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**ONLINE SUPPLEMENT  
to article in**

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**KINSHIP IN THE SHADOW OF THE CORPORATION: THE  
INTERBUILDER NETWORK IN CLYDE RIVER SHIPBUILDING, 1711–  
1990**

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**Table S1.** Basic Statistics

|                                     | Mean   | SD     | (1)  | (2)  | (3)  | (4)  | (5)  | (6)  | (7)  | (8)  | (9)  | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
|-------------------------------------|--------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1. Builder Failed                   | .033   | .178   | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 2. Interbuilder Ties                | 1.400  | 2.026  | -.04 | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 3. Interbuilder Ties * Corporation  | .821   | 1.860  | -.01 | .79  | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 4. Repeat Customers                 | 2.125  | 2.586  | -.09 | .14  | .02  | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 5. log(Capacity in Tons)            | 8.164  | 2.252  | -.07 | .24  | .23  | .58  | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 6. log(Current Production in Ships) | 3.193  | 3.949  | -.09 | .07  | -.05 | .58  | .48  | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 7. Density                          | 36.507 | 14.077 | .02  | .04  | -.05 | .35  | .31  | .36  | —    | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 8. World War                        | .075   | .264   | -.04 | .02  | .07  | .06  | .12  | .09  | .08  | —    | —    | —    | —    | —    | —    | —    | —    | —    |
| 9. Foreign Competition              | .489   | .239   | -.01 | .20  | .30  | -.20 | .03  | -.24 | -.56 | .11  | —    | —    | —    | —    | —    | —    | —    | —    |
| 10. log(Scottish Corporations)      | 6.157  | 4.201  | -.03 | .20  | .33  | .25  | .40  | .15  | .45  | .18  | .18  | —    | —    | —    | —    | —    | —    | —    |
| 11. Corporation                     | .395   | .489   | -.05 | .27  | .55  | .12  | .40  | .02  | -.04 | .19  | .43  | .58  | —    | —    | —    | —    | —    | —    |
| 12. Ties to Failed Builders         | 1.078  | 2.262  | -.03 | .39  | .25  | .14  | .16  | .03  | .01  | .04  | .12  | .19  | .16  | —    | —    | —    | —    | —    |
| 13. Age                             | 26.096 | 26.624 | -.07 | .05  | .11  | .13  | .29  | .00  | -.14 | .11  | .25  | .26  | .20  | .23  | —    | —    | —    | —    |
| 14. % Networked Family Firms        | .145   | .140   | .02  | -.19 | -.39 | -.13 | -.36 | -.03 | -.10 | -.22 | -.35 | -.74 | -.36 | -.41 | -.33 | —    | —    | —    |
| 15. % Networked Corporations        | .099   | .113   | -.03 | .38  | .59  | .03  | .32  | -.07 | -.12 | .18  | .59  | .66  | .39  | .45  | .36  | -.74 | —    | —    |
| 16. Board Interlocks                | .565   | 3.019  | -.03 | .16  | .18  | .07  | .05  | .03  | -.06 | .03  | .15  | .15  | .06  | .04  | .07  | -.17 | .17  | —    |
| 17. Antitrust Regime                | .125   | .331   | .01  | .14  | .26  | -.15 | .03  | -.20 | -.36 | -.11 | .70  | .38  | .28  | .16  | .18  | -.39 | .51  | .12  |

Note: SD = standard deviation.

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**Table S2.** Influence of Interbuilder Ties on Shipbuilder Failure, 1711–1990<sup>a</sup>

|                                  | Model 0           | Model 1           | Model 2           | Model 2a          |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|
| Interbuilder Ties                | —                 | -.100**<br>(.042) | -.409**<br>(.108) | -.431**<br>(.113) |
| Interbuilder Ties * Corporation  | —                 | —                 | .406**<br>(.117)  | .421**<br>(.120)  |
| Ties to Failed Builders          | —                 | —                 | —                 | .033<br>(.045)    |
| Repeat Customers                 | -.187**<br>(.066) | -.188**<br>(.067) | -.167**<br>(.067) | -.169*<br>(.067)  |
| log(Capacity in Tons)            | .159**<br>(.045)  | .170**<br>(.046)  | .164**<br>(.046)  | .165**<br>(.046)  |
| log(Current Production in Ships) | -.336**<br>(.054) | -.337**<br>(.054) | -.324**<br>(.054) | -.323**<br>(.054) |
| Corporation                      | -.413<br>(.214)   | -.286<br>(.225)   | -.628*<br>(.251)  | -.632*<br>(.252)  |
| Density                          | .040**<br>(.009)  | .042**<br>(.009)  | .045**<br>(.009)  | .045**<br>(.009)  |
| World War                        | -.918<br>(.457)   | -.956*<br>(.457)  | -.968*<br>(.458)  | -.965*<br>(.458)  |
| Foreign Competition              | .746<br>(.452)    | .936*<br>(.458)   | 1.033*<br>(.452)  | 1.022*<br>(.454)  |
| log(Total Scottish Corporations) | -.040<br>(.025)   | -.041<br>(.024)   | -.054*<br>(.025)  | -.055*<br>(.025)  |
| Builder Age, 0 to 5              | -4.857<br>(.521)  | -4.878<br>(.523)  | -4.880<br>(.514)  | -4.877<br>(.514)  |
| Builder Age, 5 to 10             | -5.314<br>(.521)  | -5.462<br>(.526)  | -5.457<br>(.518)  | -5.463<br>(.518)  |
| Builder Age, 10 to 20            | -5.434<br>(.535)  | -5.609<br>(.543)  | -5.552<br>(.534)  | -5.572<br>(.534)  |
| Builder Age, 20 to 80            | -5.350<br>(.680)  | -5.541<br>(.621)  | -5.370<br>(.617)  | -5.428<br>(.621)  |
| Builder Age > 80                 | -5.867<br>(.680)  | -6.043<br>(.689)  | -5.898<br>(.684)  | -5.991<br>(.697)  |
| Log-likelihood                   | -397.23           | -393.94           | -386.27           | -386.01           |

<sup>a</sup> Standard errors in parentheses.

\*  $p < .05$ ; \*\*  $p < .01$  (one-tailed tests for hypotheses, otherwise two-tailed tests).

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**Table S3.** Influence of Interbuilder Ties on Shipbuilder Failure, 1711–1990<sup>a</sup>

|                                      | Model 3<br>Year Fixed<br>Effects | Model 4             | Model 5             | Model 6             | Model 6a            | Model 7             |
|--------------------------------------|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Interbuilder Ties                    | -.411**<br>(.113)                | -.407**<br>(.109)   | -.411**<br>(.110)   | -.418**<br>(.110)   | —                   | -.408**<br>(.110)   |
| Interbuilder Ties * Corporation      | .397**<br>(.124)                 | .406**<br>(.121)    | .429**<br>(.123)    | .411**<br>(.122)    | .339*<br>(.167)     | .311*<br>(.136)     |
| % Networked Family Firms             | —                                | -2.818**<br>(1.182) | -2.972**<br>(1.198) | -2.783**<br>(1.185) | -2.799**<br>(1.182) | -3.309**<br>(1.259) |
| % Networked Corporations             | —                                | -.803<br>(1.460)    | -.994<br>(1.489)    | -.655<br>(1.462)    | -.783<br>(1.458)    | -.941<br>(1.523)    |
| Board Interlocks                     | —                                | —                   | -.082<br>(.066)     | —                   | —                   | —                   |
| Interbuilder Ties: Friendship/Family | —                                | —                   | —                   | —                   | -.419**<br>(.113)   | —                   |
| Interbuilder Ties: Business          | —                                | —                   | —                   | —                   | -.332*<br>(.167)    | —                   |
| Antitrust Regime (post-1956)         | —                                | —                   | —                   | —                   | —                   | .395<br>(.524)      |
| Antitrust Regime * Interbuilder Ties | —                                | —                   | —                   | —                   | —                   | .149<br>(.092)      |
| Repeat Customers * Corporation       | —                                | —                   | —                   | -.129<br>(.116)     | —                   | —                   |
| Repeat Customers                     | -.171*<br>(.069)                 | -.174*<br>(.068)    | -.165*<br>(.068)    | -.123<br>(.079)     | -.172*<br>(.068)    | -.159*<br>(.068)    |
| log(Capacity in Tons)                | .163**<br>(.045)                 | .162**<br>(.045)    | .154**<br>(.046)    | .159**<br>(.046)    | .165**<br>(.046)    | .150**<br>(.047)    |
| log(Current Production in Ships)     | -.326**<br>(.056)                | -.320**<br>(.054)   | -.317**<br>(.054)   | -.323**<br>(.054)   | -.320**<br>(.054)   | -.316**<br>(.054)   |
| Corporation                          | -.563*<br>(.276)                 | -.730**<br>(.252)   | -.770**<br>(.253)   | -.567*<br>(.287)    | -.703**<br>(.255)   | -.553*<br>(.261)    |
| Density                              | —                                | .052**<br>(.009)    | .051**<br>(.009)    | .052**<br>(.009)    | .052**<br>(.009)    | .059**<br>(.011)    |
| World War                            | —                                | -1.101*<br>(.460)   | -1.118*<br>(.461)   | -1.094*<br>(.460)   | -1.097*<br>(.461)   | -.956*<br>(.472)    |
| Foreign Competition                  | —                                | 1.182*<br>(.507)    | 1.246*<br>(.513)    | 1.144*<br>(.509)    | 1.182*<br>(.507)    | .774<br>(.630)      |
| log(Total Scottish Corporations)     | —                                | -.103**<br>(.035)   | -.099**<br>(.036)   | -.109**<br>(.035)   | -.105**<br>(.035)   | -.143**<br>(.047)   |
| Builder Age, 0 to 5                  | .266<br>(.336)                   | -4.334<br>(.552)    | -4.265<br>(.553)    | -4.332<br>(.551)    | -4.355<br>(.553)    | -4.138<br>(.559)    |
| Builder Age, 5 to 10                 | -.138<br>(.361)                  | -4.906<br>(.557)    | -4.820<br>(.560)    | -4.914<br>(.556)    | -4.929<br>(.558)    | -4.682<br>(.566)    |
| Builder Age, 10 to 20                | -.191<br>(.362)                  | -5.037<br>(.568)    | -4.961<br>(.570)    | -5.029<br>(.567)    | -5.055<br>(.568)    | -4.808<br>(.577)    |
| Builder Age, 20 to 80                | .057<br>(.471)                   | -4.849<br>(.649)    | -4.775<br>(.650)    | -4.794<br>(.649)    | -4.849<br>(.648)    | -4.574<br>(.658)    |
| Builder Age > 80                     | —                                | -5.400<br>(.708)    | -5.337<br>(.710)    | -5.359<br>(.709)    | -5.384<br>(.708)    | -5.222<br>(.715)    |
| Log-likelihood                       | -257.31                          | -382.75             | -381.25             | -382.12             | -382.57             | -379.73             |

<sup>a</sup> Standard errors in parentheses.

\*  $p < .05$ ; \*\*  $p < .01$  (one-tailed tests for hypotheses, otherwise two-tailed tests).