

Tables

Replication and Extension

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Table 1: Table 2 Replication: OLS regressions, Dependent variable = US patents per subclass-year (1875–1939)

| | (1) | (2) | (3) | (4) |
|--|-----------------------|-----------------------|------------------------|-----------------------|
| Subclass has at least one license | 0.1505*** (0.0356) | 0.2553*** (0.0376) | | |
| Number of licenses | | | 0.1095*** (0.0246) | 0.0715*** (0.0172) |
| Number of licenses squared | | | -0.0068*** (0.0022) | |
| Number of patents by foreign inventors | 0.2830*** (0.0176) | | 0.2821*** (0.0176) | 0.2828*** (0.0176) |
| Subclass fixed effects | Yes | Yes | Yes | Yes |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Observations | 471,120 | 471,120 | 471,120 | 471,120 |
| Number of subclasses | 7,248 | 7,248 | 7,248 | 7,248 |

Notes: Each observation is a USPTO subclass in a given year (1875–1939). `count_usa` is the number of patents granted to U.S. inventors in that subclass–year. All regressions include subclass fixed effects and grant–year fixed effects. Standard errors are clustered at the subclass level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 2: Table 3 Replication: Intent to Treat Regressions, Dependent Variable = US patents per subclass-year (1875–1939)

| | (1) | (2) | (3) | (4) |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Number of enemy patents | 0.0550*** (0.0070) | 0.0698*** (0.0084) | | |
| Remaining lifetime of enemy patents | | | 0.0065*** (0.0008) | 0.0084*** (0.0010) |
| Number of patents by foreign inventors | 0.2791*** (0.0174) | | 0.2785*** (0.0174) | |
| Subclass fixed effects | Yes | Yes | Yes | Yes |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Observations | 471,120 | 471,120 | 471,120 | 471,120 |
| Number of subclasses | 7,248 | 7,248 | 7,248 | 7,248 |

Notes: Subclass-by-year panel (1875–1939), restricted to chemical subclasses with pre-war German patents. All regressions include subclass and grant-year fixed effects, with standard errors clustered at the subclass level. `count.cl_itt` and `year.conf_itt` measure pre-war exposure to enemy patents (ITT). `count_for` measures patents by foreign inventors excluding Germans. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 3: Heterogeneous DiD Effects by Sub-Industry

| Sub-industry | DiD Effect | Std. Error |
|--------------|------------|------------|
| 8 | 0.5867 | 0.1689 |
| 74 | -0.2995 | 0.2218 |
| 101 | 1.9563 | 0.0458 |
| 106 | 0.3776 | 0.1044 |
| 204 | -0.0665 | 0.0594 |
| 416 | 0.6213 | 0.0435 |
| 430 | 0.1846 | 0.0363 |
| 528 | 0.5606 | 0.1549 |
| 534 | 0.2261 | 0.0408 |
| 536 | 0.3154 | 0.2097 |
| 544 | 0.3917 | 0.1363 |
| 546 | 0.3207 | 0.0945 |
| 548 | 0.2067 | 0.0777 |
| 549 | 0.0261 | 0.0458 |
| 552 | 0.3403 | 0.0613 |
| 562 | 0.1489 | 0.0964 |
| 564 | 0.2394 | 0.1107 |
| 568 | 0.1007 | 0.0790 |
| 570 | 0.4164 | 0.3879 |
| <i>N</i> | | 19 |

Notes: Each row represents a separate DiD regression estimated within a chemical sub-industry (main class). The dependent variable is U.S. patents per subclass-year. All specifications include subclass and grant-year fixed effects, with standard errors clustered at the subclass level.