

Introduction

1. The **Easterlin Paradox** (Easterlin, 1974) phrases aggregate happiness of countries does not change over time, even though income has grown substantially.
2. Easterlin (2001) emphasized on the adaptation mechanisms of aspirations, which always adjust to: (1) **one's past income**; (2) and **income of her reference group**, thereafter, offset happiness gain from income growth in the long run.
3. I use a life-cycle framework of labor supply and consumption to disentangle aspirations into: (1) **income desire** that depends on one's past income; and (2) **consumption desire** that depends on reference group, and thereafter, neighborhood.
4. To quantify the effect of income and relative incomes on happiness, we designed a field experiment, and controlled for **sorting into neighborhood, occupational effects, natural and socio-economic environment, and participation bias**.

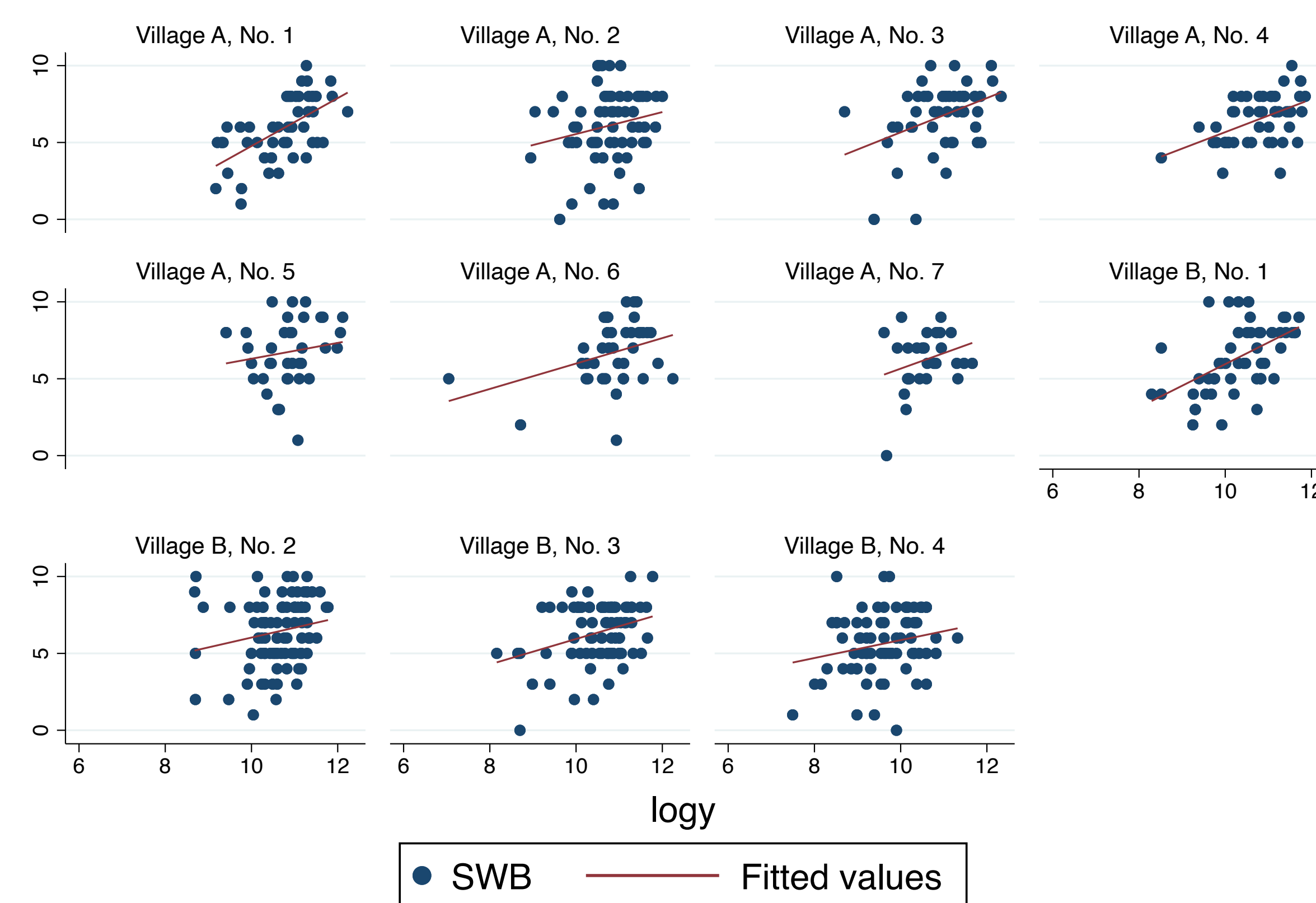
Field Experiment

1. We selected **two** villages, consisting **eleven** neighborhoods, in Fuxian County, Shaanxi Province, China.
2. The hukou system, household registration system, restrict sorting into neighborhoods. Farmland was allocated only within neighborhoods.
3. All neighborhoods focused on apple producing; All households had income from apple producing.
4. We surveyed all households in all the neighborhoods of these two villages, to control for participation bias.

Measurement

- A sample of 602 households.
- Subjective well-being: life satisfaction ladder (or the Cantril ladder)
- Household income: the total income from sales of all varieties of apples in the past year.

- Neighborhood income: average income of households within each neighborhoods.
- Income desire: Sum up all the desired income from sales of each apple varieties.
- Reference income: the average income of reference households (up to 5) identified by respondents.



Graphs by Village and Neighborhood

Figure 1. Log Income and Happiness by Neighborhoods

Empirical Framework

$$SWB_{ig} = C + \alpha \ln y_{ig} + \beta \ln y_{ig}^r + \gamma \ln y_{ig}^d + \delta X_{ig}$$

- The effect of reference income, $\ln y_{ig}^r$, on SWB, has two channels: (1) positive effects by revealing one's information on consumption desire; (2) negative effects by status comparison.
- Neighborhood income can be used as instrument to identify the effect of reference income.
- The effect of income desire is expected to be negative.

$$SWB_{ig} = C + \alpha' \ln y_{ig} + \eta \ln \bar{y}_{ig} + \beta' (\ln y_{ig}^r - \ln \bar{y}_{ig}) + \gamma' (\ln y_{ig}^d - \ln y_{ig}) + \delta X_{ig}$$

- $\ln y_{ig}^r - \ln \bar{y}_{ig}$: adjustment of reference income to neighborhood income
- $\ln y_{ig}^d - \ln y_{ig}$: adjustment of income desire to past income
- Long-run effect of income can be identified by adding up α' and η .

Results 1: The Effect of Reference Income on SWB.

Doubling reference income decreases SWB by 0.6!

	(1) OLS	(2) OLS	(3) 2SLS	(4) OLS
Log income	0.974*** (0.117)	1.147*** (0.145)	1.396*** (0.182)	1.325*** (0.166)
Log reference income	0.174 (0.151)	0.173 (0.151)	-0.608* (0.350)	
Log income desire		-0.396* (0.211)	-0.401* (0.212)	-0.425** (0.208)
Log neighbor income				-0.468* (0.258)
Individual and HH Controls	Y	Y	Y	Y
Observations	602	602	602	602
R-squared	0.184	0.189	0.144	0.191

Table 1. Effects of Reference Income on Life Satisfaction

Results 2: Long-run Effect of Income on SWB

Double household income increases life satisfaction by 0.4 in the long run!

	(1)	(2)	(3)
Log income		1.130*** (0.127)	0.848*** (0.173)
Log neighbor income		0.535** (0.250)	-0.391 (0.273)
Log reference income - Log neighbor income		-0.258	0.331** (0.165)
Log income desire - Log income			-0.438** (0.212)
Individual and HH Controls	Y	Y	Y
Observations	602	602	602
R-squared	0.088	0.185	0.198

Table 2: Decomposition of Individual Life Satisfaction Account

Acknowledgments

I thank Dr. Liang You at Shanxi University of Economics and Finance. for his leadership in conducting the survey.

Please see the latest version of the paper on my website:
<https://sites.google.com/view/jinyang-yang>

References

You, Liang, Jinyang Yang, and Xuexi Huo. 2019. "Absolute Income, Income Desire, and Subject Well-being of Farmers." Journal of Shanxi University of Economics and Finance, 41(3): 16-30.