white people relative to migration by any other race, followed by the migration of Black people. By age, the data reveal migration of people who are in their 20s has been consistently higher relative to other age groups, followed in decreasing order by migration of people in their 30s, people over 60 and people in their 50s. And by income quartile (i.e., 25% of data), the migration of people who earn the highest income outnumber the migration of people in other income quartiles. White emigration, emigration of people in their 20s, and those in higher income quartiles all follow similar trends across time: They remain relatively low between 2000 -2004, uptick significant starting in 2005, and peak in 2018.

SECTION 3: INCOME INEQUALITY AND MIGRATION

This section correlates changes in inequality with changes in migration, and their association with one another. These relationships may play out with some lag time. Consequently, this section employs a vector auto-regression (VAR) model which is a statistical approach that captures changing relationships between multiple factors over time.

The results reveal a "back and forth" interplay between out-migration, in-migration, and income inequality over time: Every two years after an increase in immigration, a rise in emigration and a decline in income inequality seem to follow. We also find this "back-and-forth" interplay in ethnic and age-related demographics: The share of emigrants earning the lowest income drops after a year of increase in white emigration, and after two years of decrease in emigration of people aged 20-30 years. The exact same trend occurs in the share of emigrants earning the highest income, with a drop observed after a year of increase in white emigration.

CONCLUSION: THE COMPLICATED PATTERNS OF INEQUALITY AND MIGRATION

Our study probes associations between California's net migration patterns and the state's income inequality. The study finds that decreased domestic immigration is associated with worsening inequality, because larger inequality potentially reduces the desirability to move to the state. However, when it comes to emigration out of California, the net impact of increasing inequality appears ambiguous and insignificant: People may wish to move out of a region that is becoming more unequal, but that decision critically hinges on the income dynamics or other factors relevant to the residents in question. Overall, it appears that income inequality neither increased nor decreased migration out of the state. However, apart from increased emigration of residents earning low incomes, all other types of migration out of the state worsen income inequality.

It should be noted that the relationships reported here are largely speculative, purely correlation-based and do not suggest causal chain of events.

A NOTE ON HOUSING PRICES

While there are many factors associated with the increase in California net out-migration, the most influential may be discernible increases in California's price levels, particularly in housing rents. The Public Policy Institute of California has been surveying residents starting in 2004, and as of 2023, about 45% of the responders claim that they have considered relocating out of California, citing housing costs. Average housing conditions in California are arguably inferior relative to other U.S. states as evidenced by County Health Rankings and Roadmaps published in 2023 by the University of Wisconsin Population Health Institute. Using data between 2015-2019, it finds California counties have an average of 26% of households with at least 1 out of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities.

The Federal Housing Finance Agency's House Price Index (HPI) offers insights into house price fluctuations. It shows a significant correlation with net-emigration during 2005 and 2019. Similarly, researchers Olney and Thompson (2024) discuss in their working paper how migration moves in the same direction as the housing price gap between the destination and origin. It shows that California is one of the top five states in average home price index appreciation between 1975-2014, potentially driving out-migration.

There are likely many factors correlating the income inequality, housing prices and out-migration. But studying them requires lengthy and intricate economic models. The current study abstracts from the complexity and attempts to isolate inequality and emigration in a simple and concise model.