

Compressed Modernity in the Life Course of a Cohort of Taiwanese Youth: Teen Sex and First Marriage

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Motivations

- Very low fertility in Taiwan
- Chang (1999)'s explanation
 - Compressed modernity
 - Social and cultural change in a brief period
 - Risk-averse individualization vs. individualism
 - Marriage continues to be an institution of duty and responsibility rather than intimacy
 - Delay or avoid entering into marriage and parenthood
- Also rising prevalence of premarital sex
 - Including teen sex



A Partial Paradox?



- Early sexual debut in Western societies
 - Adverse social consequences
 - **Leading to early marriage and premarital births**
 - Adverse health consequences
 - STD, HIV, mental stress
- Early sexual debut in Taiwan
 - **NOT leading to early marriage, premarital births**
 - Adverse health consequences
- Why?

Defining Teen Sex



- Sexuality in teens
 - Age < 18
- Sexuality before 1 year prior to 1st marriage
 - Sex within 1 year of marriage is socially accepted as a normative practice of courtship

Sexual Patterns of the J1 Cohort: TYP2011 Sample



Patterns	Female	Male
No sex by 26	40.9%	33.5%
Sex w/ 1-y of marriage	1.5%	0.5%
Sex before 1-y prior to mar.	41.0%	46.8%
Teen sex	15.1%	18.5%
Missing	1.5%	0.6%
Sample size	668	782

Demographic Patterns for the J1 Cohort: TYP2011 sample



Patterns	Female	Male
1 st marriage by 26	5.7%	2.8%
1 st child by 26	4.5%	2.2%
Expected marriage by 30	52%	47%
Expected child by 30	38%	34%
Sample size	668	782

Compressed Modernity in Adolescence



- In Taiwan and most East Asian Societies
 - Stable classroom arrangements during junior high and senior high
- Our earlier finding regarding the timing of 1st teen sex
 - Sooner as the sex rate of gender-specific classmates increases
 - Manifesting **compressed modernity**
 - Changing value on virginity
 - Intact value on collectivity

Compressed Modernity in Young Adulthood



- The social value on marriage and family remains intact
- Responsibility to support others is heavy
- Risk-averse individualization is to delay or avoid taking heavy responsibility
- Manifesting **compress modernity**

Research Questions



- Is there a causal link between teen sexuality and first marriage?
- How is **compressed modernity** manifested in the life course of a cohort of Taiwanese youth?
- Is there any gender difference in **compressed modernity**?

Competing Hypotheses



- Life course perspective (Elder 1995)
 - Early timing of first sex
 - Off-track – sex before (rather than after) marriage
 - **Hypothesis – early sex leads to early marriage**
- Compressed modernity (Chang 1999)
 - Clash of changing cultural values and intact social institutions
 - **Competing hypothesis – early sex does NOT lead to early marriage**

Analytic Strategy



- The causal link between teen sexuality and 1st marriage must be non-spurious
 - No other factors can explain away the link
- An instrumental variable (IV) approach
 - A valid IV affects teen sex significantly
 - It does not directly affect 1st marriage
- The sex rate of gender-specific classmates in junior high is a perfect candidate because ...

Why the IV is Valid?



- Junior high school assignment
- Classroom assignment
 - Classroom size around 34 (14-45)
- Classroom organization
 - A homeroom teacher throughout junior-high years
 - Student leaders
- Classroom as a peer group
 - Highly structured and stable within junior-high years
 - Replaced by another peer group in subsequent stages

Data

Taiwan Youth Project (TYP)



- A longitudinal survey of J1 and J3 cohorts of adolescents in Taipei and Yi-Lan
- This study uses the J1 cohort data
 - All first-year junior high students in 80 classrooms
 - Annual follow-ups 2000-2011
 - Analyze adolescence and young adulthood aged 13-26
 - 1,374 women and 1,438 men, 2,083 in total

Measurement (1)



- **Dependent variable**
 - Age at first marriage
- **Key explanatory variable**
 - Teen sex
- **Instrumental variable**
 - Gender-specific sex rate of classmates
 - based on same-gender members
 - % ever having sex

Measurement (2)



- **Control variables**
 - Classroom composition
 - Class size, co-ed
 - Prop parents divorced, with college education, in poverty
 - Family
 - Parents divorced
 - Parents with college education
 - Family in poverty
 - Family in upper class
 - Individual
 - 6th grade academic standing
 - 6th grade substance use

Methods Event History Analysis



- The event – first marriage
- Start from age 15
- Follow each individual
 - Until the event of 1st marriage occurred
 - Or until end of observation
 - Right censoring respondents who attrited
- Separate analysis for women and men

Sample Characteristics in the 1st Year of Junior High (original sample)



Variable	Girls	Boys
Parental divorce	0.11	0.10
Parent college ed.	0.27	0.29
Above average in Grade 6	0.44	0.35
Substance use in Grade 6	0.01	0.02
Perceived classroom cohesion	2.92	2.87
# individuals	1,374	1,438

Classroom Variables in the 3rd Year of Junior High



Variable	Girls	Boys
Classroom size	33	33
Co-ed	0.98	0.98
Prop. parents with col. ed.	0.27	0.27
% ever having sex	2.84	3.30
% ever using substance	9.78	9.95
# classrooms	80	80

Predicted Probability of Teen Sex



Variable	Female	Male
Parental divorce	0.736***	0.371
Parental college educ	-0.080	0.095
Parental poverty	-0.018	-0.543*
Top half in Grade 6	-0.201	-0.451**
Substance use	0.573	0.821***
No. of friends	-0.389	-0.043
Classroom size	0.008	-0.011
Co-ed school	-0.232	0.284
Class prop of par divorce	0.211	0.397
Class prop of par college	-1.180	0.106
Class prop of family poverty	0.494	0.255
Class prop of par upper class	0.680	-0.235
Class prop of having sex	0.077***	0.042**
Class prop of substance use	-0.001	-0.008
Pred prob of teen sex	0.129	0.167

Classmates' Teen Sex as a Valid and Powerful IV

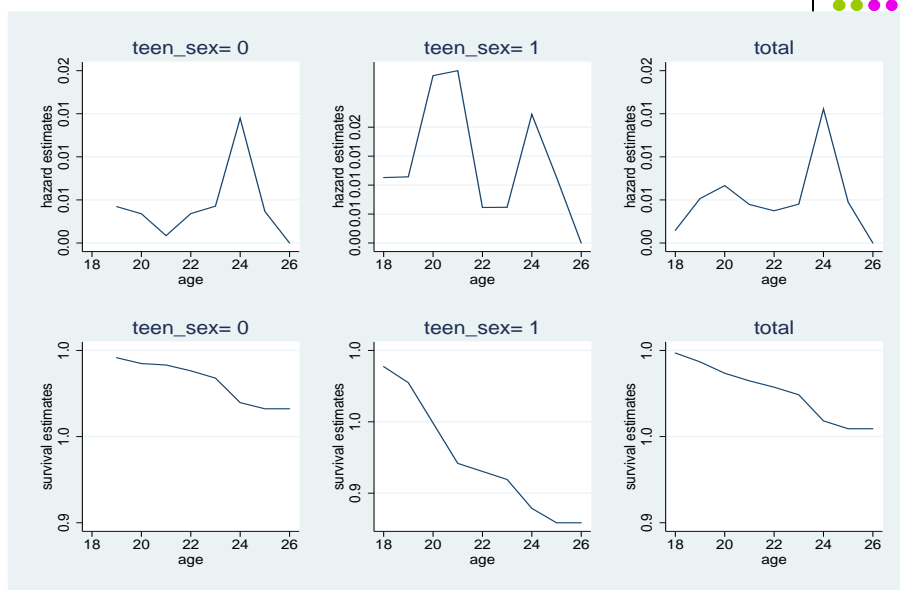


- Highly significant for predicting individual teen sex
- Junior high school classroom environment no longer exists in young adulthood so it does not have a direct impact on the timing of 1st marriage

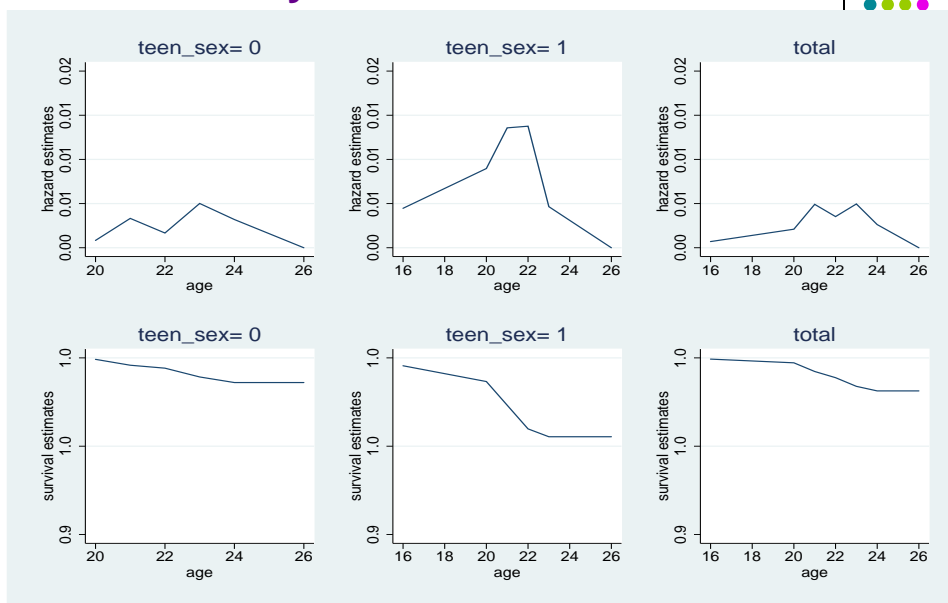


Observed hazard rate and survival rates of 1st marriage

Hazard and Survival of First Marriage by Teen Sex: **Women**



Hazard and Survival of First Marriage by Teen Sex: Men



Estimates for 1st Marriage w/ and w/o IV Women



Variable	m1	m2	m3
Time	0.227**	0.239***	0.228**
Par divorce	0.988	0.805*	0.940
Par college	-1.412*	-1.392*	-1.401*
Poverty	0.594	0.625	0.598
Top half in 6-g	-1.425**	-1.376**	-1.416**
Substance use	0.436	0.422	0.396
Teen sex	--	1.487***	--
Predicted teen sex	--	--	0.547

Findings of Event History Analysis of 1st Marriage Women



- The probability of marriage increases with time
- Parental college education slows down 1st marriage
- Early high academic achievement delays 1st marriage
- Teen sex has a spurious positive relationship with 1st marriage
- The IV estimate of teen sex shows no effect on 1st marriage

Estimates for 1st Marriage w/ and w/o IV Men



Variable	m1	m2	m3
time	0.274*	0.248	0.265*
Par divorce	1.054	0.753	1.292
Par college	-1.665*	-1.693	-1.597
Poverty	0.281	0.409	-0.017
Top half in 6-g	-1.015	-0.822	-1.24
Substance use	0.899	0.573	1.432
Teen sex	--	1.370*	--
Predicted teen sex	--	--	-4.472

Findings of Event History Analysis of 1st Marriage **Men**



- The probability of marriage increases with time
- Family and individual factors do not matter for men's 1st marriage
- Teen sex has a spurious positive relationship with 1st marriage
- The IV estimate of teen sex has no effect on 1st marriage

Conclusions (1)



- The major finding falsifies the Western-society hypothesis that teen sex leads to early marriage
- It supports the competing East-Asian hypothesis that teen sex does NOT lead to early marriage

Conclusions (2)



- The major finding suggests that compressed modernity can be manifested in the 13-year life course of a cohort of Taiwanese youth
- The increasing prevalence of teen sex and the delaying 1st marriage are the consequences of the modern individual values and persistence of traditional familialism
- This finding holds for both women and men

Future Direction



- Continue to follow J1 of TYP until the prime-age adulthood
- Try to recover lost-to-followup respondents
- The longer life course will be extremely valuable for advancing our understanding of the very low fertility phenomenon in Taiwan and other countries