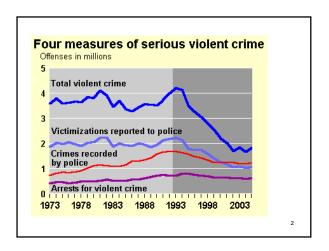
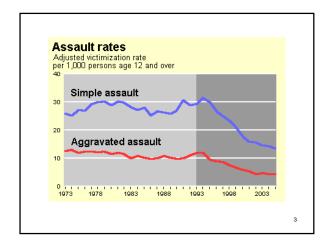
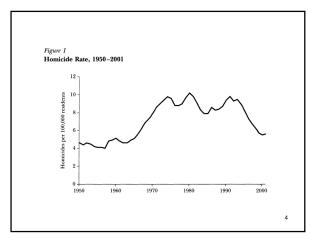
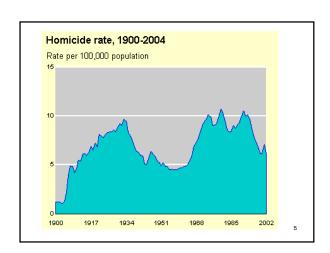
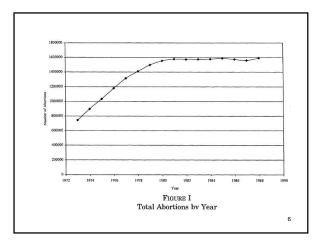
The Abortion/Crime Debate

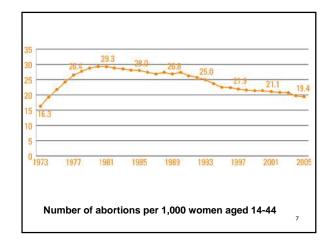












Pregnancies in 1994

- 5.4 million pregnancies
- 26.6 percent ended in abortions
- Of all pregnancies
 - -51% were intended births
 - -23% were unintended births
 - Half of all pregnancies were 'unintended'

In US Today

- 50% of abortions are to women <25
- 1/3 women aged 20-24
- 17% are to teenages
- Black women are 4.8 times as likely as non-Hispanic white women to have an abortion
- Hispanic women are 2.7 times as likely.
- Women who have never married obtain two-thirds of all abortions.[7]
- The abortion rate among women living below the federal poverty level (\$9,570 for a single woman with no children) is more than four times that of women above 300% of the poverty level (44 vs. 10 abortions per 1,000 women)

• 60% of abortions for women with children

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Why abortion may impact crime?

- Change characteristics of moms
- Quantity/quality trade off
- Change fraction unwanted children
- · Cohort size and crime

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Impact on mothers

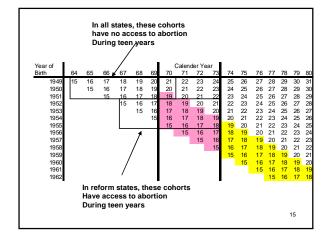
- Large fraction of abortions are to teen moms
- Reducing access may increase teen births
- Children born to teen moms have
 - Poorer economic conditions
 - Worse education outcomes
 - Greater involvement in crime

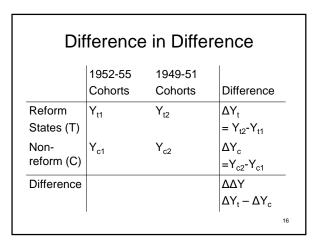
Table 1 Background Characteristics of Teenage Mothers and Women Who Delayed Childbearing until after Age 18

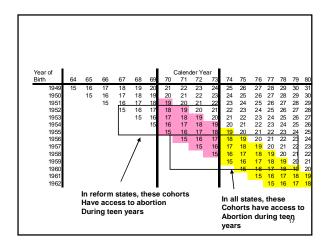
	Teenag	e Mothers	Not Teen	age Mothers
Characteristic	Mean	Standard Duration	Mean	Standard Duration
Black	0.33	0.47	0.12	0.33
White	0.58	0.49	0.82	0.39
Hispanic	0.09	0.29	0.06	0.24
Family on welfare in 1978a	0.19	0.39	0.11	0.31
Family income in 1978b	\$30,532	\$22,401	\$50,717	\$31,841
In female-head household at age 14	0.20	0.40	0.12	0.33
In intact household at age 14	0.69	0.46	0.84	0.37
Mother's education	9.88	2.86	11.67	2.76
Father's education	9.94	3.37	11.91	3.56
AFQT score ^a	25.81	21.39	49.58	27.49
Number of observations		603	4	4,323

Pre-Roe Reform

- At least 15 states had access to abortion prior to Roe
- State (Abortions/1,000 women in 1971)
- NY (27.1), HI (23.6), CA (23.5), WA (19.7), AK (17.4), OR (15.7), CO (9.1), NM (7.1), DE (13.7), MD (11.4), VA (6.8), NC (5.5), SC (3.6), AR (2.8), KS (8.8)







Dif	ference	e in Diffe	rence
	1952-55	1949-51	
	Cohorts	Cohorts	Difference
Non-	Y _{t1}	Y _{t2}	ΔY_t
Reform (T)			$= Y_{t2} - Y_{t1}$
Reform	Y _{c1}	Y_{c2}	ΔY_c
(C)			$=Y_{c2}-Y_{c1}$
Difference			ΔΔΥ
			$\Delta Y_t - \Delta Y_c$

Exposure to 3 years of Pre-Roe Abortion Availability

- Decreases chance of teen pregnancy by
 - 1.1 percentage points for whites
 - 5.6 percentage points for blacks
- Estimated to have no effect on HS graduation rates for whites
- A 3.1 percentage point increase in HS graduation rates for blacks

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Exposure to post-Roe

• No estimated changes in teen motherhood or high school graduation rates

Quantity/quality

- Parents have finite resources spend on children
- A larger family size may reduce the ability to invest in the 'quality' of children
 - Private schools
 - More attention

TABLE V
EFFECT OF FAMILY SIZE ON EDUCATION OF CHILDREN USING PRESENCE OF TWIN
BIRTH AS AN INSTRUMENT LOOKING AT CHILDREN BORN
BEFORE POTENTIAL TWIN BIRTH

	OLS (Twins sample)	First stage	Second stage	N
Instrument: Twin at second				
birth		.676*		525,952
(Sample: First child in families with 2 or more births)		(.013)		
Number of children in family	060*		.038	
•	(.003)		(.047)	

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Unwantedness

- · Lack of access to abortions will increase
 - Unwanted children
 - Less than optimal timing of pregnancies
- · Physical effects
 - Unwanted childen tend to have lower birth weights
- · Psychological effects
 - Parents may be faced with greater stress

Percentage Difference in Birthrafe between Repeal States and Nonrepeal States Source Period in 1970.) 1996, Figure 3. (Percentage Differences Are Normalized to Equal Zero in 1970.)

Table 2
Regression Results of Abortion on Unwanted Childbearing with State Fixed-Effects, 1993–99 Dependent Variable Proportion of Unwanted Births Proportion of Proportion of Proportion of Unwanted Births Unwanted Births Variable -0.00017 (0.000046) -0.383 -0.00017 (0.000092) -0.39483 Abortion ratio -0.00250 (0.00076) -**0.366** -0.00239 (0.00154) -0.350 Abortion rate State controls State fixed-effects Year effects
R²
N yes 0.895 81 yes 0.902 81 yes 0.896 yes 0.901

Outcome: fraction unwanted. Covariate of interest is abortion rate or abortions per 1,000 women 15-44. Mean abortion rate is 16. d(Unwanted)/dAR = -0.0025 If AR doubles, unwantedness goes does by -0.0025*(16) = -0.04, 4 percentage_gts

with single parent in 1980 in 1980 when a 18.6% in 1980 when a 18.7% in					
ndependent variable: repeal * 1971-1973	with single in poverty welfare recei parent in 1980 in 1980 in 1980	ith sin ent in	rate)	ln (birt	Dependent variable:
repeal * 1971-1973 -0.056 -0.059 -0.729 -0.869 -0.302 -0.541 -0.412 -	(2) (3) (4) (5) (6) (7) (8	9	(2)	(1)	
			Г		dependent variable:
					repeal * 1971–1973
					repeal * 1974–1975
repeal * 1976–1979 0.010 0.468 0.799 -0.160			(0.005)		manual = 1076 1070
(0.014) (0.679) (0.660) (0.521)		7.00			repear * 1970–1979

Data on unwanteness

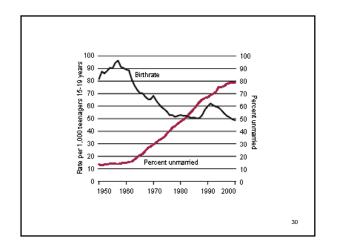
- Some countries, mothers must petition a judge to have an abortion
- Those denied petition have by definition unwanted children
- Follow those children over time
- Unwanted children have
 - Poor health, lower school performance, higher level teen sexual activity, higher welfare participation, greater neurotic tendencies
- Shortcoming of this work?

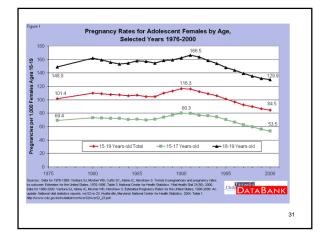
Table 3 Descriptive Statistics			4
Variable	N	Mean	Standard Deviation
Infant homicides all races	1479	4.85	6.59
White infant homicides	1479	2.81	4.20
Black infant homicides	1479	1.89	2.89
Abortion ratio (abortions divided by live births)	1479	0.30	0.21
Natural log of live births	1479	10.70	1.01
State population (in 1,000s)	1479	4,633.67	5036.91
Population density	1479	315.37	1296.53
Fertility rate (live births per 1,000 population)	1479	15.91	2.74
Income maintenance per capita	1479	267.44	109.55
Medicaid payments per capita	1479	299.20	228.98
Income per capita	1479	20,275.50	4089.80
Unemployment rate	1479	0.06	0.02
Police per 1,000 population	1479	2.59	0.93
Prisoners per 1,000 population	1477	1.91	1.68

	Condi	tional Negative	Binomial Regre	ession
	Period: All F			1973–98 Races
Variable	Coefficient	Standard Error	Coefficient	Standard Error
Abortion ratio	-0.4624	0.2854	- 0.9672	0.3967
Out-of wedlock births	0.0017	0.0008	0.0020	0.0008

Outcome of interest is In(Infant Homicides), covariate is the abortion ratio or abortions Divided by births. Mean is .254 abortions per 1000 live births. If abortion ratio increases By 10 per points, murders fall by -0.462(0.1) = -0.046 or almost 5%.

Assume 1 mil abortions, 4 mill births, AR of 0.25. Increase abortions by 100,000. 1.1/3.9 = 0.28 dAR=0.03. dH/dAR = -0.462(.03) = -0.014. 300 infant murders per year, So 1.4% is about 4. So each additional 25,000 abortions decreases murders by \mathfrak{L}^9





Compositional change

- Consider two types of parents: high and low socioeconomic status
- Suppose abortion is not used uniformly in the population
- Abortion ban will then disproportionally alter the demographic composition of the population

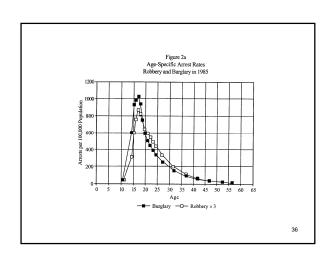
- What should be the result in the US?
- What about Romania?

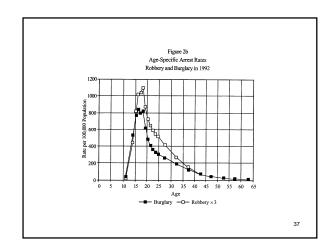
33

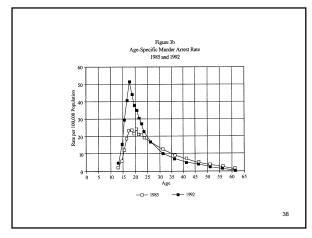
Cohort size and crime

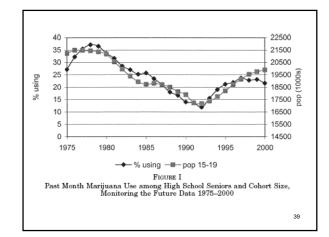
- Abortion will increase cohort size
- Most crime is committed by young men, 18-24
- Increasing cohort size will increase crime mechanically, holding all else constant
- Cohort size appears to allow some more crime to efficiently occur
- Being born in a large cohort has negative impacts on economic outcomes
 - lower wages, lower returns to school

	Control Group (Jan.–May 1967)	Treatment Group (June-Oct. 1967)	Difference
Place of birth of child:			
Urban	.350	.422	.071***
Observations	19,156	38,494	
Mother's highest educational level:			
Primary	.494	.446	048***
Secondary	.476	.521	.045***
Tertiary	.030	.033	.003
Observations	8,453	18,732	
Father's highest educational level:			
Primary	.370	.323	047***
Secondary	.576	.613	.038***
Tertiary	.055	.064	.009***
Observations	7,574	16,601	









Abortion policy in Romania

- Prior to 1966
 - Legal in 1st trimester
 - Free via state health care system
 - 4 abortions per live birth
- Ceausescu unexpectedly declares family planning and abortion illegal in fall 1966 except
 - Women over 45, >4 kids, with heath problems, or pregnancies resulting from rape/incent
- · Impact was immediate

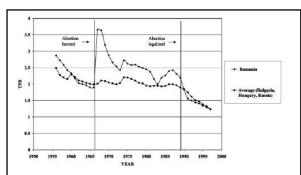


Fig. 1.—Total fertility rates. The total fertility rate is the average total number of children that would be born per woman in her lifetime, assuming no mortality in the childbearing ages, calculated from the age distribution and age-specific fertility rates of a specified group in a given reference period. Source: United Nations statistics: http://unstats.um.org/unsd/cdb/cdb_series_xrxx.asp?series_code = 13700.

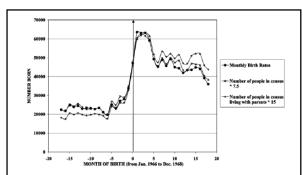


Fig. 2.—Monthly birth rates: vital statistics and representation in the 1992 census sample. The graph plots the number of persons born between 1966 and 1968 by month of birth. Month 0 refers to June 1967, the first month with large fertility increases due to the restrictive abortion policy. Also plotted are the number of persons born in the same period included in the census sample (scaled 1:7.5) and those in the census sample who still live with their parents (scaled 1:15). Source: 1992 Romanian census.

Data

- 15% sample of Romania, 1992
- 50K people from a annual birth cohort
- · Identifies year and month of birth
- People born Jan Oct 1967

Some numbers

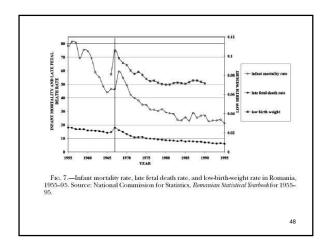
- Birth rate doubles, 14.3 to 27.4 per 1,000 women 14-44
- Fertility rate increased from 1.9 to 3.7 per woman
- Increase in fertility occurs for 4 years, ten stabilizes
- 1990 abortion ban repealed
- 1 million abortions in a country of 20 mil
 US has 1 mil abortion, country of 300 mil

Implications

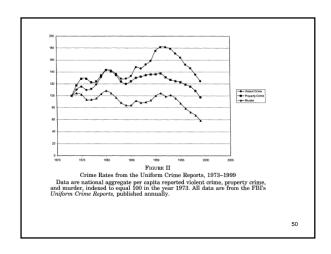
- Law announced/goes into effect 12/1966
- People born Jan June not impacted directly
 - in utero 2nd and 3rd trimester in 12/1966
 - Indirectly, they were subject to larger cohorts
- People born July-Oct 1967, 1st cohorts born under no abortion regime

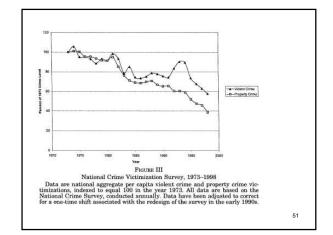
Dependent Variable	Full Sample (1)	Restricted Sample (2)	Restricted Sample (3)	Restricted Sample (4)
Apprentice school:	Sex-seament	50000000	96,000 5-0004	100 magnino
Treatment dummy	.00643* (.00376)	.00199 (.00602)	.01960*** (.00560)	.02134** (.00556)
Observed probability	.226	.232	.232	.232
High school or more:			9757/9575	10,000,004
Treatment dummy	.03789***	.04147***	00565	01713**
	(.00449)	(.00713)	(.00795)	(.00816)
Observed probability	.46	.512	.512	.512
University or more:	2225	0000		2012349
Treatment dummy	.00573**	.00611	01232***	01470**
	(.00257)	(.00479)	(.00405)	(.00392)
Observed probability	.091	.132	.132	.132
Observations	55,337	22,847	22,847	22,847
Background controls	No	No	Yes	Yes
Household controls	No	No	No	Yes

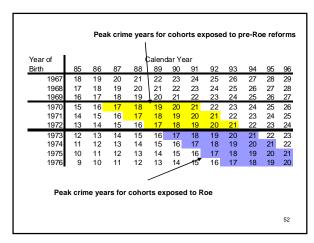
 "Ceausescu's incentive produced the desired effect. Within one year of the abortion ban, the Romanian birth rate had doubled....But these children would turn out to have particularly miserable lives. Compared to Romanian children born just a year earlier, the cohort of children born after the abortion ban would do worse in every measurable way." p. 118

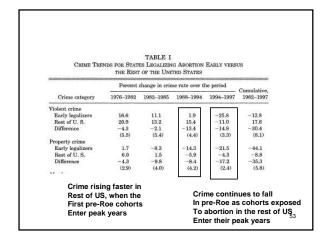


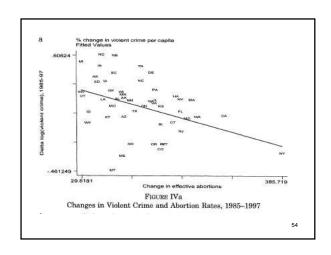
Year of				(Calend	dar Ye	ar					
Birth	85	86	87	88	89	90	91	92	93	94	95	96
1967	18	19	20	21	22	23	24	25	26	27	28	29
1968	17	18	19	20	21	22	23	24	25	26	27	28
1969	16	17	18	19	20	21	22	23	24	25	26	2
1970	15	16	17	18	19	20	21	22	23	24	25	26
1971	14	15	16	17	18	19	20	21	22	23	24	2
1972	13	14	15	16	17	18	19	20	21	22	23	2
1973	12	13	14	15	16	17	18	19	20	21	22	2
1974	11	12	13	14	15	16	17	18	19	20	21	2
1975	10	11	12	13	14	15	16	17	18	19	20	2
1976	9	10	11	12	13	14	15	16	17	18	19	20
							_					
						_						











Property crime per 1000 residents 48.04 11.46 4.60 Murder per 1000 residents 0.09 0.04 0.02	Variable	Mean	Standard deviation (overall)	Standard deviation (within state)
furder per 1000 residents 0.09 0.04 0.02 Effective* abortion rate per 1000 live births by crime: 77.11 83.18 66.13 Property crime 132.26 116.46 86.89	Violent crime per 1000 residents	6.73	2.81	.88
Effective" abortion rate per 1000 live births by crime: Violent crime 77.11 83.18 66.13 Property crime 132.26 116.46 86.89	Property crime per 1000 residents	48.04	11.46	4.60
Property crime 132.26 116.46 86.89		0.00	0.04	0.02
		77.11	83.18	66.13
Murder 51 00 66 57 55 39			116.46	86.89
	Murder	51 00	66 57	55 39

	ln(Violent crime per capita)		crim	perty e per ita)	ln(Murder per capita)		
Variable	(1)	(2)	(3)	(4)	(5)	(6)	
Effective" abortion rate	137	129	095	091	108	121	
(× 100)	(.023)	(.024)	(.018)	(.018)	(.036)	(.047)	
n(prisoners per capita)	_	027	_	159	-	231	
(t-1)		(.044)		(.036)		(.080)	
n(police per capita)	-	028		049	-	300	
(t-1)		(.045)		(.045)		(.109)	
State unemployment rate	-	.069	-	1.310	-	.968	
(percent unemployed)		(.505)		(.389)		(.794)	
n(state income per	-	.049	-	.084	550	098	
capita)		(.213)		(.162)		(.465)	

Year of				(Calenc	lar Ye	ar					
Birth	85	86	87	88	89	90	91	92	93	94	95	96
1961	24	25	26	27	28	29	30	31	32	33	34	35
1962	23	24	25	26	27	28	29	30	31	32	33	34
1963	22	23	24	25	26	27	28	29	30	31	32	33
1964	21	22	23	24	25	26	27	28	29	30	31	32
1965	20	21	22	23	24	25	26	27	28	29	30	31
1966	19	20	21	22	23	24	25	26	27	28	29	30
1967	18	19	20	21	22	23	24	25	26	27	28	29
1968	17	18	19	20	21	22	23	24	25	26	27	28
1969	16	17	18	19	20	21	22	23	24	25	26	27
1970	15	16	17	18	19	20	21	22	23	24	25	26
1971	14	15	16	17	18	19	20	21	22	23	24	25
1972	13	14	15	16	17	18	19	20	21	22	23	24
1973	12	13	14	15	16	17	18	19	20	21	22	23
1974	11	12	13	14	15	16	17	18	19	20	21	22
1975	10	11	12	13	14	15	16	17	18	19	20	21
1976	9	10	11	12	13	14	15	16	17	18	19	20
1977	8	9	10	11	12	13	14	15	16	17	18	19
1978	7	8	9	10	11	12	13	14	15	16	17	18
1979	6	7	8	9	10	11	12	13	14	15	16	17
1980	5	6	7	8	9	10	11	12	13	14	15	16
1981	4	5	6	7	8	9	10	11	12	13	14	15

	Pre-Roe Reform States Not exposed to abortion												
Year of Calendar Year													
Birth	85	86	87	88	89	90	91	92	93	94	95	96	
1961	24	25	26	27	28	29	30	31	32	33	34	35	
1962	23	24	25	26	27	28	29	30	31	32	33	34	
1963	22	23	24	25	26	27	28	29	30	31	32	33	
1964	21	22	23	24	25	26	27	28	29	30	31	32	
1965	20	21	22	23	24	25	26	27	28	29	30	31	
1966	19	20	21	22	23	24	25	26	27	28	29	30	
1967	18	19	20	21	22	23	24	25	26	27	28	29	
1968	17	18	19	20	21	22	23	24	25	26	27	28	
1969	16	17	18	19	20	21	22	23	24	25	26	27	
1970	15	16	17	18	19	20	_ 21	22	23	24	25	26	Exposed to
1971	14	15	16	17	18	19	20	21	22	23	24	25	abortion
1972	13	14	15	16	17	18	19	20	21	22	23	24	
1973	12	13	14	15	16	17	18	19	20	21	22	23	
1974	11	12	13	14	15	16	17	18	19	20	21	22	
1975	10	11	12	13	14	15	16	17	18	19	20	21	
1976	9	10	11	12	13	14	15	16	17	18	19	20	
1977	8	9	10	11	12	13	14	15	16	17	18	19	
1978 1979	7 6	8 7	9	10 9	11 10	12 11	13 12	14	15 14	16	17 16	18 17	
	-		-	-				13		15			58
1980 1981	5 4	6 5	7 6	8 7	9	10 9	11 10	12 11	13 12	14 13	15 14	16 15	
1981	- 4	_ 5	0		8	9	10	- (1	12	13	14	15	

