

Prior Work and Future Directions on Choice of Entity and Race

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Prior Work

“Entrepreneurs’ Legal Status Choices and
the C Corporation Survival Penalty,”
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Practical Motivation



IJ Clinic on Entrepreneurship



The IJ Clinic on Entrepreneurship provides **free legal assistance, support** and **advocacy** for low-income entrepreneurs in Chicago. The IJ Clinic also trains the next generation of attorneys to be vigorous and creative advocates for entrepreneurs.

Theoretical Motivation



The Anti-C Corporation Thesis

Questions Presented & Preview

- Is there a relationship between choice of legal status and survival?
 - Yes, but only for non-IPO-oriented (“Regular”) C corps with neither VC investors nor stock options plans
 - Regular C Corporations fail at higher rates than the LLC base case
 - No other legal status exhibits this difference
- How is this (penalized) Regular C corporation status “distributed” across the entrepreneur population?
 - Being non-white, foreign-born, and older is associated with Regular C corp status
 - Many Regular C corporations appear (from data) to be S-eligible
 - S-eligible C corporations have lower survival rates than actual S Corporations
 - Being non-white stands out as associated with this especially disadvantaged category

Data: Kauffman Firm Survey

- National sample of 4928 firms
- All began operations in 2004
- Survey followed them through end of 2011 (8 surveys covering 7 years)
- Approx. 7300 variables in confidential data set
- 2 key variables: survival and legal status
 - separate out “Regular C Corporations” from “ACE C Corporations” (anticipated cash exit)
 - ACE C Corps = has VC investor or employee stock option plan

**Q1: Is There a Relationship Between
Legal Status and Survival?**

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Cox proportional Hazard model:

$$\log \text{age}_i(t) = \alpha(t)_{NAICS} + \beta_1 \text{soleprop}_i + \beta_2 \text{GP}_i + \beta_3 \text{S_Corp}_i + \beta_4 \text{Reg_C_Corp}_i + \beta_5 \text{ACE_C_Corp}_i + \beta_6 \text{LLC}_i + \beta_7 X_i + \varphi_s + \varepsilon_i$$

Where age_i is a continuous variable denoting firm i 's years of survival, $\alpha(t)$ is baseline hazard function, and X_i is a matrix of 28 control variables

Null hypothesis:

$$\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 1 \text{ (not zero b/c using hazard ratios)}$$

- Where rejecting null of $\beta_4 = 1$ is consistent with anti-C corporation thesis

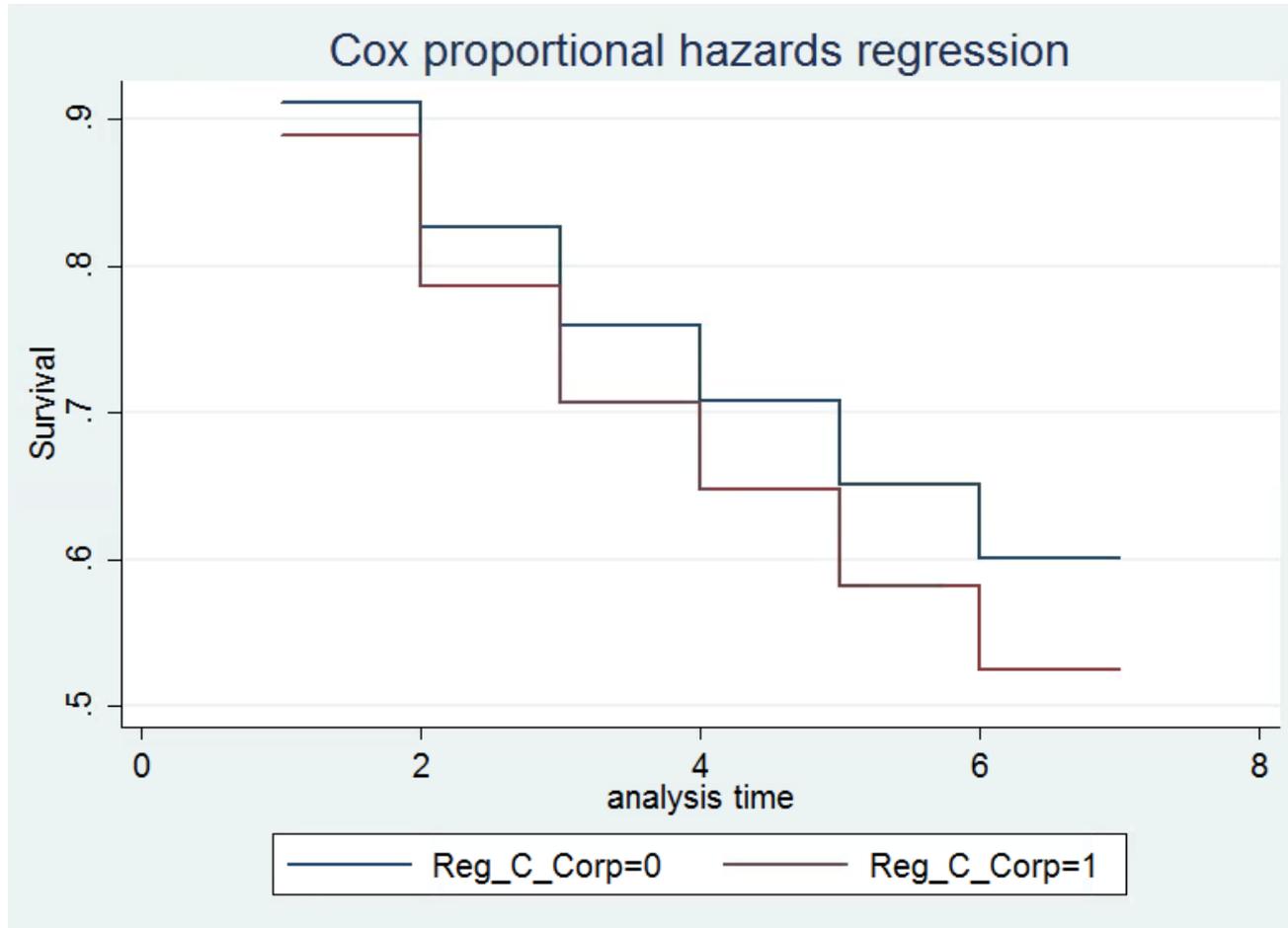
Yes, and ONLY for Regular C Corps

Table 5: Cox Hazard Regression Results with Regular and ACE C Corporations
Listed Separately – Reporting Hazard Ratios

	(1) Baseline	(2) State and Stratif.	(3) Owner Info.	(4) Business Info	(5) Financial Info	(6) All Controls	(7) All less Stock, VC
Sole prop.	1.25 ^{***} (3.87)	1.22 ^{***} (3.41)	1.13 [*] (2.09)	1.12 (1.87)	1.19 ^{**} (2.92)	1.06 (0.96)	1.07 (1.01)
GP	1.42 ^{**} (2.85)	1.36 [*] (2.49)	1.22 (1.63)	1.32 [*] (2.26)	1.28 (1.89)	1.15 (1.09)	1.15 (1.10)
S Corp	1.09 (1.36)	1.06 (0.88)	1.12 (1.55)	1.12 (1.64)	1.07 (0.97)	1.14 (1.87)	1.13 (1.77)
ACE C	1.12 (0.64)	1.07 (0.41)	1.24 (1.31)	1.48 (1.92)	1.06 (0.33)	1.51 (1.87)	1.40 (1.92)
Reg C	1.41 ^{***} (3.69)	1.36 ^{**} (3.27)	1.37 ^{***} (3.38)	1.41 ^{***} (3.69)	1.33 ^{**} (3.02)	1.36 ^{**} (3.18)	1.36 ^{**} (3.22)
Time- interaction for IP holders	No	No	No	Yes	No	Yes	Yes
State fixed effects & stratificatio n	No	Yes	Yes	Yes	Yes	Yes	Yes
N	4392	4392	4392	4392	4392	4392	4392

Bootstrapped z-statistics in parentheses; * p < 0.05, ** p < 0.01, *** p < 0.001.

Regular C Corporations vs. Other Legal Statuses



Q2: How is this (penalized) Regular C corporation status “distributed” across the entrepreneur population?

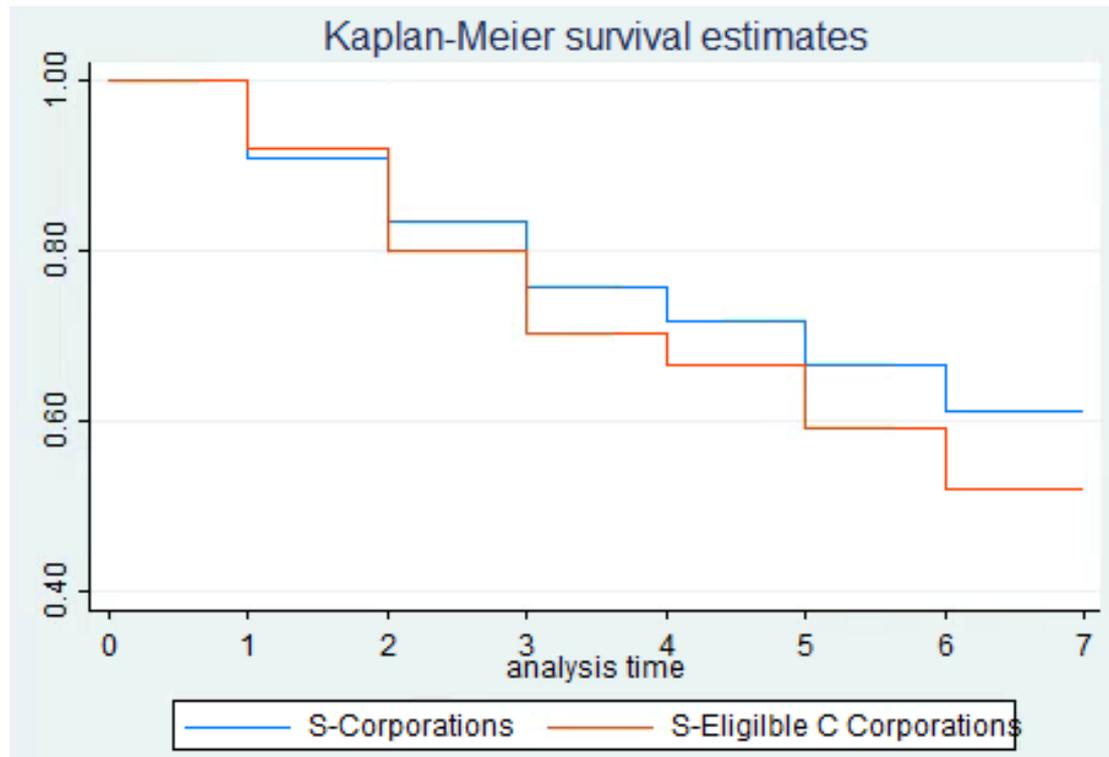
Odds Ratios: Regular C Status

(representing estimated constant effect of covariate on likelihood of C status)

Table 6: Entrepreneur and Firm Characteristics Associated with Regular C Corporation Status: Odds Ratios

	(1) All Firms	(2) Firms Choosing a Separate Legal Entity
White	0.532 ^{***} (-4.00)	0.457 ^{***} (-4.73)
Native-born	0.556 ^{**} (-3.27)	0.580 ^{**} (-2.80)
Coll. grad	0.788 (-1.75)	0.624 ^{***} (-3.30)
Mean owner age	1.140 [*] (2.03)	1.153 [*] (1.99)

Survival of S-Eligible C Corps vs. S Corps Unequal



Within S-Eligible Pool, Race Stands Out As Associated with Survival-Penalized C Corp Status

Table 13: Odds Ratios of C Corporation Status Among S-Eligible “Regular C Corporations” and S Corporations

	(1) <i>Demographic Controls</i>	(2) <i>Incl. Interactions</i>	(3) <i>All Controls (Demo, Business, Finance)</i>
Female	0.953 (-0.28)	1.096 (0.17)	0.950 (-0.27)
White	0.402*** (-4.85)	0.418** (-3.00)	0.392*** (-4.91)
Coll. grad	0.671** (-2.77)	0.640 (-1.25)	0.708* (-2.08)
Native born	0.686 (-1.74)	0.690 (-1.79)	0.745 (-1.29)
Mean owner age	1.186* (2.26)	1.184* (2.30)	1.181* (2.02)
<i>N</i>	1,224	1,224	1,224

NOTES: Bootstrapped z statistics in parentheses; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Conclusions

- Regular C corporations are associated with a 36 percent survival penalty relative to LLCs
 - No other legal statuses have such a penalty
- Odds of being in the survival-penalized Regular C Corporation status are reduced by
 - Being white (by 47 percent), being native-born (by 44 percent), and being young
- Regular C Corps that appear to be S-eligible fail at higher rates than actual S Corporations
- Within this pool of S-eligible Regular C Corporations, being white reduces odds of Regular C corp status by 61 percent
- Switching the (counter-majoritarian) default tax classification of corporations from subchapter C to S has potential to address some of the distributive implications of legal status complexity

Future Directions (with Dorothy Brown)

New project using different
(more comprehensive) data

Federal Statistical Research Data Centers

The Census Bureau operates 33 Federal Statistical Research Data Centers



Researchers interested in analyzing federal agency microdata that are not publicly available might benefit from using a Federal Statistical Research Data Center (FSRDC). This introductory video describes what FSRDCs are, what kinds of data are available, and how to access an FSRDC. We look forward to working with you!



New Project

- Address limitations of survey data by using administrative data from Census available through Federal Statistical Research Data Centers
- County Business Patterns microdata has firms' legal status info
- Can be linked via EIN to other datasets that track firms over time and contain demographic information about the entrepreneur (Longitudinal Business Database and Annual Business Survey)

Questions

- Ask very basic question: who forms what kinds of firms?
 - Looking at similarly-situated entrepreneurs, does choice of legal status vary by race?
- Hypothesis: compared to similarly-situated white entrepreneurs, non-white entrepreneurs use simpler legal statuses (i.e., fewer tax partnerships)
 - This could indicate lack of access to legal advice
- Secondary uses of data:
 - Replicate survival results from earlier paper, see if they hold post-TCJA
 - Examine prediction that some firms would switch legal status after TCJA
 - Who are the switchers? Are non-white entrepreneurs more or less likely to switch than similarly-situated white entrepreneurs?
 - Again, could indicate lack of access to advice, illustrate barriers created by complexity

Thank you!

Appendix

Existing Literature

Empirical:

- Cole (2011): looked at “switchers” to test life-cycle theory of firm and empirical determinants of entity choice (KFS)
- Broughman (2011): wealth-protection as motivation for seeking liability-limited entities (KFS); found very limited support in data

Caveat to Anti-C corporation Hypothesis

- A puzzling but durable norm in favor of C corp status observed for “Silicon-Valley-like” firms contemplating public exit
 - Bankman (1994), Fleischer (2003), Polsky & Rosenzweig (2016)
- Bankman’s story about switching and collective action costs suggests that C corps with this particular profile are not “mismatches”
 - adherence to norm → signal of quality/access to counsel
- Fleischer’s analysis goes further: focuses on non-usability of losses, agency costs and transaction costs

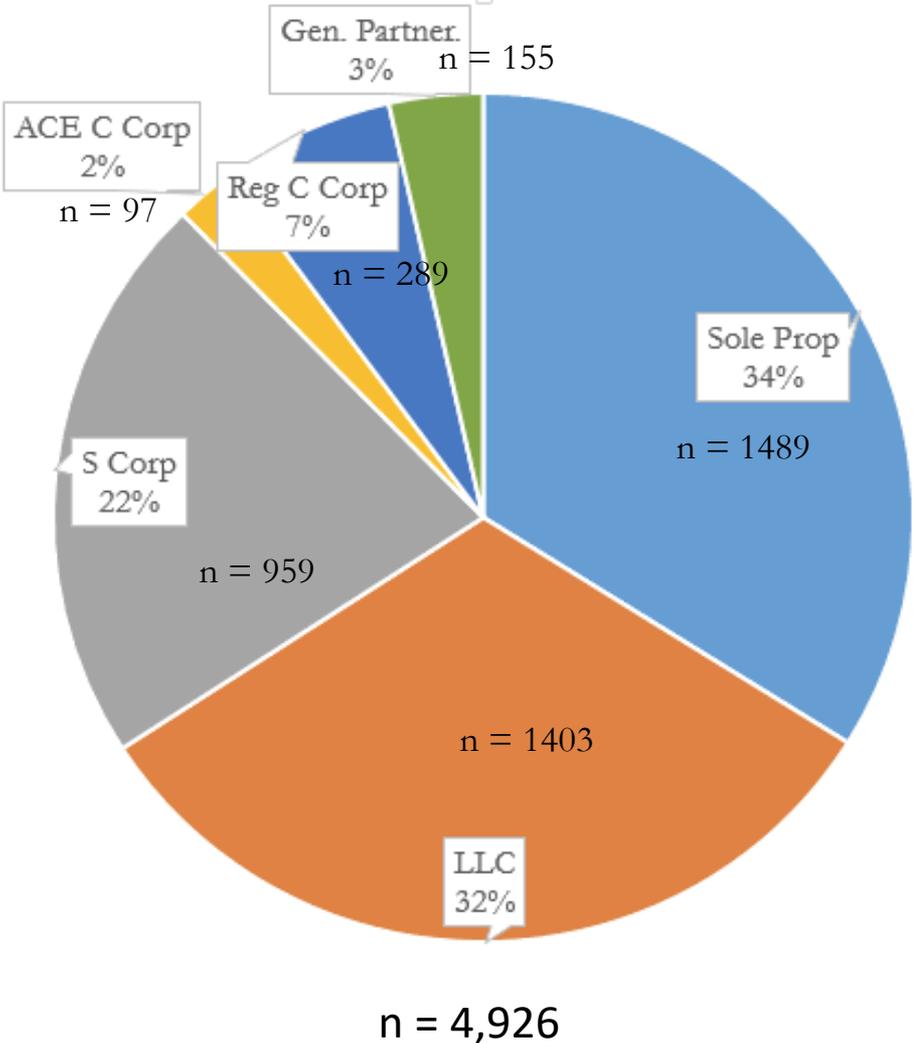
Approach: Partition “ACE C Corps” from “Regular C Corps”

- To be a “Anticipated Cash Exit C corp” (“ACE C Corp”) (n=97), the enterprise must have:
 1. At least one “venture capitalist investor;” or
 2. Employee stock option plan
- Otherwise, a “Regular C corp” (n=289)

Assessing Survival

- There is no “survived” dummy in KFS: need to look at details of “final status” variables
- If “out of business,” must dig into recorded reasons for shutting down
- Rubric:
 - Where final status indicated “in operation” or where there was exit under positive circumstances (merger or acquisition in current or prior period), classified as “survived”
 - Where final status indicated out of business, classified as “failed”
 - Where missing values, made logical inferences (e.g., “survived” in year 6 and year 4 implies “survived” for year 5, even if missing)
- Remaining number of observations with missing covariates or missing survival status dropped; LPs and “other” classifications also excluded
- Final sample: 4392 (lost 536 observations due to drops)

KFS Sample by Legal Status



Other Info About Entrepreneurs & Firms

Three main groups of variables from which controls were selected:

1. Demographics and owner info

- 8 variables: primary owner sex, race, native-born, education, industry experience, others

2. Enterprise characteristics, strategy and innovation

- 8 variables: home-based, IP, health plan, stock option plan, R&D spending, others

3. Finance and investor info

- 12 variables: debt, assets, investors & investor demographics

Conjecture: C status may be sticky for less sophisticated entrepreneurs

Pitfalls: timing, need unanimous shareholder agreement, etc.

To proxy for S eligibility, flagged Regular C corporations as either:

- “S-Ineligible” C Corps with
 - non-individual owners,
 - non-citizen owners (over-inclusive)
 - one class of stock: firms with stock option plans already separated out
- “S-Eligible”: all others

Logit Regression Result Similar (Dependent Variable: survived7)

VARIABLES	(1) survived7	(2) survived7	(3) survived7	(4) survived7	(5) survived7	(6) survived7
Sole proprietor	-0.198*** (-2.795)	-0.146* (-1.824)	-0.00558 (-0.0676)	-0.0903 (-0.999)	-0.128 (-1.533)	0.0374 (0.400)
GP	-0.369* (-1.958)	-0.278 (-1.332)	-0.0745 (-0.352)	-0.225 (-1.001)	-0.244 (-1.207)	-0.0885 (-0.404)
S_Corp	-0.0100 (-0.125)	0.0419 (0.466)	0.0318 (0.354)	0.00986 (0.110)	0.0459 (0.499)	0.0261 (0.273)
C_Corp	-0.468*** (-3.492)	-0.424*** (-3.033)	-0.414*** (-2.800)	-0.476*** (-3.250)	-0.389*** (-2.682)	-0.403*** (-2.601)
LLC (omitted – base case)	-	-	-	-	-	-
Demo & work behavior controls	No		Yes	No	No	Yes
Business characteristics & innovation controls	No		No	Yes	No	Yes
Finance & ownership controls	No		No	No	Yes	Yes
State fixed effects	No	Yes	Yes	Yes	Yes	Yes
Observations	4,089	4,089	4,002	4,078	4,089	3,992
Pseudo R-squared	0.00389	0.0179	0.0343	0.0335	0.0225	0.0509

Robust z-statistics in parentheses; standard errors clustered by state id for all specifications

*** p<0.01, ** p<0.05, * p<0.1

Estimating Magnitude of the C Corp Penalty (dProbit): about 11 percentage points

dProbit Regression Results

Marginal Percentage Effect of Entity Status on Survival as compared to C Corporation

VARIABLES	(1) survived3	(2) survived4	(3) survived5	(4) survived6	(5) survived7
Sole proprietor	0.0765** (2.478)	0.0915*** (3.426)	0.0740** (2.396)	0.0985*** (2.783)	0.111*** (3.005)
GP	0.0240 (0.511)	0.0321 (0.714)	0.0533 (1.071)	0.0319 (0.501)	0.0780 (1.201)
S_Corp	0.0833*** (2.635)	0.0702** (2.303)	0.0820** (2.405)	0.112*** (3.240)	0.105*** (2.871)
LLC	0.0693** (2.487)	0.0884*** (3.059)	0.0753** (2.487)	0.108*** (3.245)	0.112*** (3.155)
Entrepreneur demographic & work behavior controls	Yes	Yes	Yes	Yes	Yes
Business characteristics & innovation controls	Yes	Yes	Yes	Yes	Yes
Finance & ownership controls	Yes	Yes	Yes	Yes	Yes
Observations	3,992	3,992	3,992	3,992	3,992
Pseudo R-squared	0.0383	0.0381	0.0330	0.0330	0.0364

Robust z-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1