Table S1: Bivariate correlations

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| (1) Tobin’s Q | 1.000 |
| (2) ROA | -0.363\* | 1.000 |
| (3) Profitability | 0.005 | 0.059\* | 1.000 |
| (4) Revenue growth | 0.080\* | -0.114\* | -0.003 | 1.000 |
| (5) Firm size (log) | -0.073\* | 0.259\* | 0.346\* | -0.042\* | 1.000 |
| (6) R&D intensity | 0.304\* | -0.487\* | -0.055\* | 0.137\* | -0.327\* | 1.000 |
| (7) Cap intensity | 0.003 | -0.073\* | -0.021 | 0.112\* | -0.114\* | 0.068\* | 1.000 |
| (8) OIP1 | 0.020 | 0.045\* | -0.004 | -0.016 | 0.155\* | -0.077\* | -0.065\* | 1.000 |
| (9) OIP2 | 0.097\* | 0.049\* | 0.010 | -0.007 | 0.150\* | -0.046\* | -0.085\* | 0.089\* | 1.000 |
| (10) OIP3 | -0.048\* | 0.005 | -0.047\* | -0.025\* | -0.180\* | -0.038\* | 0.050\* | -0.094\* | -0.110\* | 1.000 |
| (11) OIP4 | 0.096\* | -0.106\* | -0.025\* | 0.008 | -0.060\* | 0.205\* | 0.023 | -0.026\* | -0.042\* | -0.070\* | 1.000 |
| (12) OIP5 | 0.203\* | -0.282\* | -0.023 | 0.055\* | -0.209\* | 0.588\* | 0.057\* | -0.152\* | -0.167\* | -0.147\* | 0.096\* | 1.000 |
| (13) OIP\_sum | 0.212\* | -0.200\* | -0.048\* | 0.018 | -0.138\* | 0.432\* | 0.008 | 0.292\* | 0.344\* | 0.338\* | 0.239\* | 0.575\* | 1.000 |
| \* shows significance at the .05 level | | | | | | | | | | | | | |

Table S2: OLS regression: the relationship between OIP adoption and revenue growth, profitability & ROA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Model S1 | Model S2 | Model S3 | Model S4 | Model S5 | Model S6 |
| Dependent variable | Revenue growth | Revenue growth | Profitability | Profitability | ROA | ROA |
| OIP1 |  | 0.019 |  | -0.346\*\*\* |  | -0.014 |
|  |  | (0.044) |  | (0.093) |  | (0.034) |
| OIP2 |  | 0.037 |  | -0.194\*\* |  | 0.019 |
|  |  | (0.039) |  | (0.082) |  | (0.030) |
| OIP3 |  | -0.087\*\* |  | 0.059 |  | 0.026 |
|  |  | (0.042) |  | (0.088) |  | (0.032) |
| OIP4 |  | -0.133\* |  | -0.121 |  | 0.024 |
|  |  | (0.078) |  | (0.161) |  | (0.059) |
| OIP5 |  | -0.033 |  | -0.003 |  | 0.040\* |
|  |  | (0.029) |  | (0.059) |  | (0.022) |
| OIP\_sum | -0.022 |  | -0.102\*\* |  | 0.022 |  |
|  | (0.019) |  | (0.041) |  | (0.015) |  |
| Firm size (log) | 0.019\*\*\* | 0.017\*\*\* |  | 0.413\*\*\* | 0.042\*\*\* | 0.043\*\*\* |
|  | (0.006) | (0.006) |  | (0.013) | (0.005) | (0.005) |
| ROA | -0.071\*\*\* | -0.069\*\*\* | -0.028 | -0.029 |  |  |
|  | (0.025) | (0.025) | (0.034) | (0.034) |  |  |
| Capital intensity | 0.028\*\*\* | 0.029\*\*\* | 0.011\*\* | 0.010\*\* | -0.003 | -0.003 |
|  | (0.003) | (0.003) | (0.005) | (0.005) | (0.002) | (0.002) |
| RDI | 0.331\*\*\* | 0.350\*\*\* | 0.215\*\*\* | 0.160\*\* | -0.781\*\*\* | -0.790\*\*\* |
|  | (0.039) | (0.040) | (0.072) | (0.076) | (0.025) | (0.026) |
| Missing R&D value | -0.000 | -0.001 | 0.094\*\*\* | 0.089\*\*\* | 0.040\*\*\* | 0.039\*\*\* |
|  | (0.013) | (0.013) | (0.026) | (0.027) | (0.010) | (0.010) |
| Sector-fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Year-fixed effect | Yes | Yes | Yes | Yes | Yes | Yes |
| No. of Obs. | 6457 | 6457 | 6588 | 6588 | 6591 | 6591 |
| R-squared | 0.070 | 0.071 | 0.155 | 0.157 | 0.257 | 0.257 |

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

In these regression analyses, we can see poor results between OIP adoption and these three current financial indicators (i.e., revenue growth, profitability and ROA). As we mentioned in our paper, open innovation tends to have a long-term impact on firm performance, so it is not easy to evaluate its role for business gains immediately. Thus, Tobin’s Q, as a forward-looking measure, is a better proxy to show the relationship between open innovation and firm financial performance, compared to other commonly used financial performance indicators, such as profitability (profits before tax, with a z-score normalization here), return on assets (ROA) and revenue growth. These regression results also show that open innovation doesn’t have a direct impact on current financial gains.