

# American Indian Casinos and Native American Self-Identification

Francisca M. Antman

University of Colorado Boulder

Brian Duncan

University of Colorado Denver

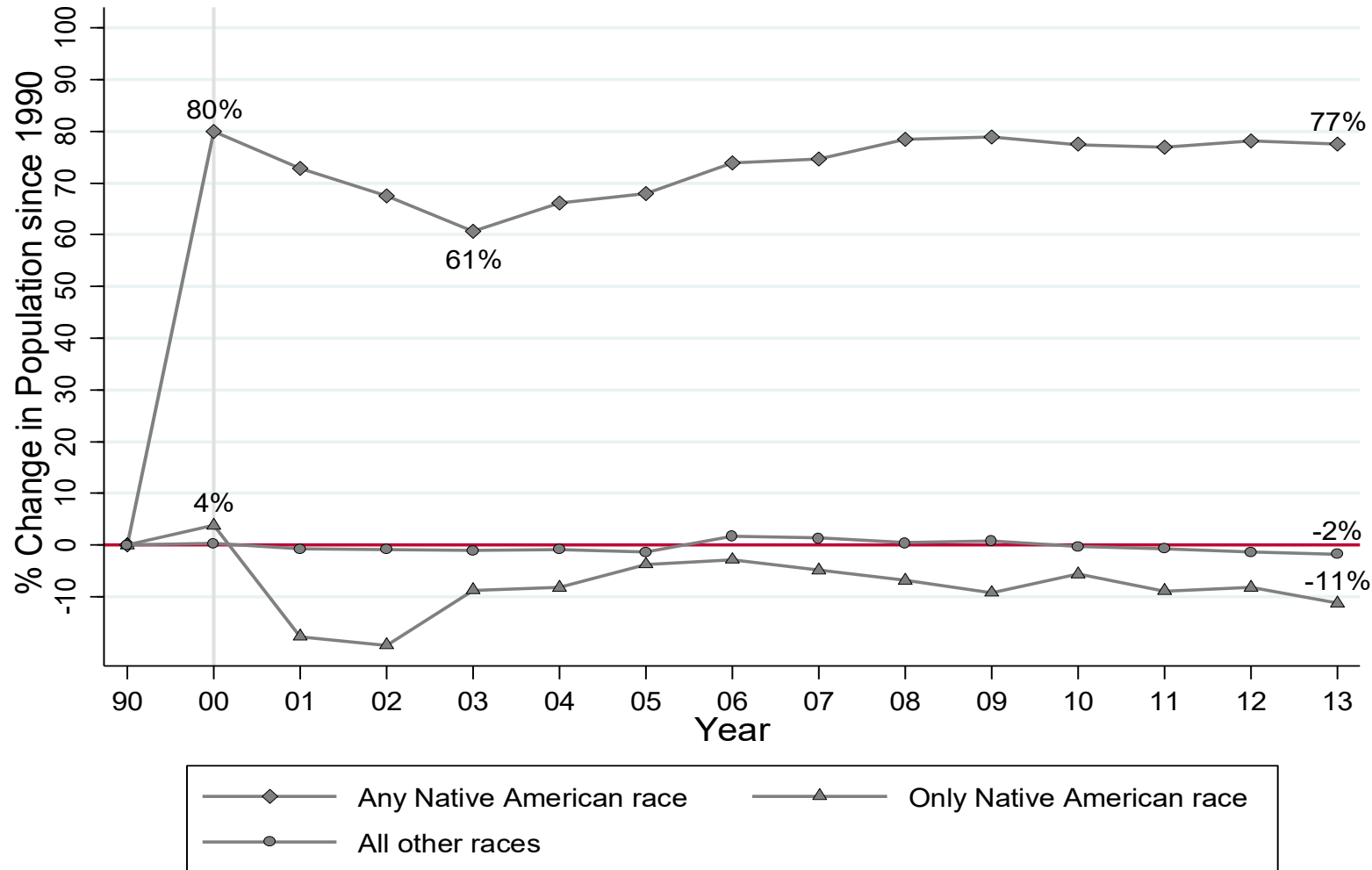
March 1, 2022

# Motivation – Self-Reported Racial Identity

- ◆ Racial identity carries host of social and economic consequences.
  - Racial identity routinely treated as exogenously given, immutable trait.
  - Most often, racial identity based on individual self-reports.
- ◆ Does self-reported racial identity respond to economic incentives?
  - Evidence from affirmative action bans (Antman & Duncan 2015, REStat)
- ◆ Can changes in economic incentives by racial group explain the dramatic rise in U.S. Native American population in recent years?

# Motivation – Increase in the Native American Population

Population Growth of Individuals Aged 0 to 40 in 1990 who Report an American Indian Race, by Year



# Motivation – Increase in the Native American Population

- ◆ Liebler and Ortyl (2014) find more than 1 million “new” American Indians in the 2000 U.S. Census that cannot be attributed to normal sources of population growth
  - Close to 40% of the American Indian population in 2000 had not identified as such in 1990.
- ◆ What could explain changes in racial identity for the Native American population in the U.S.?
  - ◆ Beginning in the 1990s, American Indian tribes began to establish Class III Casinos which spread dramatically over this period, and were required to invest profits in tribal lands. Can this be linked to rise in Native American racial self-reports?

- ◆ Can the opening of American Indian Casinos and economic returns associated with casinos explain changes in Native American self-Identification?
- ◆ This paper links data on tribal-state compacts permitting tribal gaming across states over time with racial self-identification rates of individuals distinguished by Native American ancestry.
- ◆ Additional evidence linking self-identification rates to casino opening data as well as proxy indicator for tribe making casino dividend payments to its members.

# Preview of Results

- State policy changes allowing tribes to open casinos are associated with an
  - *Increase* in the probability that individuals *with* American Indian ancestry will self-identify as Native American
  - *Decrease* in the probability that individuals with *no* (documented) American Indian ancestry will self-identify as Native American.
- Magnitudes of the impacts are increasing in the strength of American Indian ancestral ties.
- Similar results hold when causal identification comes from American Indian casino openings across states over time
- Stronger impacts if casinos are likely to pay per capita dividend payments to their members.
- Results consistent with racial self-identification responding to economic motivations as well as social stigma

# Background – Rise of American Indian Casinos

- ◆ American Indian tribes granted greater control over economic development on reservations and begin to experiment with bingo halls and lotteries in mid-70s and 80s.
- ◆ Court rulings in 70s and 80s favored tribes rights to open casinos.
- ◆ Indian Gaming Regulatory Act (IGRA) of 1988.
  - Tribes could open casinos in states where gambling is already permitted in some form.
  - Tribal proceeds may only be used in specific ways, including funding economic development and/or per capita dividend payments.

# Conceptual Framework: Economic Benefits and Social Stigma

- ◆ Individuals with **strong ties** to American Indian ancestry may see **increased benefit** from identifying as Native American following introduction of tribal gaming due to increased resources stemming from casino profits and possible dividend payments
- ◆ Individuals with **no (documented)** American Indian ancestry may perceive **social stigma** from identifying with a race with which they have no documented ties--especially given tribal authority over recognizing its members, and reminder of this fact on US surveys
- ◆ Individuals with **stronger ties** to American Indian ancestry will see **increased benefits** to Native American racial self-identification after introduction of tribal gaming → **more likely to identify**
- ◆ Individuals with **no documented ties** to American Indian ancestry **may have negative net benefit** of self-identifying as Native American if stigma outweighs any potential benefit of identifying following introduction of tribal gaming → **may be less likely to identify**

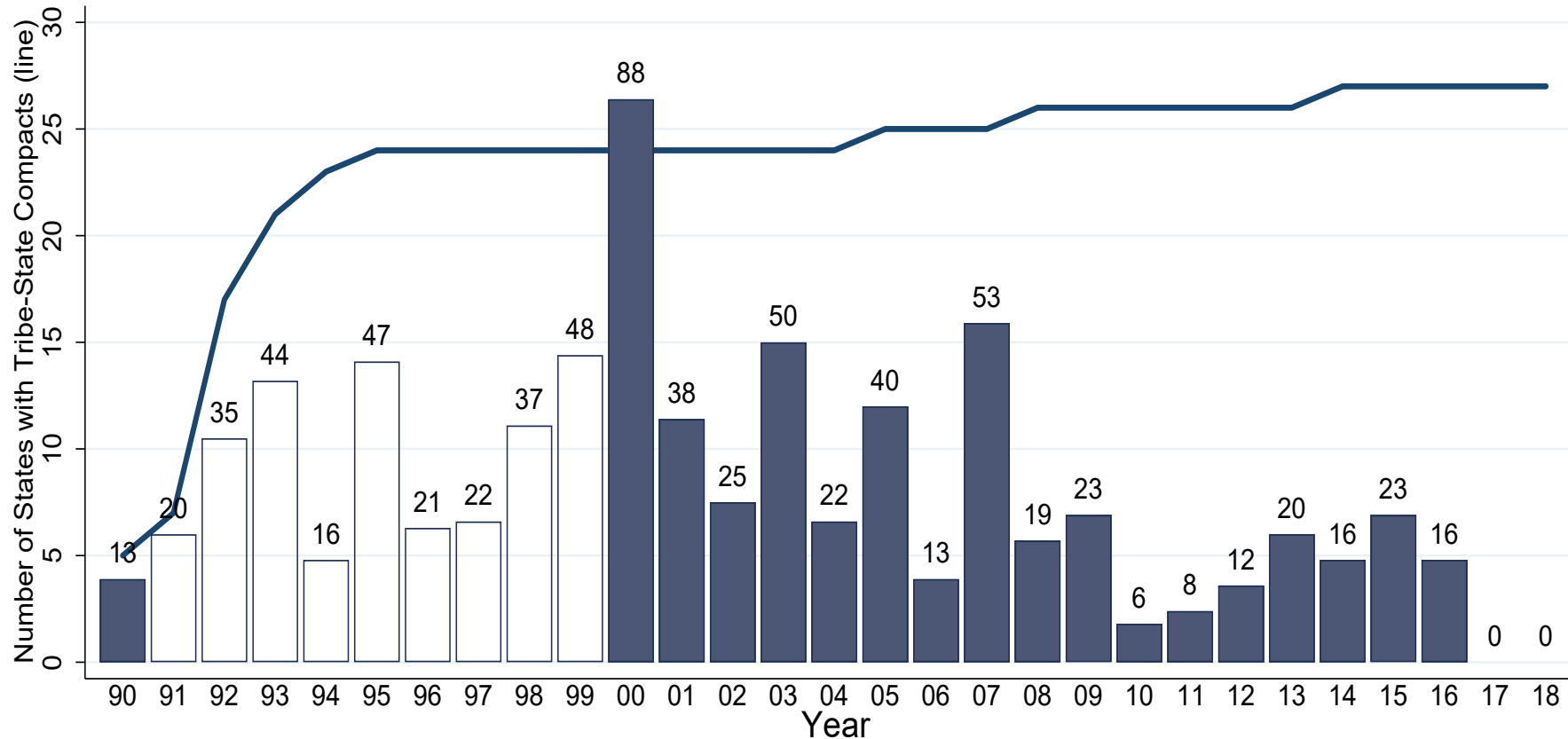


# Data – Tribal-State Compacts and American Indian Casino Openings

- ◆ Focus on Class III (Las Vegas style) casinos – most profitable
  - Consistent with the focus in the literature on impact of casinos.
    - E.g., Akee, Spilde, and Taylor (2015); Evans & Topoleski (2002)
- ◆ Main analysis: Year of first tribal-state compact, i.e., when a state first approved Class III American Indian casinos from Bureau of Indian Affairs.
- ◆ Extension: Hand-collected data on casino openings, since no official data exist.
  - First obtained list of tribes with approved Class III tribal gaming ordinances from the Federal Register and National Indian Gaming Commission.
  - Opening dates constructed primarily from internet searches, the Better Business Bureau (BBB), The Museum of Gaming History (themogh.org), 500nations website (500nations.com), and casino websites.
  - Extension analysis in this version of the paper focuses on first casino opening in state.
- ◆ Data on Revenue Allocation Plans (proxy for dividend payments) from Bureau of Indian Affairs, procured by Professor Tad Conner

# Expansion in Tribal Gaming Across States over Time

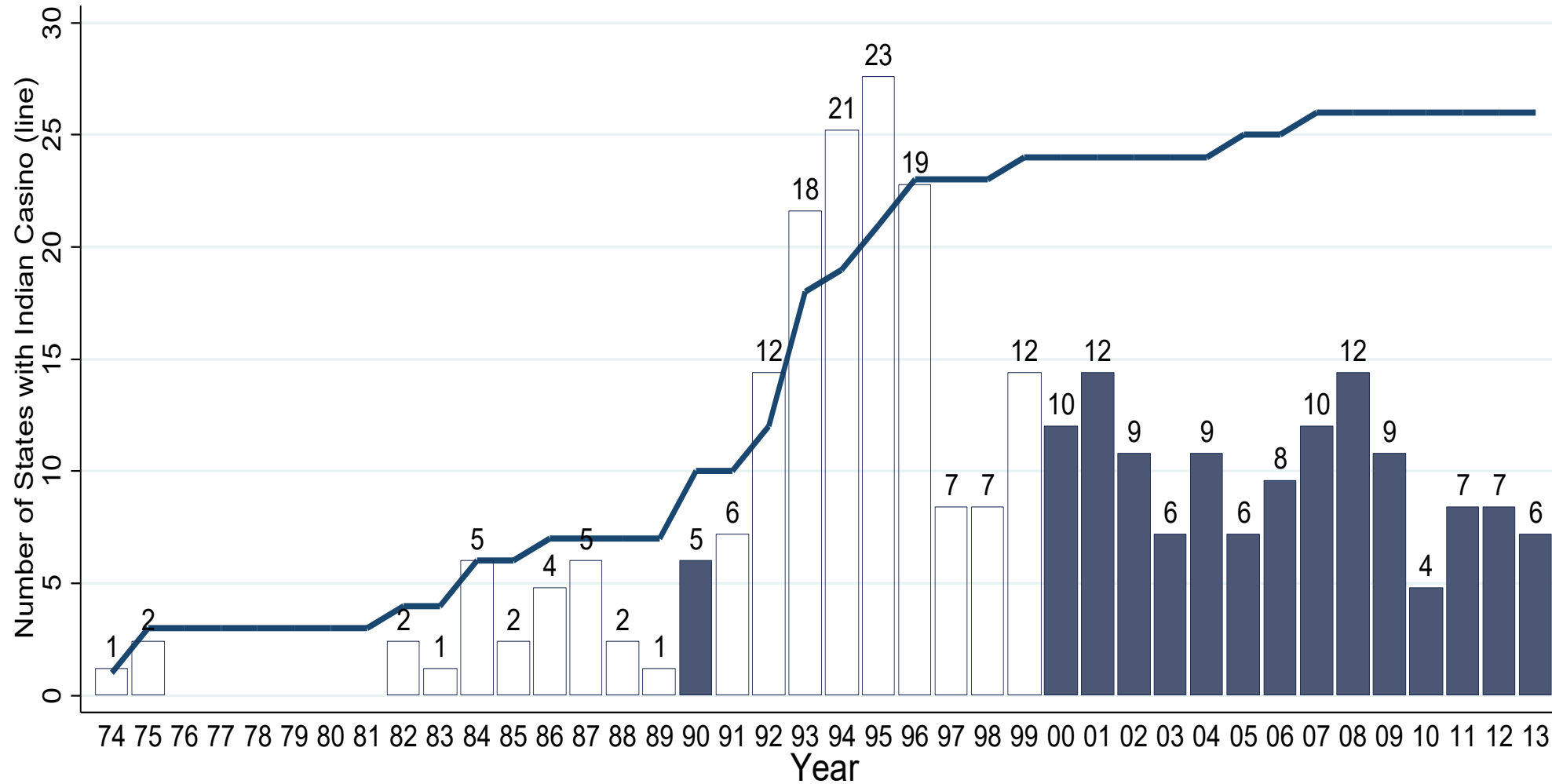
Figure 1: Number of States with a Tribal-State Compact (line) and Number of New Tribal-State Compacts (bars), by year



Source: U.S. Department of the Interior Bureau of Indian Affairs. Indian Gaming Compacts. Retrieved from <https://www.indianaffairs.gov/as-ia/oig/gaming-compacts>. Downloaded on April 4, 2018. Data in our main analysis is extracted from the 1990 and 2000 5% Census and the 2001–2018 American Community Survey (shaded bars). 10

# American Indian Casino Openings

Number of States with a Class III Indian Casino (line) and Number Casino Openings (bars), by year. Shaded bars correspond with years of Census/ACS data.



# Data – Individual Self-reported Race and Ancestry

- ◆ 1990 and 2000 Census Data, 2001–2018 ACS data (individuals aged 0-59).
- ◆ Self-Reported Race — A Subjective Question.
  - 2000: “Mark [X] one or more races to indicate what this person considers himself/herself to be”.
  - Results robust to using only 2000+
  - ACS Instructions: “The concept of race, as used by the Census Bureau, reflects self-identification by individuals according to the race or races with which they identify.” However, Native American race response linked to tribal authority:
    - Individuals who select to identify as American Indian/Alaskan Native are asked to “print name of *enrolled or principal tribe*” (emphasis added).
    - American Indian/Alaskan Native defined as “A person having origins in any of the original peoples of North and South America (including Central America) *and who maintains tribal affiliation or community attachment*” (emphasis added).

# Data – Individual Self-reported Race and Ancestry, cont.

- ◆ Ancestry — An Objective Question.
  - “What is this person's ancestry or ethnic origin?”
  - “Ancestry refers to the person's ethnic origin or descent, "roots," or heritage. Ancestry also may refer to the country of birth of the person or the person's parents or ancestors before their arrival in the United States.”
  - Individuals may list up to two ancestries, so we differentiate the strength of individuals’ ancestral ties by means of which ancestries they list, as well as the order in which they list their ancestries
    - Individuals listing American Indian ancestry first are presumed to have stronger American Indian ties than individuals listing American Indian ancestry second.
    - We categorize individuals in increasing order of American Indian ancestral ties as follows:
      - No American Indian ancestry listed;
      - Other ancestry listed first, American Indian ancestry listed second;
      - American Indian ancestry listed first, Other ancestry listed second;
      - Only American Indian ancestry listed.

# Definitions – Native American Race/Ancestry

- ◆ Native American — individuals who self-identify as American Indian and/or Alaska Native on the race question.
  - Census identifies American Indian/Alaska Native for individuals with two or more races (i.e., it does not separate them out).
- ◆ American Indian Tribe — individuals who self-identify as American Indian only and list a specific American Indian tribe.
  - Tribe is only available for those who list American Indian as a single race.
- ◆ American Indian Ancestry — **includes all American Indian tribes.**
  - Does not include Aleut, Eskimo, Inuit, Mexican Indian, Mexican American Indian, Central American Indian, South American Indian, or Asian Indian.

# Summary Statistics

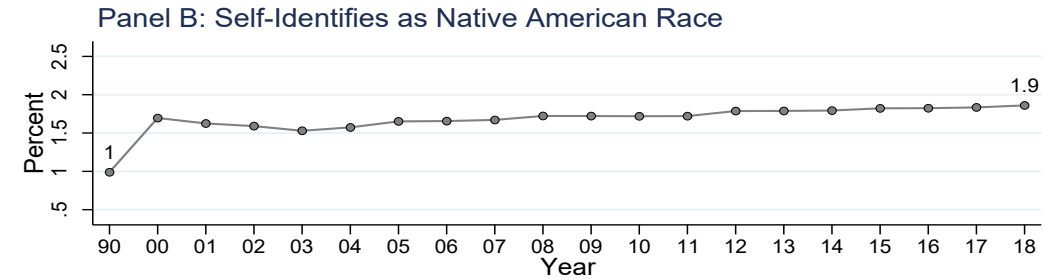
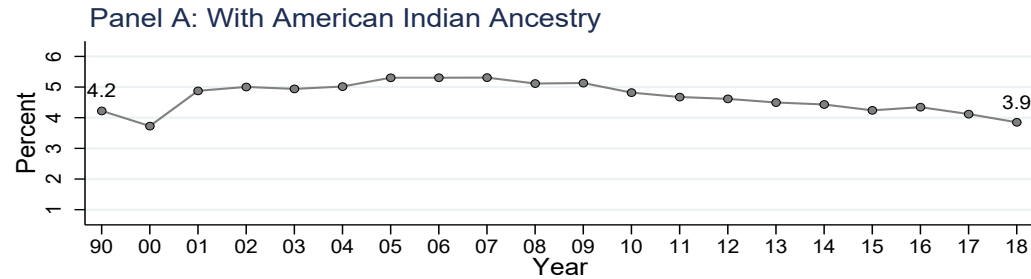
**Table 1: Self-reported Race of Children and Adults, by American Indian Ancestry**

<b>Panel A: Children</b>	No Indian Ancestry	Other 1 <sup>st</sup> Indian 2 <sup>nd</sup>	Indian 1 <sup>st</sup> Other 2 <sup>nd</sup>	Only Indian Ancestry
<b>Self-Reported Race</b>				
<b>Native American American Indian tribe</b>	0.70	14.51	23.41	54.67
<b>White</b>	74.52	84.75	86.82	41.83
<b>Black</b>	17.23	15.85	8.60	5.00
<b>Asian</b>	4.88	1.20	1.39	8.42
<b>Sample size</b>	15,320,115	252,026	157,297	255,381
<b>Panel B: Adults</b>	No Indian Ancestry	Other 1 <sup>st</sup> Indian 2 <sup>nd</sup>	Indian 1 <sup>st</sup> Other 2 <sup>nd</sup>	Only Indian Ancestry
<b>Self-Reported Race</b>				
<b>Native American American Indian tribe</b>	0.51	11.66	21.03	46.41
<b>White</b>	81.93	85.06	86.81	55.46
<b>Black</b>	14.30	13.48	7.14	4.81
<b>Asian</b>	1.91	0.42	0.49	1.42
<b>Sample size</b>	32,464,010	628,749	340,255	572,517

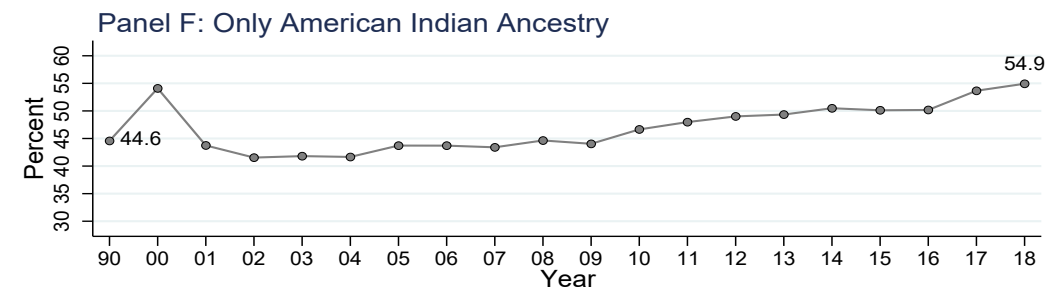
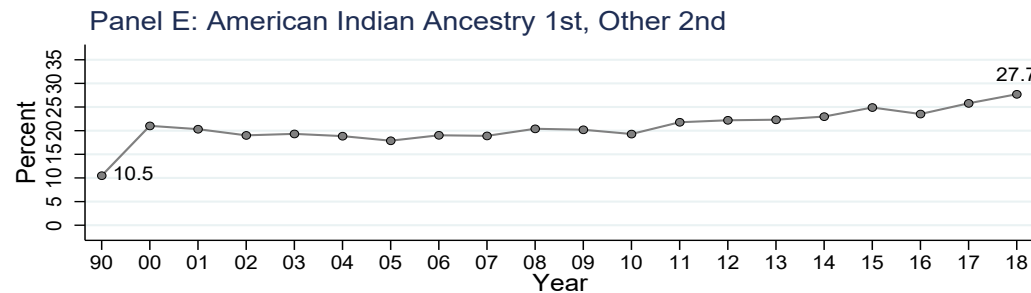
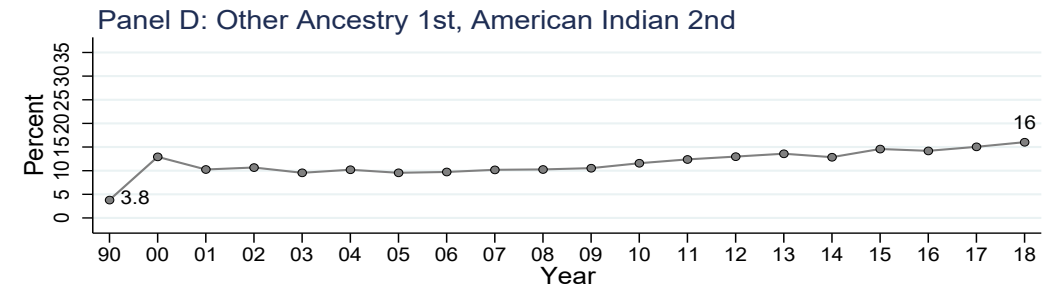
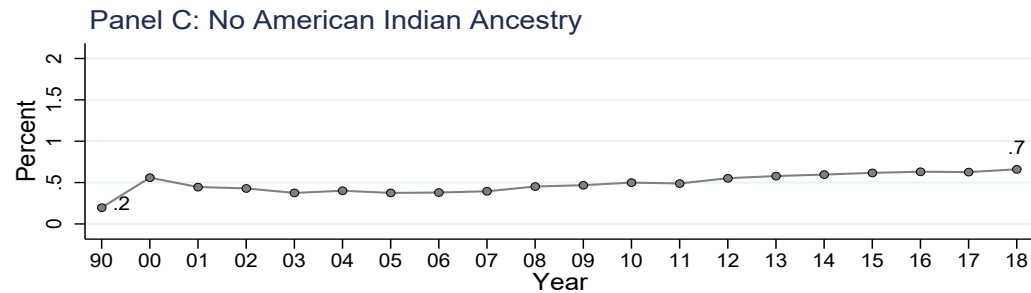
**Notes: 1990 and 2000 Census Data, 2001–2018 ACS data. The samples include U.S.-born individuals aged 0–59 with the indicated ancestry. Individuals with an allocated race or Hispanic origin are excluded. All numbers are percentages. Race categories are not mutually exclusive or exhaustive.**

# American Indian Ancestry and Self-Reported Race Over Time

Percent of U.S. Population



Percent of U.S. Population Who Self-Identify as Native American Race, by Indian Ancestry



Source: 1990 and 2000 Census Data, 2001-2018 American Community Survey (ACS) data. The sample includes U.S.-born individuals 0 to 40 in 1990. Individuals with an allocated race or Hispanic origin are excluded.



# Impact of Tribal-State Casino Compacts on Racial Identity— Main Estimating Equation

- ◆ To exploit variation in tribal-state compacts across states over time and allow for distinction between the impacts of a state having any (Class III) casinos in operation by American Indian ancestry, we estimate:

$$\begin{aligned} & \textit{NativeAm}_{ist} \\ &= \pi_1(\textit{Compact}_{st} \times \textit{NoIndAnc}_{ist}) + \pi_2(\textit{Compact}_{st} \times \textit{OtherAnc1st}, \textit{IndAnc2nd}_{ist}) \\ &+ \pi_3(\textit{Compact}_{st} \times \textit{IndAnc1st}, \textit{OtherAnc2nd}_{ist}) + \pi_4(\textit{Compact}_{st} \times \textit{OnlyIndAnc}_{ist}) \\ &+ \pi_5(\textit{OtherAnc1st}, \textit{IndAnc2nd}_{ist}) + \pi_6(\textit{IndAnc1st}, \textit{OtherAnc2nd}_{ist}) \\ &+ \pi_7 \textit{OnlyIndAnc}_{ist} + \mathbf{X}_{ist}\boldsymbol{\beta} + \mu_s + \delta_t + \theta_s t + \varepsilon_{ist} \end{aligned}$$

# Identification and Specification

where:

- $NativeAm_{ist}$  is a dummy variable equal to one if person  $i$  from birth state  $s$  in survey year  $t$  indicates a Native American race.
- $Compact_{st}$  is a dummy variable equal to one if state  $s$  has a tribal-state compact in year  $t$ .
- Dummy variables describing American Indian ancestral ties, in increasing order of strength:
  - $NoIndAnc_{ist}$ : no American Indian ancestry
  - $OtherAnc1st, IndAnc2nd_{ist}$ : other (non-American Indian) ancestry listed first and American Indian ancestry listed second
  - $IndAnc1st, OtherAnc2nd_{ist}$ : American Indian ancestry listed first and other (non-American Indian) ancestry listed second
  - $OnlyIndAnc_{ist}$ : only American Indian ancestry, respectively
- $X_{ist}$  includes controls for age and gender
- State fixed effects, year fixed effects, and state-specific time trends. Cluster at state level. Estimated separately for children and adults.

# Impact of Tribal-State Casino Compacts on Racial Identity— Event Study Framework

- ◆ To trace out effects over time and check for parallel trends prior to tribal-state compacts, we estimate:

$NativeAm_{ist}$

$$\begin{aligned} &= \sum_{\substack{k=-4 \\ k \neq -1}}^3 \omega_k (CompYear_{kst} \times NoIndAnc_{ist}) + \sum_{\substack{k=-4 \\ k \neq -1}}^3 \alpha_k (CompYear_{kst} \times OtherAnc1st, IndAnc2nd_{ist}) \\ &+ \sum_{\substack{k=-4 \\ k \neq -1}}^3 \lambda_k (CompYear_{kst} \times IndAnc1st, OtherAnc2nd_{ist}) + \sum_{\substack{k=-4 \\ k \neq -1}}^3 \theta_k (CompYear_{kst} \times OnlyIndAnc_{ist}) \\ &+ \gamma_1 (OtherAnc1st, IndAnc2nd_{ist}) + \gamma_2 (IndAnc1st, OtherAnc2nd_{ist}) + \gamma_3 OnlyIndAnc_{ist} + \mathbf{X}_{ist} \boldsymbol{\beta} \\ &+ \mu_s + \delta_t + \theta_s t + \varepsilon_{ist} \end{aligned}$$

where:

$CompYear_{kst}$  is a dummy variable equal to one indicating that state  $s$  in year  $t$  falls into one of seven event year categories,  $k$ , representing:  
9 or more years before, 6 to 8 years before, 3 to 5 years before, less than three years after, 3 to 5 years after, 6 to 8 years after, and 9 or more years after the state approved Class III American Indian casinos.

All other controls are as noted above.

# Impact of Tribal-State Casino Dividend Payments on Racial Identity—Estimating Equation

- ◆ To explore whether effects appear to be driven by casino dividend payments, we estimate:

$$\begin{aligned} & NativeAm_{ist} \\ &= \phi_1(nonRAPCasino_{st} \times NoIndAnc_{ist}) + \phi_2(RAPCasino_{st} \times NoIndAnc_{ist}) \\ &+ \phi_3(nonRAPCasino_{st} \times OtherAnc1st, IndAnc2nd_{ist}) \\ &+ \phi_4(RAPCasino_{st} \times OtherAnc1st, IndAnc2nd_{ist}) \\ &+ \phi_5(nonRAPCasino_{st} \times IndAnc1st, OtherAnc2nd_{ist}) \\ &+ \phi_6(RAPCasino_{st} \times IndAnc1st, OtherAnc2nd_{ist}) \\ &+ \phi_7(nonRAPCasino_{st} \times OnlyIndAnc_{ist}) + \phi_8(RAPCasino_{st} \times OnlyIndAnc_{ist}) \\ &+ \gamma_1(OtherAnc1st, IndAnc2nd_{ist}) + \gamma_2(IndAnc1st, OtherAnc2nd_{ist}) \\ &+ \gamma_3 OnlyIndAnc_{ist} + \mathbf{X}_{ist}\boldsymbol{\beta} + \mu_s + \delta_t + \theta_s t + \varepsilon_{ist} \end{aligned}$$

where:

$nonRAPCasino_{st}$  is a dummy variable equal to one if state  $s$  has a non-RAP casino in year  $t$ .

$RAPCasino_{st}$  is a dummy variable equal to one if state  $s$  has a RAP casino in year  $t$ .

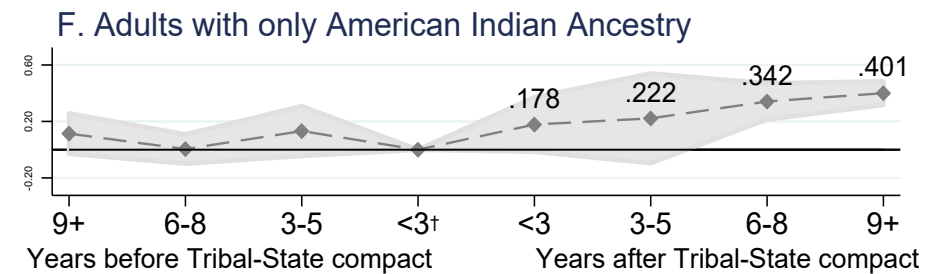
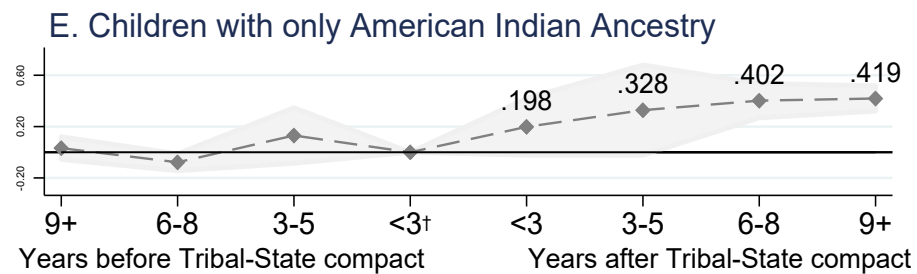
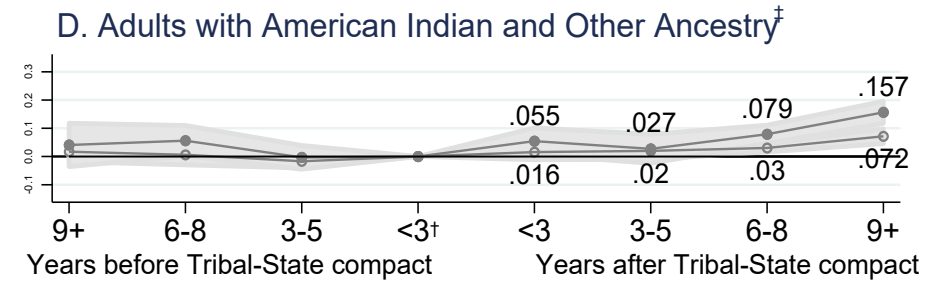
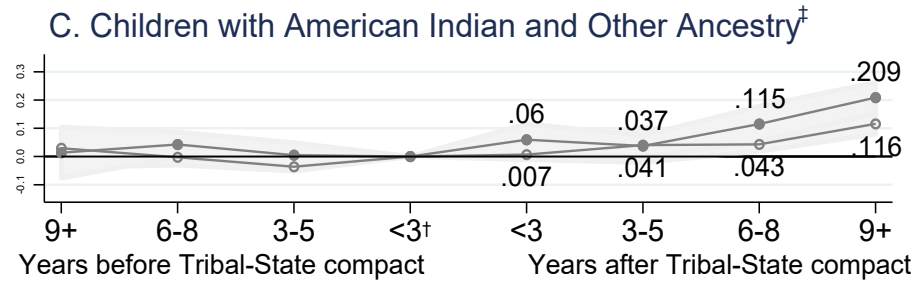
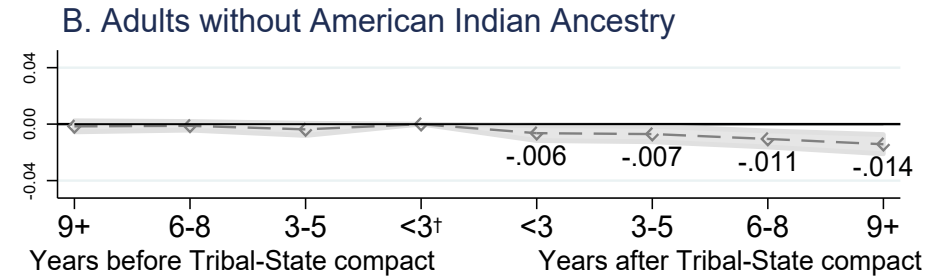
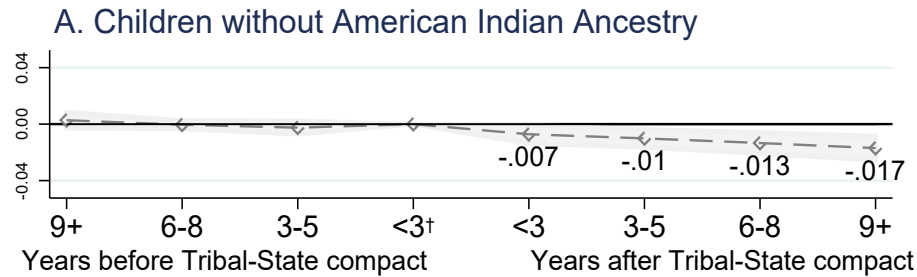
All other controls are as noted above.

# Main Results: Relationship between Tribal-State Compacts in Birth State and Native American Identification

	Native American Identification	
	Children	Adults
<b>Compact × No American Indian ancestry</b>	-.0120*** (.0034)	-.0103*** (.0027)
<b>Compact × (Other ancestry 1<sup>st</sup>, Am. Indian 2<sup>nd</sup>)</b>	.1111*** (.0205)	.0699*** (.0145)
<b>Compact × (Am. Indian ancestry 1<sup>st</sup>, other 2<sup>nd</sup>)</b>	.1985*** (.0323)	.1496*** (.0238)
<b>Compact × Only American Indian ancestry</b>	.4128*** (.0582)	.3894*** (.0505)
<b>Sample size</b>	15,984,819	34,005,531

Magnitudes interpreted relative to rates of self-identification in Table 1 suggest sizable impacts, generally rising by strength of ancestry, e.g. 60-80% for adults, and falling considerably for those with no American Indian ancestry.

# Event Study: Relationship between Tribal-State Compacts in Birth State and Native American Identification



<sup>‡</sup>Panels C and D:

○ Other ancestry 1st, American Indian ancestry 2nd      ● American Indian ancestry 1st, other ancestry 2nd



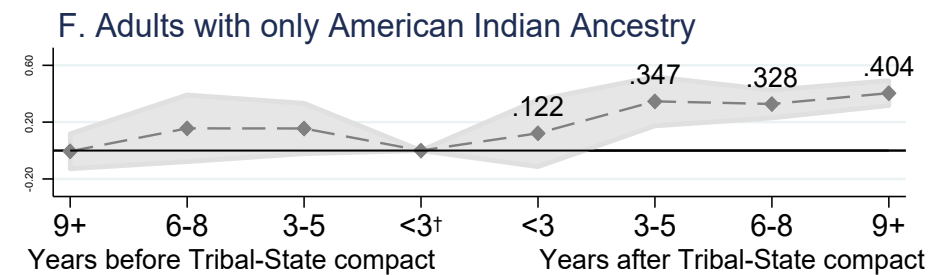
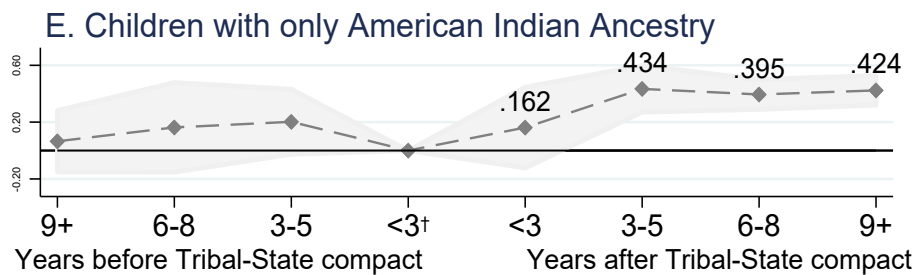
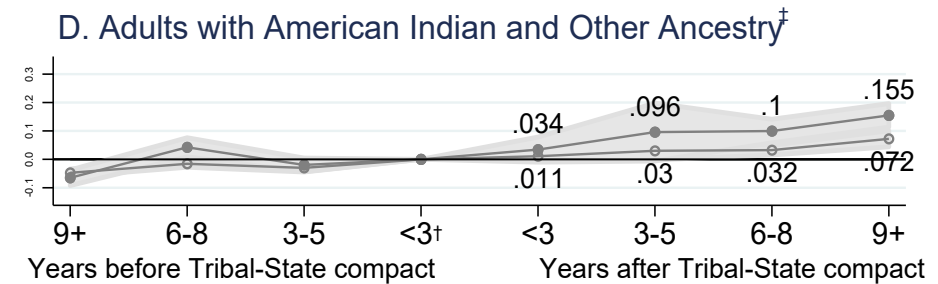
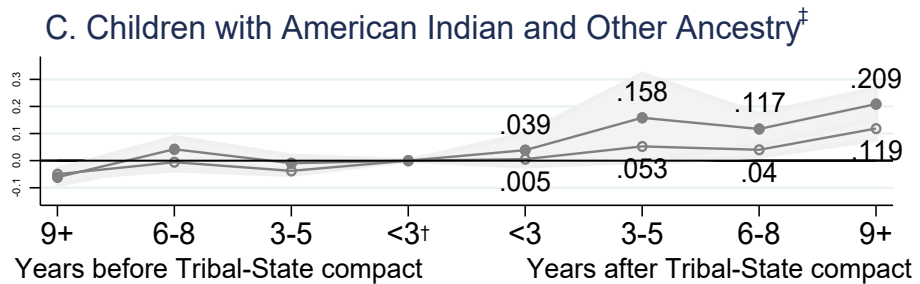
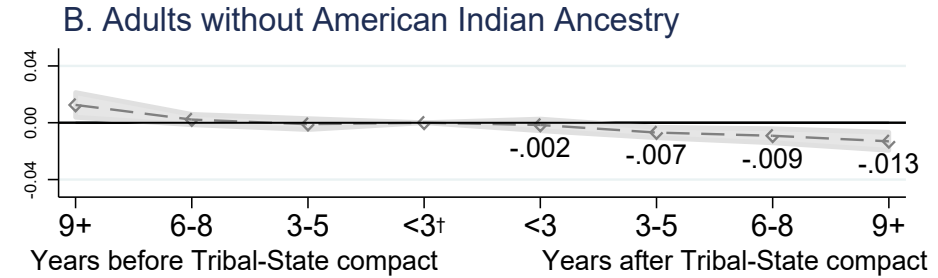
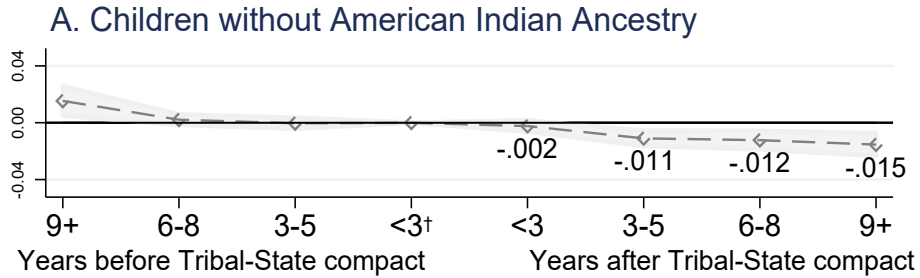
# Results: Relationship between Tribal-State Compacts in Birth State and Native American Tribe Identification

**Table 3: Relationship between Tribal-State Gaming Compacts in Birth State and Tribal Identification Among Individuals who Identify as Native American Race**

	Native American Tribe Identification	
	Children	Adults
<b>Compact × No American Indian ancestry</b>	-.0435 (.0422)	-.0264 (.0348)
<b>Compact × American Indian ancestry</b>	.0749* (.0381)	.0712** (.0305)
<b>Mean of dependent with no Am Indian ancestry</b>	.2667	.2664
<b>Mean Dependent with Am Indian ancestry</b>	.6282	.6198
<b>Sample size</b>	344,263	596,489

Note: American Indian Tribe identification includes individuals who self-identify as Native American and list a specific American Indian tribe.

# Event Study: Relationship between Casino Openings in Birth State and Native American Identification



<sup>‡</sup>Panels C and D:

- Other ancestry 1st, American Indian ancestry 2nd
- American Indian ancestry 1st, other ancestry 2nd

# Results: Relationship between Tribal Dividend Payments Proxy and Native American Tribe Identification

	Native American Identification	
	Children	Adults
<b>No American Indian ancestry × Has Non-RAP casino</b>	-.0062 (.0048)	-.0063** (.0030)
<b>Has RAP casino</b>	-.0079*** (.0022)	-.0073*** (.0021)
<b>Other ancestry 1<sup>st</sup>, Am. Indian 2<sup>nd</sup> × Has Non-RAP casino</b>	.0751*** (.0235)	.0586*** (.0158)
<b>Has RAP casino</b>	.1029*** (.0240)	.0663*** (.0175)
<b>Am. Indian ancestry 1<sup>st</sup>, other 2<sup>nd</sup> × Has Non-RAP casino</b>	.1587*** (.0546)	.1314*** (.0386)
<b>Has RAP casino</b>	.1881*** (.0354)	.1499*** (.0238)
<b>Only American Indian ancestry Has Non-RAP casino</b>	.3784** (.1529)	.3987*** (.1201)
<b>Has RAP casino</b>	.3829*** (.0658)	.3492*** (.0512)
<b>Sample size</b>	9,821,565	20,292,357

- ◆ Results are similar when the set of control states is limited to those that had a Native American population greater than 6,000 or greater than 10,000 in 1990.
- ◆ Results are similar if drop 1990 Census year (Appendix)
- ◆ Show ancestry does not respond to treatment (Appendix)
- ◆ Robustness to Concerns over Staggered Treatment Timing (in progress)

# Conclusions

- State policy changes allowing tribes to open casinos are associated with an
  - *Increase* in the probability that individuals *with* American Indian ancestry will self-identify as Native American
  - *Decrease* in the probability that individuals with *no* (documented) American Indian ancestry will self-identify as Native American.
- Magnitudes of the impacts are increasing in the strength of American Indian ancestral ties.
- Similar results hold when causal identification comes from American Indian casino openings across states over time
- Suggestive evidence of stronger impacts if casinos are likely to pay per capita dividend payments to their members.
- Results consistent with racial self-identification responding to economic motivations as well as social stigma