

# Individual Troubles, Shared Troubles

The Multiplicative Effect of Individual and Country-level  
Unemployment on Life Satisfaction in 95 Nations (1981-2009)

Esteban Calvo

Public Policy Institute, Universidad Diego Portales, Chile

Christine A. Mair

Department of Sociology and Anthropology, University of Maryland

Natalia Sarkisian

Department of Sociology, Boston College

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## Why study the effect of unemployment on life satisfaction?

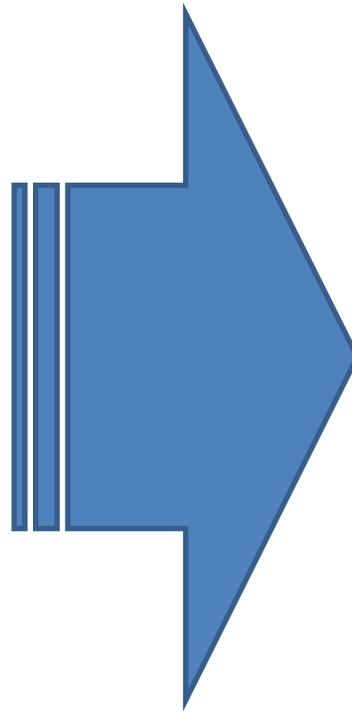
- The reduction of unemployment rates is a **central goal of public policy** in almost all industrial societies.
- Awareness of **negative consequences on subjective well-being** can be traced back to 19<sup>th</sup> century.
- **Controversy on the specific processes through which unemployment endangers life satisfaction:** individual experience, contextual influence, or a combination of both.



## Why study the effect of unemployment on life satisfaction?

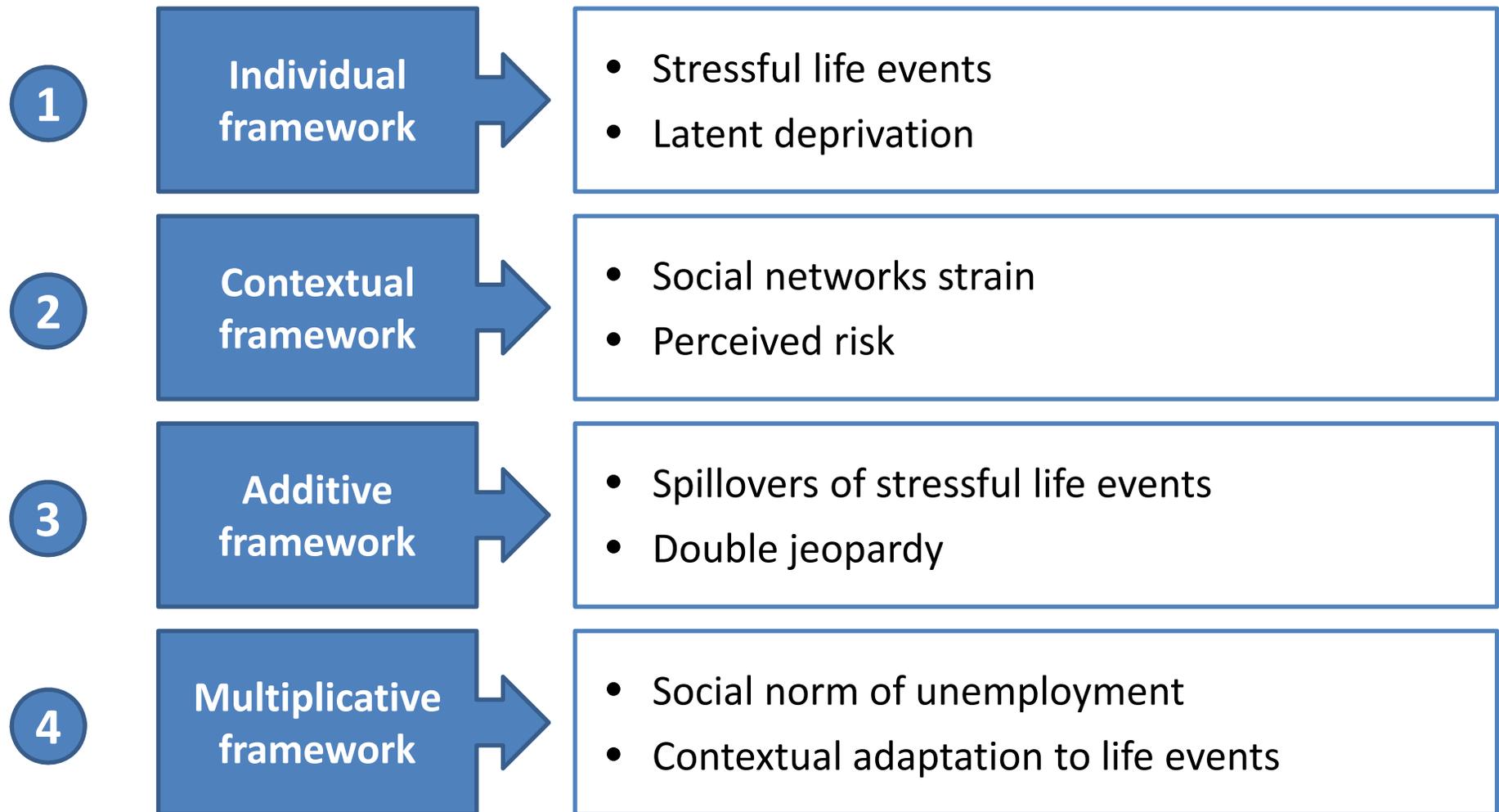
Most studies cannot address this controversy because they use **either individual- or country-level data** and raise serious concerns about individualistic and ecologic fallacies.

Few studies using multilevel data are **largely restricted to Europe and to short periods of time.**



**Longitudinal and multilevel study of 398,533 individuals, in 95 income-diverse countries, observed between 1981 and 2009.**

## Previous research can be organized in four competing frameworks



# 1 Individual framework: stressful life events and latent deprivation



- Unemployment is a particularly stressful life event
- Scarring effects > dynamic equilibrium or set point
- Unemployed are deprived from latent functions of employment (material and non-material benefits)
- Other labor force statuses may also provide latent functions (students and homemakers > retirees)



## 2 Contextual framework: social network strain and perceived risk

Country-level  
unemployment  
rate

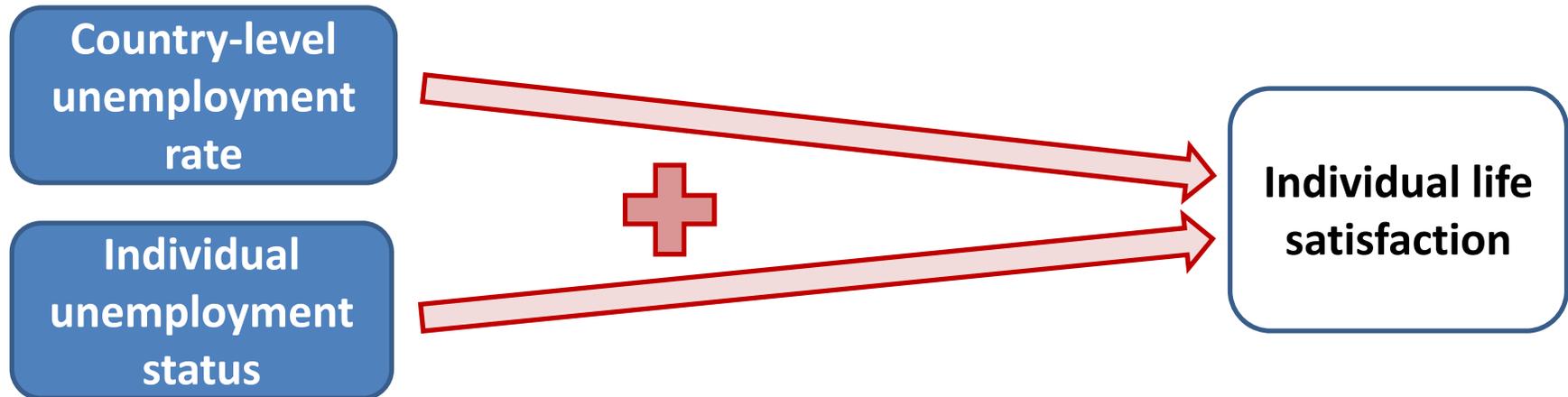


Individual life  
satisfaction

- Contextual influence is detrimental for all individuals, regardless of labor force status
- Social network strain: rippling effect through the social networks of unemployed individual (children, spouses)
- Perceived labor market risks: awareness of the high contextual unemployment and the risk of being unemployed decreases life satisfaction (coworkers)

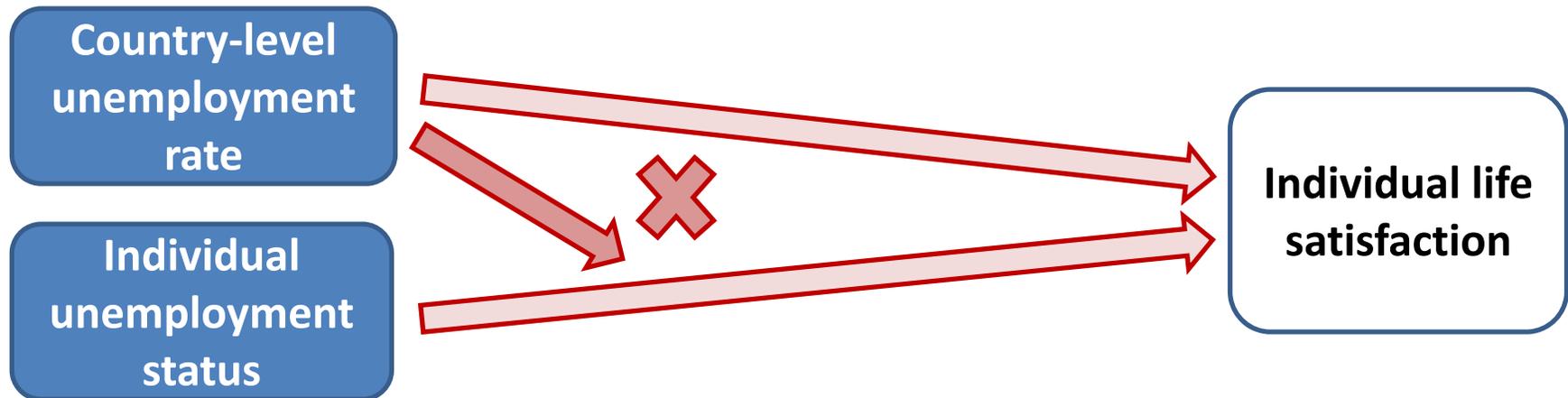


### 3 Additive framework: stress spillover and double jeopardy



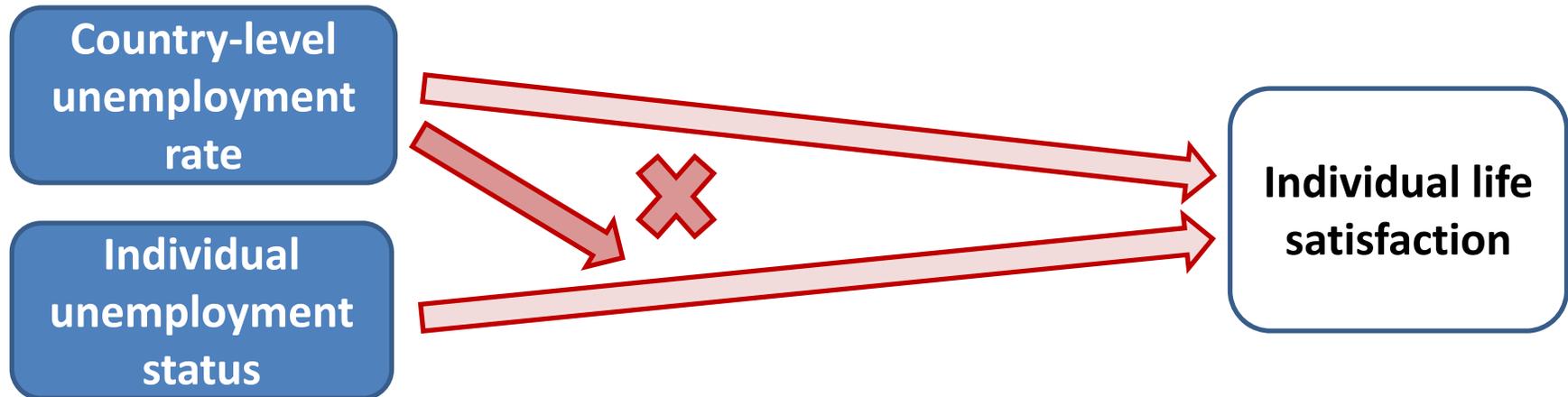
- Additive effect = joint effect is the sum of independent effects
- Individual and contextual effects combine to create a “double jeopardy”
- Unemployed individuals in areas of high unemployment have especially low levels of life satisfaction
- Empirical assessments of additive effects are limited and inconclusive

## 4 Multiplicative framework: social norm and contextual adaptation



- Multiplicative effect: joint effect is different than the sum of independent effects (interaction between unemployment rates and individual unemployment)
- **Social norm of unemployment model:**
  - High and prolonged unemployment creates an environment where being unemployed is more normative and less stigmatized
  - Unemployed/employed gap narrows in the context of high unemployment
  - Conflicting results perhaps due to unclear mechanisms and limited samples

## 4 Multiplicative framework: social norm and contextual adaptation



### - Contextual adaptation to life events model:

- Unemployment is a stressful life event at the individual and contextual level
- Life satisfaction effect of individual unemployment varies depending on country-level unemployment rates, and vis-à-vis other labor force statuses
- When unemployment rates increase, the life satisfaction gaps between the unemployed and other groups vary in complex ways:



## Four research hypotheses



## Data and sample

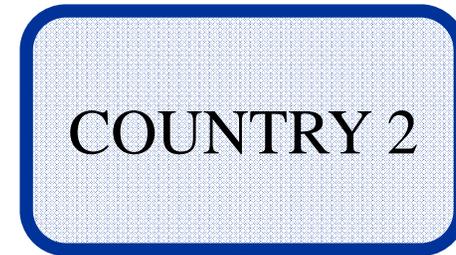
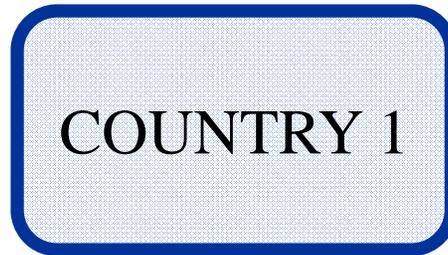
1. World Values Survey
2. European Values Survey
3. World Development Indicators
4. Social Security Programs Throughout the World Reports
5. World Income Inequality Database
6. National Accounts Official Country Data

**Created a single  
hierarchically  
clustered dataset**

## Data and sample

### Level-3

(N = 95  
countries)



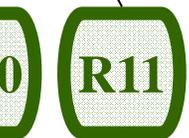
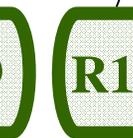
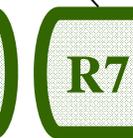
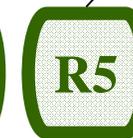
### Level-2

(N = 277  
country-years)



### Level-1

(N = 398,533  
respondents)



## Variables measured at three-levels

Life satisfaction	All things considered, how satisfied are you with your life as a whole these days? (1=completely dissatisfied , 10=completely satisfied)
Labor force status	Dummies for workers, students, homemaker, and retirees. Reference category: unemployed.
Unemployment rate	% of the labor force without work but available and seeking employment (logarithmically transformed and mean-centered)
Individual-level control variables	Gender, Education, Income, Age, Age squared, Health, Marital status, Number of children
Time variant country-level controls	Time, Time squared, GDP p/c, Availability of unemployment program, Gov. exp. by function, Income inequality, Battle-related deaths, Intentional homicides
Time invariant country-level controls	Post-materialist values, Past USSR membership, Region of the world

## Analytical strategy

Missing  
data

- 9.76% of missing data points.
- Linear interpolation at level 2, using two valid observations at an average of  $\pm 1.7$  years.
- Single stochastic imputation with chained equations using variables measured at all three levels .

Model  
estimation

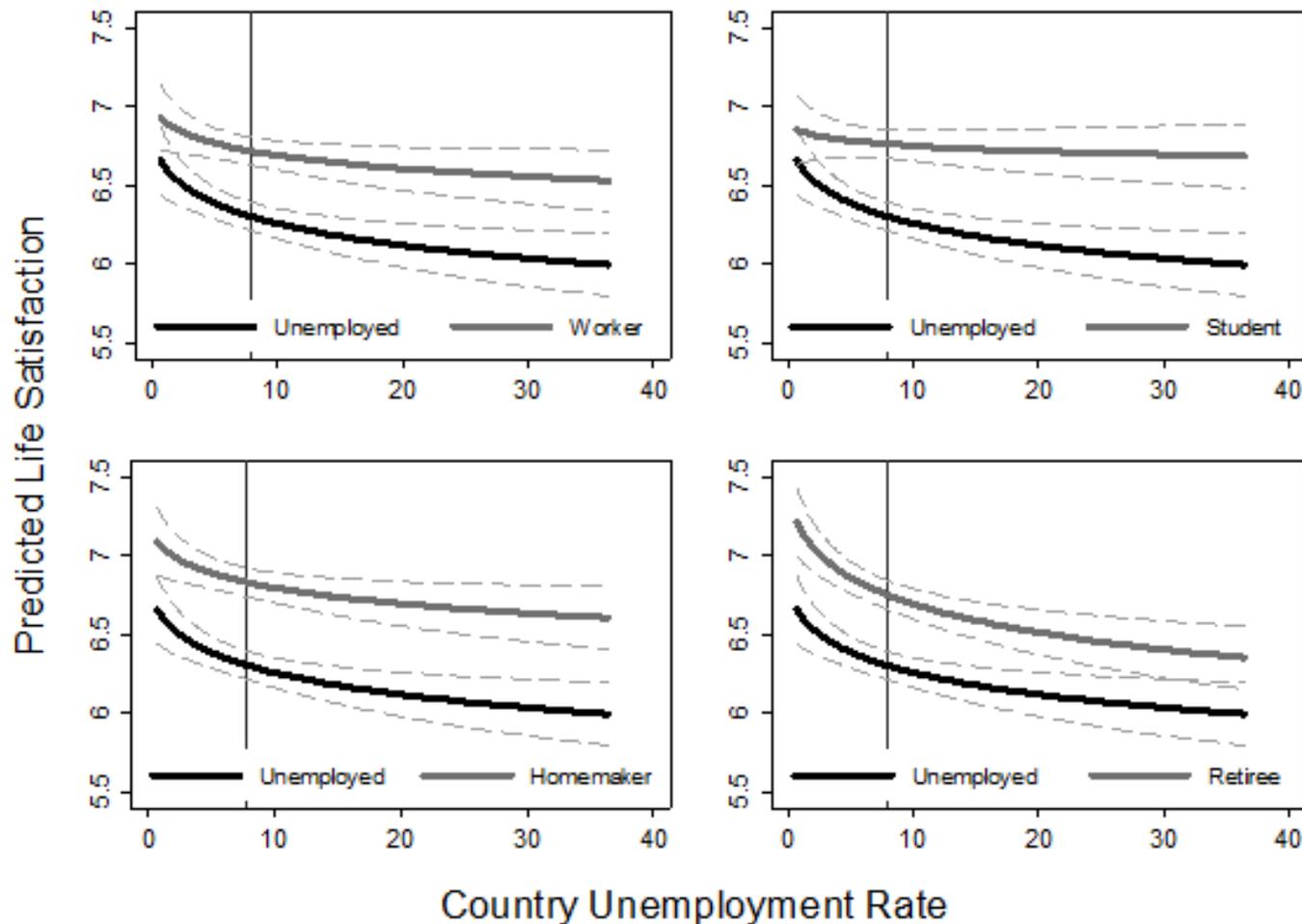
**Null model:** only random effects to decompose the variance in each level.

**Fixed and a random effects:** adjust for unobserved time-invariant differences across countries.

**Sequential models:** independent variables + control variables + cross-level interactions.

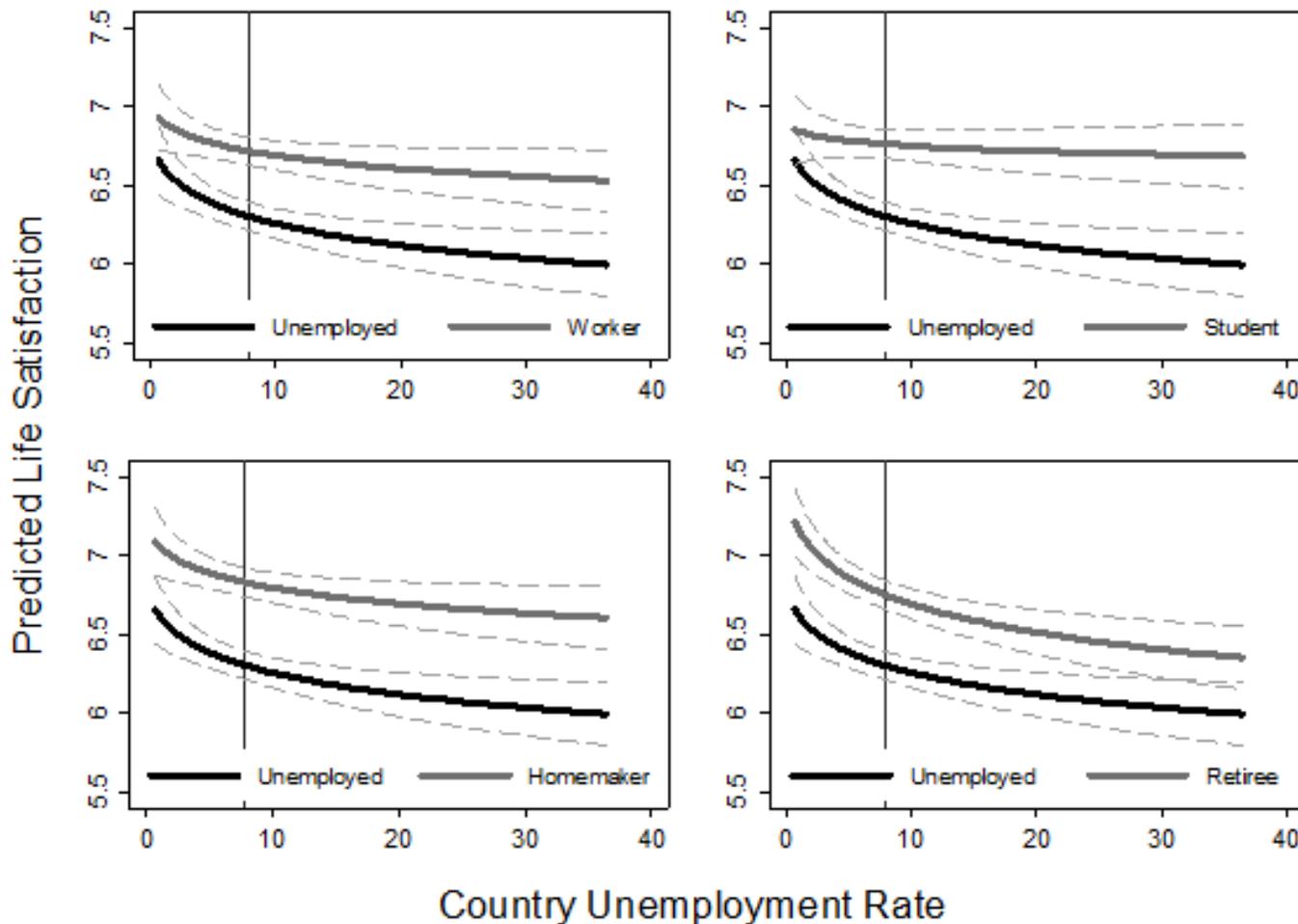


## 4 Multiplicative effect of unemployment on life satisfaction



*Notes:* Predicted values are based on the random effects regression model; they are calculated holding all controls at their grand mean. 95% confidence intervals are represented with dashed lines. The vertical lines indicate where mean of (log) unemployment rate is located; that is where main effects are observed. As there are few countries with extremely low and high unemployment rates, the confidence intervals become wider in the extremes.

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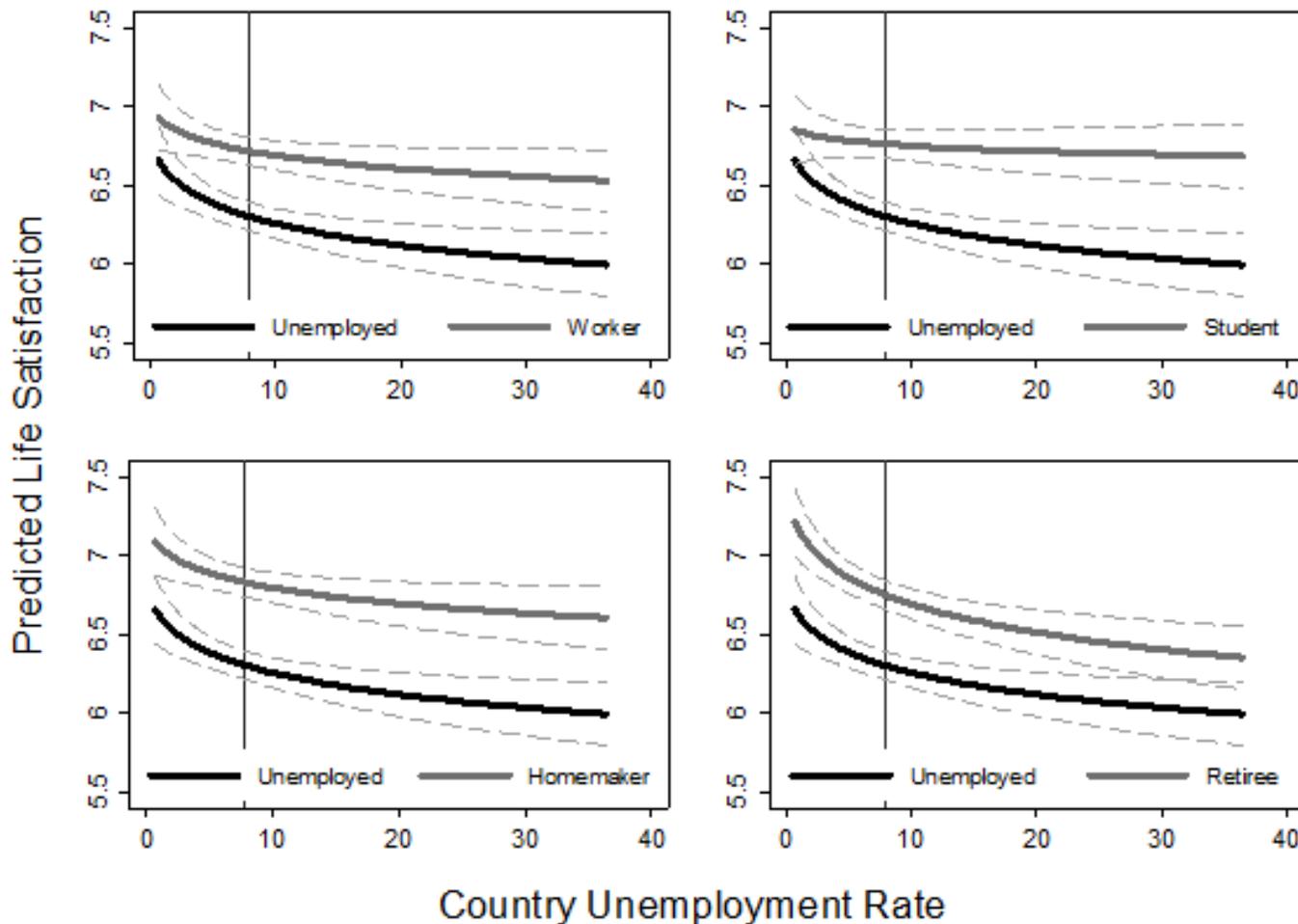


2 Unemployed individuals are consistently less satisfied than other individuals.

3 Country-level unemployment rate has a further detrimental effect on the life satisfaction of all groups, but students.

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## 4 Multiplicative effect of unemployment on life satisfaction



4

When unemployment rates increase, the life satisfaction of the unemployed drops even further below students, homemakers, and workers, but becomes more similar to retirees.

No evidence for a social norm of unemployment (the gap only decreases for unemp. vs retirees).

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## Discussion

At high unemployment rates the well-being of the whole population is at risk.

Individual troubles are **shared troubles.**

Policy debates have a narrow focus on national unemployment programs.

- Offer resources during a stressful life event.
- May prevent involuntary retirement.
- May reduce network strain and perceived risk.
- But program availability is not enough.

Consider unorthodox policy solutions.

- Working, studying, and homemaking can limit the negative effects of unemployment rates.
- Education fellowships for both working and retirement age individuals; maternity and paternity leaves; anti age-discrimination laws.

## Conclusion

The individual experience of unemployment should be understood in the context of diverse labor force statuses and national unemployment rates.

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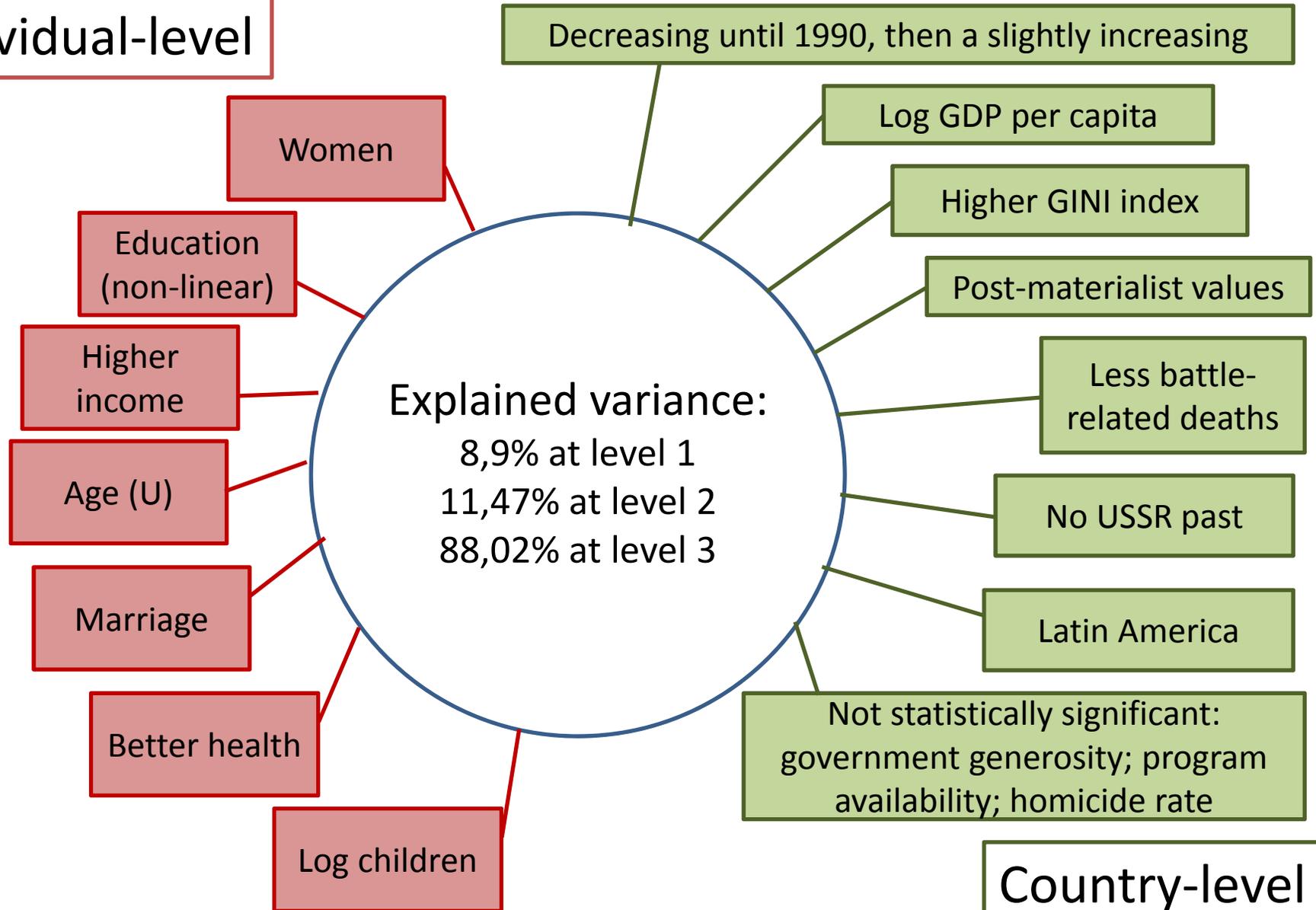
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# Control variables and explained variance in life satisfaction

## Individual-level



## Limitations and future research

- Assess the moderating role of unemployment programs' structure.
- Include direct measures of job prospects and social norms.
- Adjust for stable inter-individual differences.
- Explore variations by age, class, gender, and culture.
- Include other well-being outcomes (health, social relationships).

