Achieving MELIority: Why Demographers, Not Economists, Are Destined to Replace GDP with Median Expected Lifetime Income (MELI).

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Extended Abstract:

Gross Domestic Product (GDP) stands as the most extensively employed metric for evaluating well-being globally. This predominance owes much to its history as the oldest measure and governments have invested far more resources into refining GDP than all other approaches combined. Simon Kuznets won the third Nobel Prize in Economics for developing GDP and subsequently there are thousands of economists working on it every year and hundreds gather annually to work on improving and standardizing it, as well as to explore alternatives that might someday supplant it. However, despite these efforts, alternative metrics have consistently faltered, as will be explained shortly.

In parallel, there is also a separate movement led by psychologists with a completely different methodology that wishes to replace GDP. The International Society for Quality-of-Life Studies (ISQOLS) is at the forefront of this endeavor where hundreds of researchers from dozens of countries convene annually to discuss how to measure average happiness, subjective wellbeing, or related concepts. Although this research has developed many wonderful ideas for individuals and policymakers, it has diverted approximately zero attention away from GDP because most people understand and trust GDP more.

The conventional preference for GDP over average happiness is because of the greater clarity of GDP per capita as a measure of average income. Everyone understands how to compare income whereas we don't know how to compare happiness across individuals. Is it better to be a Socrates dissatisfied than a fool satisfied, as John Stuart Mill claimed? Questions like these are difficult to answer because happiness and subjective wellbeing have various dimensions and are harder to measure consistently than a flow of income. While income is undoubtedly less critical than happiness, its tangibility makes it relatable. Most

individuals worldwide can envision their local poverty line income and what it means to earn double that amount. In contrast, there exists no equivalent benchmark for doubling happiness, rendering comparisons more elusive.

For all its numerous limitations, income is a very useful measure of economic wellbeing and even if we could figure out a perfect measure of happiness, it wouldn't replace income as a measure of wellbeing because people will still care about income too. The popularity of per-capita GDP shows that people want make comparisons of income, so we should develop the optimal measure of income. Median Expected Lifetime Income (MELI) is a much better measure than per-capita GDP because MELI uses the median income rather than the mean income which is preferable income which is approximately lognormally distributed across the bottom 90% of households. This approach more accurately deals with the adverse effects of rising inequality while remaining accessible to ordinary people, in contrast to the geometric mean used in the United Nations' Human Development Index (HDI).

Any income metric must establish a temporal framework. GDP employs the arbitrary solar year, whereas MELI encapsulates income across a lifetime. This amalgamation of lifespan and income offers a natural measure that resonates with people's lives more than simple annual income. Amartya Sen once said that life expectancy is the single best measure of welfare and he inspired the UN to develop the Human Development Index (HDI) which combines income, lifespan and education. Although the HDI is the second most successful measure of economic wellbeing after GDP, it is far less popular because nobody knows what it means if a country's HDI goes up from 50 to 75. Do you? Actually, this is a trick question because the HDI only goes from 0 to 1, but even most economists do not know that! Because the HDI is a unit-free index it is impossible to compare it to any empirical quantity in a person's life. In contrast, most people can intuitively understand the meaning of a change in median lifetime income of US$50k to US$75k (after converting from dollars into the local currency).

MELI combines 2/3 of the data in the HDI into a measure empirically comparable to individuals' life experiences, rendering it more comprehensible than the HDI and most other post-GDP indices. Nevertheless, GDP is entrenched in economics beginning with everyone's very first economics class and this poses a significant challenge to transitioning to median income. GDP relies on aggregate data, which lacks household-level information essential for median income calculation, a realm outside the purview of GDP-focused economists. Median income requires the methodology of demographers and census bureaus, but they have not seen their remit as being to replace GDP as a measure of income, so there has been an odd separation between the institutions that measure mean income (GDP) and median income.

Calculating MELI presents two methodological challenges: household size adjustment and incorporating expected lifespan to calculate lifetime income. Because most people live in households that share income to varying degrees, we must adjust for household size in order to make comparisons across different households. While dividing household income by the number of household members might not capture individual welfare optimally, its simplicity aligns with the goal of replacing per-capita GDP. It is certainly far more reasonable to divide income equally within each household than to divide it equally across an entire nation. Future refinements can address this oversimplification and adjust for economies of scale in household consumption, akin to the continuous refinement of GDP measurement over the past century.

MELI is a measure of 'expected income' that does not seek to predict the future, but that encapsulates the current year's conditions, akin to period life expectancy measuring the current period. The calculation of MELI can be approached through two methodologies. The simplest is to multiply the median individual income times the life expectancy that year. A more sophisticated way to measure MELI is to measure the median income at each age times the probability of reaching that age from a period life table and then the sum of the expected median income at each age produces MELI.

Finally, what really matters for the flow of economic wellbeing is not income but consumption, and a goal for future improvement is to measure median expected lifetime consumption (MELC). The difference between income and consumption is savings and someone who has an income of $100/day and saves $50/day is not experiencing the same flow of economic resources as someone who dissaves $100/day and has zero income, but twice the consumption.

Savings is also important, but that is a measure of sustainability, not a measure of the flow of economic wellbeing. So consumption should ideally be measured separately from savings because they are two very different measures of economic wellbeing which can be added together to equal income when they should ideally be measured separately, but that will require more resources whereas MELI can be feasibly implemented using existing data sources.