Online Appendix for

Human Capital Relatedness and Mergers and Acquisitions [1]

This appendix presents additional tables to accompany the paper "Human Capital Relatedness and Mergers and Acquisitions" The contents are as follows:

Table OA.1: The effect of human capital relatedness on the probability of merger – control sample is acquiring firm paired with pseudo target firm. This table reports the probit regression specifications in Table 2 of the paper where each merging firm pair has one-matching non-merging firm pair constructed by pairing the acquiring firm with a pseudo target firm. The construction of this control sample (Control sample 2) is discussed in Appendix B of the paper. The table shows that the results reported in Table 2 are robust to a control sample involving a pseudo merger between the actual acquirer and a matching firm on vertical relation, product market similarity, number of segments, total assets, and market-to-book ratio.

Table OA.2: The effect of human capital relatedness on the probability of merger – control sample is five randomly-selected non-merging firm pairs for each merging firm pair. This table reports the probit regression specifications in Table 2 of the paper where each merging firm pair has five randomly selected non-merging firm pairs. The construction of this control sample (Control sample 3) is discussed in Appendix B of the paper. The table shows that the results reported in Table 2 are robust to a random control sample.

Table OA.3: The influence of merger type on the effect of human capital relatedness on the probability of merger – control sample is acquiring firm paired with pseudo target firm. This table reports the probit regression specifications in Table 3 of the paper where each merging firm pair has one matching non-merging firm pair constructed by pairing each acquiring firm with a pseudo target firm. The construction of this control sample (Control sample 2) is discussed in Appendix B of the paper. The merger type results using this control sample are weaker than those reported in Table 3. Specifically, the size of the coefficients on the interactions of *HCR* with merger type dummy variables, their statistical significance, and their marginal effects on the probability of merger are generally smaller using this control sample than the one in Table 3.

Table OA.4: The influence of merger type on the effect of human capital relatedness on the probability of merger – control sample is five randomly-selected non-merging firm pairs for each merging firm pair. This table reports the probit regression specifications in Table 3 of the paper where each merging firm pair has five randomly selected non-merging firm pairs. The construction of this control sample (Control sample 3) is discussed in Appendix B of the paper. This table shows that the results reported in Table 3 are robust to a random control sample. In unreported regressions, we also find robust results when each merging firm pair has one or ten randomly selected non-merging firm pairs.

Table OA.5: Subsample regressions of the effect of human capital on the probability of merger by merger type – control sample is pseudo acquiring firm paired with pseudo target firm. In the paper, Table 3 reports the influence of merger type on the relation between *HCR* and likelihood of merger in full

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sample probit regressions using interactions between *HCR* and merger type dummy variables. This table uses the same control sample of non-merging firm pairs (Control sample 1 discussed in Appendix B) and separately estimates the relation between *HCR* and likelihood of merger for the subsamples of *MergerType*1 (Panel A), *MergerType*2 (Panel B), *MergerType*3 (Panel C), *Vertical Mergers* (Panel D), *Horizontal Mergers* (Panel E), and *Conglomerate Mergers* (Panel F). The subsample results are remarkably similar to those reported in Table 3. Specifically, the coefficients on *HCR* in the merger type subsamples have the same signs and significance (economic and statistical) as the coefficients on the interactions of *HCR* by merger type in Table 3.

Table OA.6: Subsample regressions of the effect of human capital on the probability of merger by merger type – control sample is acquiring firm paired with pseudo target firm. This table reports subsample regressions identical to those in Table OA.5, except that each merging firm pair is matched with a non-merging firm pair constructed by pairing each acquiring firm with a pseudo target firm (Control sample 2 discussed in Appendix B). The coefficients on *HCR* in the subsample regressions always have the same signs as the coefficients on the interactions of *HCR* by merger type in Table 3 but the economic and statistical significance tends to be weaker.

Table OA.7: Subsample regressions of the effect of human capital on the probability of merger by merger type – control sample is five randomly-selected non-merging firm pairs for each merging firm pair. This table reports subsample regressions identical to those in Table OA.5, except that each merging firm pair has five randomly selected non-merging firm pairs (Control sample 3 discussed in Appendix B). The coefficients on *HCR* in the subsample regressions have the same signs and significance as those reported for the interactions of *HCR* with merger type dummy variables in Table 3.

Table OA.8: Human capital relatedness and post-merger labor productivity. This table reports regressions of the post-merger change in labor productivity on *HCR*, where labor productivity is computed as the ratio of operating cash flow to employment in Panel A, and operating cash flow to selling, general, and administrative expenses in Panel B. The coefficients on *HCR* are positive in Panels A and B, and 3 out of 4 coefficients are statistically significant at the 10 percent level. We find evidence of a significant influence of *HCR* on labor productivity in both unrelated (*MergerType*2) and related (*Horizontal*) mergers, although like the overall effect of *HCR* on labor productivity, the merger type results are not always significant.

Table OA.9: Acquirer returns in asset sales and parent employee transfer. This table reports regressions of acquirer returns in asset sales on *HCR* for subsamples grouped by percentage change in employment of the selling firm (parent). The dependent variable is the acquirer cumulative abnormal return over days −1 to +1, where day 0 is the asset sale announcement day. The percentage change in employment is the absolute value of employment in year +1 minus employment in year −1 scaled by employment in year −1, where year 0 is the asset sale announcement year. Panels A-D report subsample regressions for change in employment below and above 1%, 2%, 4%, and 5%, respectively. The table shows that the coefficient on *HCR* is statistically significantly positive only when the change in parent firm employment is above the threshold change in employment. These regressions provide additional support for the conclusion that *HCR* helps predict acquirer returns only when human capital is transferred to the acquiring firm and thereby support rejection of the falsification of our *HCR* measure.

Table OA.1

The effect of human capital relatedness on the probability of merger – control sample is acquiring firm paired with pseudo target firm

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Columns (1), (2), and (3) report results for the effects of human capital relatedness (*HCR*) and product market relatedness (*PMR*) on the probability of merger when the regression does not include control variables, and columns (4), (5), and (6) are the corresponding regressions with control variables. All variables are defined in Appendix A. Each merging firm pair has one matching non-merging firm pair constructed by pairing each acquiring firm with a pseudo target firm. The algorithm used to construct the non-merging control firm pair is described in Appendix B (Control sample 2). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
HCR	0.382***	0.174*	0.378***	0.487***	0.265**	0.350**
	(4.02)	(1.72)	(2.84)	(4.50)	(2.32)	(2.33)
	0.059	0.032	0.078	0.060	0.036	0.055
PMR		0.400***	0.760***		0.503***	0.652***
		(6.39)	(4.61)		(6.88)	(3.49)
		0.156	0.197		0.155	0.200
HCR × *PMR*			–0.488**			–0.202
			(–2.37)			(–0.87)
			–0.081			–0.040
Total assets of acquirer				0.010	0.034	0.035
				(0.50)	(1.62)	(1.63)
				0.007	0.021	0.022
Total assets of target				0.026	–0.001	–0.001
				(1.04)	(–0.06)	(–0.02)
				0.014	–0.001	–0.000
Market-to-book of acquirer				0.033*	0.044**	0.044**
				(1.75)	(2.27)	(2.27)
				0.028	0.036	0.036
Market-to-book of target				0.011	0.006	0.005
				(0.52)	(0.27)	(0.23)
				0.006	0.003	0.003
Leverage ratio of acquirer				–0.082	–0.006	–0.093
				(–0.36)	(–0.43)	(–0.41)
				–0.005	–0.006	–0.005
Leverage ratio of target				0.314	0.198	0.205
				(1.59)	(0.99)	(1.03)
				0.023	0.014	0.015
Free cash flow of acquirer				–1.485***	–1.302**	–1.300**
				(–2.90)	(–2.49)	(–2.49)
				–0.074	–0.063	–0.063

Table OA.1 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Free cash flow of target				8.670***	8.830***	8.810***
				(18.69)	(18.77)	(18.70)
				0.708	0.701	0.699
Cash holdings of acquirer				–0.210	–0.350**	–0.339**
				(–1.41)	(–2.31)	(–2.23)
				–0.021	–0.034	–0.033
Cash holdings of target				–0.413***	–0.455***	–0.453***
				(–3.92)	(–4.26)	(–4.23)
				–0.055	–0.059	–0.058
Sales growth of acquirer				0.071	0.072	0.071
				(1.04)	(1.04)	(1.03)
				0.017	0.017	0.016
Sales growth of target				0.070*	0.079*	0.079*
				(1.68)	(1.88)	(1.89)
				0.018	0.020	0.020
Return on assets of acquirer				0.836*	0.655	0.653
				(1.93)	(1.48)	(1.47)
				0.036	0.028	0.027
Return on assets of target				–9.090***	–9.223***	–9.203***
				(–19.50)	(–19.48)	(–19.41)
				–0.755	–0.744	–0.742
Intercept	–0.275***	–0.325***	–0.453***	–0.117	–0.177	–0.243
	(–3.69)	(–4.31)	(–4.86)	(–0.60)	(–0.89)	(–1.14)
Pseudo R-squared	0.01	0.03	0.03	0.26	0.28	0.28
Observed prob. merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. merger	0.50	0.50	0.50	0.49	0.49	0.49
No. of observations	1,824	1,824	1,824	1,824	1,824	1,824

Table OA.2

The effect of human capital relatedness on the probability of merger – control sample is five randomly-selected non-merging firm pairs for each merging firm pair

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Columns (1), (2) and (3) report results for the effects of human capital relatedness (*HCR*) and product market relatedness (*PMR*) on the probability of merger when the regression does not include control variables, and columns (4), (5), and (6) are the corresponding regressions with control variables. All variables are defined in Appendix A. Each merging firm pair has five randomly selected non-merging firm pairs. The algorithm used to construct the non-merging control firm pairs are described in Appendix B (Control sample 3). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
HCR	3.060***	2.322***	2.589***	3.150***	2.431***	2.701***
	(43.44)	(28.56)	(29.19)	(28.39)	(18.26)	(18.47)
	0.145	0.085	0.092	0.073	0.049	0.052
PMR		2.076***	3.796***		2.472***	4.090***
		(24.34)	(16.11)		(18.17)	(11.37)
		0.234	0.414		0.123	0.198
HCR × *PMR*			–2.448***			–2.251***
			(–8.58)			(–5.23)
			–0.087			–0.035
Total assets of acquirer				0.344***	0.368***	0.376***
				(19.39)	(17.17)	(17.15)
				0.049	0.037	0.037
Total assets of target				0.012	–0.029	–0.024
				(0.68)	(–1.34)	(–1.09)
				0.002	–0.003	–0.002
Market-to-book of acquirer				0.085***	0.010***	0.103***
				(6.24)	(6.12)	(6.29)
				0.016	0.013	0.013
Market-to-book of target				–0.041*	–0.035*	–0.038*
				(–2.34)	(–1.65)	(–1.72)
				–0.005	–0.003	–0.003
Leverage ratio of acquirer				–0.335*	–0.134	–0.132
				(–1.77)	(–0.60)	(–0.58)
				–0.004	–0.001	–0.001
Leverage ratio of target				–0.394***	–0.501***	–0.494***
				(–2.60)	(–2.75)	(–2.70)
				–0.007	–0.006	–0.006
Free cash flow of acquirer				10.175***	11.945***	11.568***
				(19.75)	(19.15)	(18.35)
				0.115	0.094	0.089

Table OA.2 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Free cash flow of target				4.691***	4.641***	4.573***
				(14.69)	(12.87)	(12.64)
				0.086	0.060	0.057
Cash holdings of acquirer				–0.433***	–0.623***	–0.633***
				(–3.70)	(–4.15)	(–4.20)
				–0.010	–0.010	–0.010
Cash holdings of target				–0.278***	–0.407***	–0.397***
				(–2.67)	(–3.24)	(–3.13)
				–0.008	–0.008	–0.008
Sales growth of acquirer				0.091**	0.067	0.055
				(2.51)	(1.47)	(1.18)
				0.005	0.003	0.002
Sales growth of target				–0.029	–0.065	–0.056
				(–0.78)	(–1.48)	(–1.30)
				–0.002	–0.003	–0.002
Return on assets of acquirer				–9.858***	–11.323***	–11.051***
				(–20.18)	(–19.64)	(–18.94)
				–0.096	–0.077	–0.073
Return on assets of target				–4.550***	–4.353***	–4.300***
				(–14.28)	(–12.23)	(–12.02)
				–0.085	–0.057	–0.055
Intercept	–2.300***	–2.274***	–2.395***	–3.576***	–3.514***	–3.736***
	(–54.52)	(–50.28)	(–48.36)	(–20.31)	(–16.69)	(–16.93)
Pseudo R-squared	0.30	0.38	0.39	0.48	0.52	0.52
Observed prob. merger	0.17	0.17	0.17	0.17	0.17	0.17
Predicted prob. merger	0.17	0.16	0.17	0.17	0.17	0.17
No. of observations	6,762	6,762	6,762	6,762	6,762	6,762

Table OA.3

The influence of merger type on the effect of human capital relatedness on the probability of merger – control sample is acquiring firm paired with pseudo target firm

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Columns (1) and (2) interact human capital relatedness (*HCR*) with merger type dummy variables, *MergerType*1-*MergerType*3, based on acquirer and target firm number of segments and industry overlap, and Columns (3) and (4) interact human capital relatedness (*HCR*) with dummy variables for whether the merger is vertical (*Vertical*), horizontal (*Horizontal*), or conglomerate (*Conglomerate*). *MergerType*1 is a dummy variable equal to one for single-segment acquirer and target in different industries, *MergerType*2 is a dummy variable equal to one when one or both acquirer and target are multi-segment with no common industry segments, and *MergerType*3 is a dummy variable equal to one when each of the merging firms is either single- or multi-segment and have at least one segment in the same industry. The dummy variables *Vertical*, *Horizontal*, and *Conglomerate* are equal to one for vertical, horizontal, and conglomerate mergers, respectively; and are constructed using the algorithm in Fan and Goyal (2006). All regressions are estimated without an intercept so there is not a left-out or baseline merger group. All variables are defined in Appendix A. Each merging firm pair has one matching non-merging firm pair constructed by pairing each acquiring firm with a pseudo target firm. The algorithm used to construct the non-merging control firm pairs is described in Appendix B (Control sample 2). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
HCR × *MergerType*1	0.749***	0.066**	0.678**			
	(2.90)	(2.55)	(2.48)			
	0.076	0.066	0.067			
HCR × *MergerType*2	0.442*	0.443*	0.448*			
	(1.73)	(1.71)	(1.70)			
	0.045	0.044	0.044			
HCR × *MergerType*3	–0.101	–0.475*	–0.462			
	(–0.37)	(–1.65)	(–1.44)			
	–0.010	–0.047	–0.046			
HCR × *Vertical*				0.563*	0.499	0.476*
				(1.74)	(1.51)	(1.66)
				0.058	0.049	0.047
HCR × *Horizontal*				–0.170	–0.290	–0.326
				(–0.61)	(–1.02)	(–0.97)
				–0.017	–0.029	–0.032
HCR × *Conglomerate*				0.748***	0.598***	0.584***
				(4.78)	(3.73)	(3.35)
				0.076	0.059	0.058
PMR		0.517***	0.533***		0.541***	0.505***
		(6.91)	(2.79)		(7.17)	(2.58)
		0.158	0.163		0.165	0.154
HCR × *PMR*			–0.022			0.049
			(–0.09)			(0.20)
			–0.002			0.005

Table OA.3 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
*MergerType*1	–0.160	–0.296	–0.302			
	(–0.72)	(–1.31)	(–1.28)			
	–0.050	–0.090	–0.092			
*MergerType*2	–0.300	–0.404	–0.409			
	(–1.24)	(–1.64)	(–1.62)			
	–0.094	–0.123	–0.125			
*MergerType*3	0.422	0.488	0.478			
	(1.31)	(1.49)	(1.38)			
	0.133	0.149	0.146			
Vertical				–0.186	–0.336	–0.316
				(–0.62)	(–1.10)	(–0.99)
				–0.059	–0.103	–0.097
Horizontal				0.436	0.210	0.238
				(1.41)	(0.67)	(0.69)
				0.137	0.064	0.073
Conglomerate				–0.266	–0.333	–0.321
				(–1.30)	(–1.60)	(–1.48)
				–0.084	–0.102	–0.098
Intercept	No	No	No	No	No	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.27	0.29	0.29	0.27	0.29	0.29
Observed prob. merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. merger	0.51	0.51	0.51	0.51	0.51	0.51
No. of observations	1,824	1,824	1,824	1,824	1,824	1,824

Table OA.4

The influence of merger type on the effect of human capital relatedness on the probability of merger – control sample is five randomly-selected non-merging firm pairs for each merging firm pair

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Columns (1) and (2) interact human capital relatedness (*HCR*) with merger type dummy variables, *MergerType*1-*MergerType*3, based on acquirer and target firm number of segments and industry overlap, and Columns (3) and (4) interact human capital relatedness (*HCR*) with dummy variables for whether the merger is vertical (*Vertical*), horizontal (*Horizontal*), or conglomerate (*Conglomerate*). *MergerType*1 is a dummy variable equal to one for single-segment acquirer and target in different industries, *MergerType*2 is a dummy variable equal to one when one or both acquirer and target are multi-segment with no common industry segments, and *MergerType*3 is a dummy variable equal to one when each of the merging firms is either single- or multi-segment and have at least one segment in the same industry. The dummy variables *Vertical*, *Horizontal*, and *Conglomerate* are equal to one for vertical, horizontal, and conglomerate mergers, respectively; and are constructed using the algorithm in Fan and Goyal (2006). All regressions are estimated without an intercept so there is not a left-out or baseline merger group. All variables are defined in Appendix A. Each merging firm pair has five randomly selected non-merging firm pairs. The algorithm used to construct the non-merging control firm pairs is described in Appendix B (Control sample 3). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
HCR × *MergerType*1	2.055***	1.423***	1.656***			
	(10.53)	(6.06)	(6.89)			
	0.044	0.022	0.024			
HCR × *MergerType*2	2.014***	1.722***	1.949***			
	(7.67)	(5.84)	(6.44)			
	0.043	0.026	0.029			
HCR × *MergerType*3	–4.590***	–3.776***	–4.277***			
	(–21.46)	(–15.00)	(–14.96)			
	–0.099	–0.057	–0.063			
HCR × *Vertical*				2.666***	2.155***	2.432***
				(9.36)	(6.43)	(7.03)
				0.060	0.034	0.037
HCR × *Horizontal*				–4.125***	–3.380***	–3.927***
				(–20.87)	(–13.47)	(–13.54)
				–0.093	–0.053	–0.060
HCR × *Conglomerate*				2.580***	2.063***	2.258***
				(16.28)	(11.37)	(12.09)
				0.058	0.032	0.034
PMR		2.432***	4.365***		2.463***	4.225***
		(17.42)	(11.46)		(18.08)	(11.70)
		0.114	0.197		0.119	0.198
HCR × *PMR*			–2.746***			–2.498***
			(–5.90)			(–5.69)
			–0.040			–0.038

Table OA.4 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
*MergerType*1	−2.959***	−2.986***	−3.209***			
	(−15.38)	(−13.09)	(−13.47)			
	−0.196	−0.140	−0.145			
*MergerType*2	−3.105***	−3.161***	−3.373***			
	(−14.72)	(−12.73)	(−13.01)			
	−0.206	−0.148	−0.153			
*MergerType*3	4.436***	4.342***	4.723***			
	(19.24)	(15.92)	(15.83)			
	0.294	0.204	0.214			
Vertical				−3.405***	−3.399***	−3.620***
				(−14.19)	(−12.03)	(−12.27)
				−0.236	−0.165	−0.170
Horizontal				4.198***	4.244***	4.642***
				(19.57)	(16.03)	(15.88)
				0.291	0.206	0.218
Conglomerate				−3.206***	−3.170***	−3.370***
				(−17.43)	(−14.48)	(−14.78)
				−0.222	−0.154	−0.158
Intercept	No	No	No	No	No	No
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-squared	0.68	0.70	0.71	0.68	0.70	0.70
Observed prob. merger	0.17	0.17	0.17	0.17	0.17	0.17
Predicted prob. merger	0.17	0.17	0.17	0.17	0.18	0.17
No. of observations	6,762	6,762	6,762	6,762	6,762	6,762

Table OA.5

Subsample regressions of the effect of human capital on the probability of merger by merger type – control sample is pseudo acquiring firm paired with pseudo target firm

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Type 1 mergers are mergers between a single-segment acquirer and target in different industries, type 2 mergers are mergers where one or both acquirer and target are multi-segment with no common industry segments, and type 3 mergers are mergers where each of the merging firms is either single- or multi-segment and have at least one segment in the same industry. Mergers are classified as vertical, horizontal, or conglomerate using the algorithm in Fan and Goyal (2006). All variables are defined in Appendix A. Each merging firm pair has one matching non-merging firm pair. The algorithm used to construct the non-merging control firm pairs is described in Appendix B (Control sample 1). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. MergerType1						
HCR	0.941***	0.598**	0.696**	1.170***	0.872**	0.804*
	(4.16)	(2.50)	(2.38)	(3.49)	(2.36)	(1.77)
	0.117	0.068	0.079	0.069	0.044	0.040
PMR		0.883***	1.021***		1.177***	1.084***
		(6.68)	(3.75)		(5.83)	(2.59)
		0.311	0.359		0.181	0.167
HCR × *PMR*			–0.294			0.196
			(–0.58)			(0.25)
			–0.034			0.010
Intercept	–0.520***	–0.694***	–0.732***	–0.186	–0.592	–0.543
	(–4.54)	(–5.72)	(–5.29)	(–0.38)	(–1.11)	(–0.96)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.04	0.13	0.13	0.53	0.57	0.57
Observed prob. of merger	0.45	0.45	0.45	0.45	0.45	0.45
Predicted prob. of merger	0.45	0.46	0.45	0.46	0.46	0.46
No. of observations	447	447	447	447	447	447
Panel B. MergerType2						
HCR	0.981***	0.879***	1.210***	0.815*	1.029**	1.046*
	(4.03)	(3.55)	(4.12)	(1.77)	(2.03)	(1.81)
	0.115	0.099	0.135	0.032	0.035	0.035
PMR		0.662***	1.216***		1.590***	1.618***
		(4.26)	(4.03)		(4.26)	(2.73)
		0.231	0.419		0.165	0.168
HCR × *PMR*			–1.197**			–0.066
			(–2.15)			(–0.06)
			–0.134			–0.002
Intercept	–0.768***	–0.882***	–1.022***	–1.350*	–2.137***	–2.150***
	(–6.21)	(–6.84)	(–6.98)	(–1.94)	(–2.68)	(–2.60)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.04	0.08	0.09	0.59	0.61	0.61
Observed prob. of merger	0.36	0.36	0.36	0.36	0.36	0.36
Predicted prob. of merger	0.36	0.36	0.36	0.35	0.36	0.36
No. of observations	399	399	399	399	399	399

Table OA.5 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel C. MergerType3						
HCR	–0.953***	–1.116***	–0.827**	–0.397	–0.787**	–0.423
	(–4.02)	(–4.52)	(–2.42)	(–1.33)	(–2.47)	(–0.97)
	–0.120	–0.140	–0.104	–0.031	–0.060	–0.032
PMR		0.225***	0.779*		0.591***	1.306**
		(2.66)	(1.69)		(5.19)	(2.21)
		0.087	0.301		0.140	0.308
HCR × PMR			–0.613			–0.790
			(–1.22)			(–1.24)
			–0.077			–0.060
Intercept	1.040***	1.033***	0.786***	0.631	0.676*	0.340
	(4.71)	(4.65)	(2.62)	(1.62)	(1.69)	(0.70)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.01	0.02	0.02	0.41	0.42	0.43
Observed prob. of merger	0.57	0.57	0.57	0.57	0.57	0.57
Predicted prob. of merger	0.57	0.57	0.57	0.58	0.58	0.58
No. of observations	1,132	1,132	1,132	1,132	1,132	1,132
Panel D. Vertical Merger						
HCR	1.511***	1.313***	1.692***	1.563***	1.255**	1.913***
	(5.19)	(4.33)	(4.31)	(3.41)	(2.50)	(2.73)
	0.177	0.149	0.191	0.080	0.057	0.085
PMR		0.524***	1.141***		1.058***	2.002***
		(2.90)	(2.63)		(3.43)	(2.69)
		0.184	0.396		0.148	0.275
HCR × PMR			–0.993			–1.467
			(–1.57)			(–1.42)
			–0.112			–0.065
Intercept	–0.879***	–0.959***	–1.164***	–1.471*	–1.057	–1.566
	(–4.63)	(–4.90)	(–4.85)	(–1.73)	(–1.19)	(–1.61)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.11	0.14	0.15	0.56	0.58	0.59
Observed prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
No. of observations	238	238	238	238	238	238

Table OA.5 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel E. Horizontal Merger						
HCR	–0.800***	–0.111***	–1.102**	–0.957***	–1.075***	–1.696***
	(–3.28)	(–3.57)	(–2.37)	(–3.19)	(–3.50)	(–2.97)
	–0.102	–0.111	–0.139	–0.082	–0.089	–0.141
PMR		0.387***	0.107		0.579***	–0.186
		(3.70)	(0.21)		(4.36)	(–0.30)
		0.151	0.042		0.149	–0.048
HCR × *PMR*			0.310			0.852
			(0.57)			(1.28)
			0.039			0.071
Intercept	0.735***	0.511**	0.710*	1.028***	0.818**	1.369**
	(3.22)	(2.15)	(1.67)	(2.69)	(2.08)	(2.36)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.01	0.03	0.03	0.38	0.40	0.40
Observed prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. of merger	0.50	0.50	0.50	0.51	0.51	0.51
No. of observations	834	834	834	834	834	834
Panel F. Conglomerate Merger						
HCR	1.287***	1.011***	1.349***	1.370***	1.014***	1.073***
	(9.36)	(6.96)	(7.51)	(6.50)	(4.47)	(3.85)
	0.153	0.116	0.152	0.076	0.051	0.054
PMR		0.639***	1.261***		1.023***	1.126***
		(6.62)	(5.91)		(6.70)	(3.52)
		0.225	0.440		0.158	0.173
HCR × *PMR*			–1.026***			–0.175
			(–3.30)			(–0.37)
			–0.116			–0.009
Intercept	–0.692***	–0.758***	–0.921***	–0.889**	–1.344***	–1.390***
	(–8.09)	(–8.65)	(–9.03)	(–2.51)	(–3.53)	(–3.46)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.10	0.14	0.15	0.55	0.58	0.58
Observed prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. of merger	0.49	0.50	0.50	0.51	0.51	0.51
No. of observations	906	906	906	906	906	906

Table OA.6

Subsample regressions of the effect of human capital on the probability of merger by merger type – control sample is acquiring firm paired with pseudo target firm

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Type 1 mergers are mergers between a single-segment acquirer and target in different industries, type 2 mergers are mergers where one or both acquirer and target are multi-segment with no common industry segments, and type 3 mergers are mergers where each of the merging firms is either single- or multi-segment and have at least one segment in the same industry. Mergers are classified as vertical, horizontal, or conglomerate using the algorithm in Fan and Goyal (2006). All variables are defined in Appendix A. Each merging firm pair has one matching non-merging firm pair. The algorithm used to construct the non-merging control firm pairs is described in Appendix B (Control sample 2). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
***Panel A. MergerType*1**						
HCR	0.535**	0.368	0.245	0.720***	0.615**	0.480
	(2.33)	(1.56)	(0.83)	(2.76)	(2.29)	(1.44)
	0.069	0.045	0.030	0.073	0.059	0.046
PMR		0.604***	0.443*		0.178***	0.419
		(4.70)	(1.68)		(4.07)	(1.38)
		0.228	0.167		0.178	0.124
HCR × *PMR*			0.344			0.382
			(0.70)			(0.68)
			0.042			0.037
Intercept	–0.282**	–0.447***	–0.396***	–0.080	–0.293	–0.215
	(–2.35)	(–3.52)	(–2.70)	(–0.19)	(–0.70)	(–0.49)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.01	0.06	0.06	0.28	0.31	0.31
Observed prob. of merger	0.48	0.48	0.48	0.48	0.48	0.48
Predicted prob. of merger	0.48	0.49	0.48	0.48	0.49	0.49
No. of observations	424	424	424	424	424	424
***Panel B. MergerType*2**						
HCR	0.517**	0.521**	0.687**	0.375	0.378	0.221
	(1.99)	(1.98)	(2.30)	(1.12)	(1.11)	(1.58)
	0.064	0.063	0.083	0.030	0.029	0.017
PMR		0.545***	0.887***		0.574**	0.234
		(3.30)	(2.65)		(2.59)	(1.55)
		0.203	0.330		0.136	0.055
HCR × *PMR*			–0.746			0.738
			(–1.18)			(0.92)
			–0.090			0.056
Intercept	–0.488***	–0.617***	–0.694***	–0.069	–0.269	–0.175
	(–3.54)	(–4.25)	(–4.34)	(–0.12)	(–0.46)	(–0.30)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.01	0.04	0.05	0.40	0.41	0.41
Observed prob. of merger	0.40	0.40	0.40	0.40	0.40	0.40
Predicted prob. of merger	0.40	0.40	0.40	0.41	0.40	0.40
No. of observations	337	337	337	337	337	337

Table OA.6 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
***Panel C. MergerType*3**						
HCR	–0.284	–0.527**	–0.560*	–0.132	–0.445	–0.480
	(–1.19)	(–2.10)	(–1.65)	(–0.47)	(–1.52)	(–1.25)
	–0.037	–0.067	–0.071	–0.014	–0.045	–0.049
PMR		0.305***	0.239		0.447***	0.374
		(3.68)	(0.52)		(4.57)	(0.71)
		0.120	0.094		0.141	0.118
HCR × PMR			0.074			0.081
			(0.15)			(0.14)
			0.009			0.008
Intercept	0.355	0.385*	0.413	0.360	0.457	0.489
	(1.60)	(1.72)	(1.39)	(1.01)	(1.26)	(1.14)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.00	0.01	0.01	0.24	0.26	0.26
Observed prob. of merger	0.54	0.54	0.54	0.54	0.54	0.54
Predicted prob. of merger	0.54	0.54	0.54	0.54	0.55	0.55
No. of observations	1,063	1,063	1,063	1,063	1,063	1,063
Panel D. Vertical Merger						
HCR	0.480*	0.415	0.411	0.549*	0.493	0.147
	(1.69)	(1.44)	(1.06)	(1.68)	(1.63)	(0.30)
	0.061	0.052	0.052	0.053	0.046	0.013
PMR		0.379**	0.374		0.594**	0.115
		(2.16)	(0.89)		(2.75)	(0.22)
		0.147	0.145		0.170	0.033
HCR × PMR			0.009			0.718
			(0.01)			(1.02)
			0.001			0.066
Intercept	–0.310	–0.416**	–0.414	0.735	0.559	0.768
	(–1.53)	(–1.99)	(–1.57)	(1.08)	(0.81)	(1.07)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.01	0.03	0.03	0.31	0.33	0.34
Observed prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. of merger	0.50	0.51	0.50	0.51	0.51	0.51
No. of observations	222	222	222	222	222	222

Table OA.6 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel E. Horizontal Merger						
HCR	–0.018	–0.118	–0.068	–0.212	–0.332	–0.253
	(–0.08)	(–0.48)	(–0.17)	(–0.73)	(–1.12)	(–0.50)
	–0.002	–0.015	–0.009	–0.021	–0.032	–0.024
PMR		0.174***	0.513		0.576***	0.681
		(4.17)	(1.10)		(4.55)	(1.22)
		0.174	0.201		0.171	0.202
HCR × PMR			–0.078			–0.118
			(–0.15)			(–0.19)
			–0.010			–0.011
Intercept	–0.017	–0.216	–0.260	0.042	–0.129	–0.199
	(–0.07)	(–0.94)	(–0.71)	(0.11)	(–0.33)	(–0.38)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.00	0.02	0.02	0.28	0.30	0.30
Observed prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. of merger	0.50	0.50	0.50	0.51	0.51	0.51
No. of observations	728	728	728	728	728	728
Panel F. Conglomerate Merger						
HCR	0.680***	0.519***	0.678***	0.798***	0.652***	0.700***
	(4.93)	(3.64)	(3.90)	(5.02)	(3.98)	(3.56)
	0.086	0.064	0.083	0.080	0.063	0.068
PMR		0.514***	0.823***		0.514***	0.613**
		(5.49)	(3.84)		(4.74)	(2.50)
		0.195	0.312		0.154	0.184
HCR × PMR			–0.493			–0.157
			(–1.61)			(–0.45)
			–0.060			–0.015
Intercept	–0.395***	–0.475***	–0.560***	–0.099	–0.246	–0.281
	(–4.35)	(–5.10)	(–5.21)	(–0.35)	(–0.85)	(–0.94)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.03	0.06	0.06	0.28	0.30	0.30
Observed prob. of merger	0.50	0.50	0.50	0.50	0.50	0.50
Predicted prob. of merger	0.51	0.50	0.50	0.51	0.51	0.51
No. of observations	874	874	874	874	874	874

Table OA.7

Subsample regressions of the effect of human capital on the probability of merger by merger type – control sample is five randomly-selected non-merging firm pairs for each merging firm pair

The table reports the results of probit regressions of the probability of merger. The sample includes merging firm pairs (acquirer and target) announced during the period from 1997 to 2012, and non-merging control firm pairs. Type 1 mergers are mergers between a single-segment acquirer and target in different industries, type 2 mergers are mergers where one or both acquirer and target are multi-segment with no common industry segments, and type 3 mergers are mergers where each of the merging firms is either single- or multi-segment and have at least one segment in the same industry. Mergers are classified as vertical, horizontal, or conglomerate using the algorithm in Fan and Goyal (2006). All variables are defined in Appendix A. Each merging firm pair has five randomly-selected non-merging firm pairs. The algorithm used to generate the random non-merging firm pairs is described in Appendix B (Control sample 3). All independent variables are lagged one year. Coefficients, z-statistics (in parenthesis), and economic significance are reported. Economic significance is the marginal effect on the probability of merger for a one standard deviation change for a continuous independent variable or for a change from zero to one for a dummy variable, holding all other variables at their means. Marginal effects and standard errors for interactions are computed using the methods in Ai and Norton (2003). The z-statistics are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. MergerType1						
HCR	1.823***	1.100***	1.375***	1.864***	1.156***	1.532***
	(13.32)	(6.78)	(8.10)	(8.80)	(4.31)	(5.31)
	0.094	0.040	0.048	0.045	0.018	0.023
PMR		2.618***	4.547***		2.925***	4.980***
		(15.71)	(9.19)		(10.55)	(7.28)
		0.291	0.491		0.139	0.228
HCR × *PMR*			–3.247***			–3.331***
			(–4.78)			(–3.55)
			–0.114			–0.050
Intercept	–1.837***	–1.901***	–1.991***	–2.267***	–2.292***	–2.542***
	(–29.23)	(–27.27)	(–26.96)	(–7.77)	(–6.35)	(–6.69)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.08	0.22	0.23	0.34	0.40	0.40
Observed prob. of merger	0.11	0.11	0.11	0.11	0.11	0.11
Predicted prob. of merger	0.11	0.11	0.11	0.11	0.10	0.11
No. of observations	2,136	2,136	2,136	2,136	2,136	2,136
Panel B. MergerType2						
HCR	1.994***	1.693***	2.055***	2.213***	1.949***	2.412***
	(12.17)	(9.73)	(11.04)	(7.03)	(5.62)	(6.36)
	0.110	0.081	0.093	0.043	0.031	0.036
PMR		1.864***	3.903***		2.035***	4.257***
		(10.04)	(8.70)		(6.05)	(5.20)
		0.274	0.547		0.100	0.197
HCR × *PMR*			–3.740***			–4.157***
			(–5.67)			(–3.24)
			–0.170			–0.062
Intercept	–1.825***	–1.885***	–2.017***	–3.584***	–3.738***	–4.155***
	(–24.10)	(–23.54)	(–23.28)	(–7.94)	(–7.48)	(–7.62)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.10	0.17	0.19	0.41	0.43	0.44
Observed prob. of merger	0.12	0.12	0.12	0.12	0.12	0.12
Predicted prob. of merger	0.11	0.12	0.12	0.12	0.13	0.12
No. of observations	1,445	1,445	1,445	1,445	1,445	1,445

Table OA.7 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel C. MergerType3						
HCR	–4.426***	–3.630***	–3.977***	–4.885***	–4.213***	–4.560***
	(–31.57)	(–23.45)	(–21.90)	(–20.27)	(–14.48)	(–13.87)
	–0.149	–0.097	–0.102	–0.078	–0.046	–0.048
PMR		1.720***	3.926***		2.363***	4.595***
		(13.81)	(8.87)		(10.71)	(6.08)
		0.142	0.310		0.080	0.150
HCR × *PMR*			–2.738***			–2.714***
			(–5.40)			(–3.24)
			–0.070			–0.029
Intercept	–3.204***	–3.077***	–3.303***	–5.420***	–5.427***	–5.733***
	(–30.43)	(–27.97)	(–25.18)	(–15.28)	(–12.32)	(–12.21)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.50	0.54	0.54	0.59	0.61	0.62
Observed prob. of merger	0.23	0.23	0.23	0.23	0.23	0.23
Predicted prob. of merger	0.23	0.23	0.23	0.23	0.24	0.23
No. of observations	3,181	3,181	3,181	3,181	3,181	3,181
Panel D. Vertical Merger						
HCR	2.595***	2.087***	2.454***	3.239***	2.936***	3.372***
	(13.69)	(9.99)	(10.63)	(8.08)	(6.01)	(6.12)
	0.145	0.098	0.109	0.065	0.044	0.048
PMR		1.724***	4.268***		2.276***	4.681***
		(8.25)	(5.88)		(5.68)	(3.82)
		0.249	0.584		0.104	0.206
HCR × *PMR*			–3.580***			–3.458**
			(–4.09)			(–2.24)
			–0.159			–0.049
Intercept	–2.070***	–2.078***	–2.247***	–4.928***	–4.706***	–5.224***
	(–18.74)	(–17.81)	(–17.22)	(–7.39)	(–6.04)	(–6.06)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.23	0.30	0.32	0.49	0.52	0.52
Observed prob. of merger	0.17	0.17	0.17	0.17	0.17	0.17
Predicted prob. of merger	0.15	0.17	0.16	0.17	0.16	0.17
No. of observations	834	834	834	834	834	834

Table OA.7 – *continued*

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel E. Horizontal Merger						
HCR	–3.935***	–2.934***	–3.477***	–4.070***	–3.245***	–3.734***
	(–28.01)	(–17.25)	(–15.82)	(–19.98)	(–3.245)	(–12.23)
	–0.129	–0.060	–0.068	–0.075	–0.037	–0.040
PMR		2.225***	4.587***		2.388***	4.693***
		(16.53)	(9.79)		(12.25)	(6.78)
		0.140	0.276		0.083	0.156
HCR × PMR			–2.974***			–2.904***
			(–5.59)			(–3.78)
			–0.058			–0.031
Intercept	–3.075***	–3.045***	–3.404***	–4.303***	–4.208***	–4.543***
	(–29.16)	(–24.82)	(–20.67)	(–13.87)	(–10.76)	(–10.86)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.41	0.49	0.49	0.50	0.54	0.54
Observed prob. of merger	0.17	0.17	0.17	0.17	0.17	0.17
Predicted prob. of merger	0.18	0.16	0.17	0.17	0.17	0.17
No. of observations	2,778	2,778	2,778	2,778	2,778	2,778
Panel F. Conglomerate Merger						
HCR	2.790***	2.295***	2.501***	2.603***	2.037***	2.333***
	(26.87)	(19.86)	(20.44)	(15.33)	(10.17)	(10.70)
	0.155	0.104	0.110	0.062	0.034	0.038
PMR		2.157***	3.595***		2.860***	4.778***
		(15.86)	(11.54)		(11.81)	(8.81)
		0.301	0.487		0.148	0.237
HCR × PMR			–2.424***			–3.010***
			(–5.76)			(–4.25)
			–0.107			–0.048
Intercept	–2.031***	–2.065***	–2.148***	–3.029***	–3.268***	–3.594***
	(–37.63)	(–35.60)	(–35.00)	(–12.09)	(–10.67)	(–10.94)
Controls	No	No	No	Yes	Yes	Yes
Pseudo R-squared	0.24	0.32	0.33	0.48	0.51	0.52
Observed prob. of merger	0.17	0.17	0.17	0.17	0.17	0.17
Predicted prob. of merger	0.17	0.16	0.17	0.17	0.17	0.17
No. of observations	3,150	3,150	3,150	3,150	3,150	3,150

Table OA.8

Human capital relatedness and post-merger labor productivity

The table examines the effect of human capital relatedness (*HCR*) on post-merger labor productivity. The sample includes deals announced during the period 1997-2012. The dependent variable is the average post-merger industry-adjusted labor productivity in years + 1 and +2 (or +1, +2, and +3) minus the pre-merger industry-adjusted labor productivity in year −1, where year 0 is the merger announcement year. In Panel A (B), labor productivity is the ratio of operating cash flow to employment (selling, general, and administrative expense). Pre-merger industry-adjusted labor productivity is the ratio of the sum of acquiring and target industry-adjusted operating cash flow to the sum of industry-adjusted employees or selling, general, and administrative expense. Industry adjusted values are net of the corresponding median value for firms in the same three-digit SIC code. All regressions exclude mergers between single segment firms in the same industry (i.e., cases where *HCR* = 1). In Panels A and B, regressions (2), (3), (5), and (6) are estimated without an intercept. The control variables are those used in Tables 4-6. All variables are defined in Appendix A and all variables are winsorized at the 1st and 99th percentiles except *HCR* and *PMR*. We report *t*-statistics in parentheses below parameter estimates that are computed using robust standard errors clustered at the year level. We use ***, **, and * to denote significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable is average post-merger labor productivity minus pre-merger labor productivity					
	Average of years +1 and +2 versus −1			Average of years +1, +2, and +3 versus −1		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Labor productivity is ratio of operating cash flow to employment						
HCR	19.657			24.977*		
	(1.45)			(1.76)		
HCR × *MergerType*1		−8.839			−12.824	
		(−0.59)			(−0.68)	
HCR × *MergerType*2		24.787*			32.337**	
		(1.73)			(2.08)	
HCR × *MergerType*3		−1.196			−10.500	
		(−0.03)			(−0.26)	
HCR × *Vertical*			21.095			37.060
			(0.74)			(1.04)
HCR × *Horizontal*			52.165*			48.819
			(1.71)			(1.37)
HCR × *Conglomerate*			3.971			6.783
			(0.35)			(0.58)
PMR	32.237**	30.545**	37.868**	48.101**	43.588***	51.862***
	(2.01)	(1.95)	(2.22)	(2.58)	(2.59)	(2.90)
HCR × *PMR*	−50.605**	−48.372**	−61.433**	−73.078**	−66.787**	−82.678***
	(−2.37)	(−2.18)	(−2.56)	(−2.51)	(−2.53)	(−2.92)
*MergerType*1		−11.948			−20.709	
		(−0.93)			(−1.01)	
*MergerType*2		−30.398*			−40.753	
		(−1.68)			(−1.54)	
*MergerType*3		0.992			4.954	
		(0.04)			(0.16)	
Vertical			−23.388			−46.944
			(−1.05)			(−1.40)
Horizontal			−43.431**			−46.536*
			(−2.02)			(−1.74)
Conglomerate			−21.543*			−33.508
			(−1.65)			(−1.40)
Intercept	−25.909*	No	No	−37.607*	No	No
	(−1.88)			(−1.69)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.04	0.06	0.06	0.04	0.06	0.06
No. of observations	597	597	597	536	536	536

Table OA.8 – *continued*

	Dependent variable is average post-merger labor productivity minus pre-merger labor productivity					
	Average of years +1 and +2 versus –1			Average of years +1, +2, and +3 versus –1		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel B. Labor productivity is ratio of operating cash flow to selling, general, and administrative expense						
HCR	0.362*			0.404*		
	(1.77)			(1.85)		
HCR × *MergerType*1		0.278			0.341	
		(0.81)			(0.81)	
HCR × *MergerType*2		0.149			0.191	
		(1.08)			(1.36)	
HCR × *MergerType*3		0.444			0.268	
		(1.10)			(0.59)	
HCR × *Vertical*			0.242			0.362
			(0.95)			(1.22)
HCR × *Horizontal*			1.444**			1.286
			(2.19)			(1.39)
HCR × *Conglomerate*			0.191			0.214
			(1.36)			(1.43)
PMR	0.288*	0.307*	0.480**	0.375*	0.366*	0.518**
	(1.75)	(1.87)	(2.36)	(1.75)	(1.76)	(2.02)
HCR × *PMR*	–0.151	–0.191	–0.412	–0.300	–0.294	–0.516
	(–0.58)	(–0.67)	(–1.35)	(–0.79)	(–0.78)	(–1.30)
*MergerType*1		0.072			–0.060	
		(0.15)			(–0.10)	
*MergerType*2		0.171			0.064	
		(0.43)			(0.13)	
*MergerType*3		0.035			0.124	
		(0.07)			(0.22)	
Vertical			0.146			–0.070
			(0.38)			(–0.15)
Horizontal			–0.769			–0.712
			(–1.04)			(–0.76)
Conglomerate			0.163			0.023
			(0.44)			(0.05)
Intercept	0.045	No	No	–0.081	No	No
	(0.11)			(–0.16)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.03	0.03	0.05	0.03	0.03	0.04
No. of observations	523	523	523	470	470	470

Table OA.9

Acquirer returns in asset sales and parent employee transfer

The table reports regressions of acquirer cumulative abnormal returns on human capital relatedness (*HCR*) between the acquirer and asset acquired for subsamples of acquirers where the percentage change in parent employment is below and above 1% (Panel A), 2% (Panel B), 4% (Panel C), and 5% (Panel D), respectively. The dependent variable is the sum of the acquirer abnormal returns from day −1 to day +1, where day 0 is the asset sale announcement day. The percentage change in parent employment is the absolute value of employment in year +1 minus employment in year −1 scaled by employment in year −1, where year 0 is the asset sale announcement year. All variables are defined in Appendix A, and all variables are winsorized at the 1st and 99th percentiles of their distributions except *HCR*. We report *t*-statistics in parentheses below parameter estimates that are computed using robust standard errors clustered at the year level. We use ***, **, * to denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Regressions of acquirer CAR on HCR for subsamples below and above a 1% change in parent employment

	(1)		(2)		(3)		(4)	
Variable	below	above	below	above	below	above	below	above
HCR	0.599	2.446***	1.501	2.071***	1.324	2.342**	1.518	1.864*
	(0.16)	(3.38)	(0.31)	(2.87)	(0.24)	(2.43)	(0.26)	(1.94)
Relative transaction Size					−7.420*	2.169**	−2.468	2.176**
					(−1.84)	(2.29)	(−0.19)	(2.12)
Total assets of acquirer					−1.389***	−0.528**	−0.953	−0.499**
					(−3.30)	(−2.48)	(−1.69)	(−2.23)
Market-to-book of acquirer					−0.375	−0.915***	−0.361	−0.756**
					(−0.67)	(−2.87)	(−0.15)	(−2.46)
Leverage of acquirer					2.799	1.238	−0.560	1.329
					(0.71)	(0.86)	(−0.06)	(0.87)
Prior returns of acquirer					3.256	0.008	8.467**	−0.187
					(1.01)	(0.01)	(2.09)	(−0.20)
Intercept	−0.013	0.702	1.575	0.362	13.231**	5.436***	7.698	4.746**
	(−0.01)	(1.20)	(0.45)	(0.69)	(2.27)	(2.65)	(0.76)	(2.18)
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes
Adjusted R-squared	0.001	0.01	0.44	0.06	0.30	0.09	0.70	0.12
No. of observations	30	470	30	470	27	443	27	443

Panel B. Regressions of acquirer CAR on HCR for subsamples below and above a 2% change in parent employment

	(1)		(2)		(3)		(4)	
Variable	below	above	below	above	below	above	below	above
HCR	1.322	2.546***	0.739	2.095***	1.675	2.325**	1.811	1.791*
	(0.71)	(3.23)	(0.26)	(2.73)	(0.87)	(2.27)	(0.98)	(1.67)
Relative transaction Size					−4.865***	2.749***	−3.921	2.769***
					(−3.07)	(3.32)	(−1.39)	(3.03)
Total assets of acquirer					−0.777**	−0.506**	−0.787	−0.490**
					(−2.14)	(−2.32)	(−1.36)	(−2.14)
Market-to-book of acquirer					-0.190	−0.769***	−0.475	−0.602**
					(−0.26)	(−2.74)	(−0.39)	(−1.97)
Leverage of acquirer					4.476	1.557	3.783	1.609
					(1.16)	(1.20)	(0.85)	(1.13)
Prior returns of acquirer					3.138*	−0.070	3.638	−0.272
					(1.93)	(−0.09)	(1.48)	(−0.30)
Intercept	−0.373	0.724	−1.170	0.674	4.974	4.857**	3.941	4.725**
	(−0.24)	(1.16)	(−0.67)	(1.21)	(1.22)	(2.50)	(0.66)	(2.32)
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes
Adjusted R-squared	0.01	0.01	0.39	0.06	0.19	0.11	0.51	0.13
No. of observations	52	448	52	448	49	421	49	421

Table OA.9 – *continued*

Panel C. Regressions of acquirer CAR on HCR for subsamples below and above a 4% change in parent employment

	(1)		(2)		(3)		(4)	
Variable	below	above	below	above	below	above	below	above
HCR	1.807	2.507***	1.722	2.118**	1.146	2.359**	1.833	1.866*
	(1.41)	(3.04)	(0.91)	(2.57)	(0.76)	(2.13)	(0.90)	(1.91)
Relative transaction Size					1.183	2.535**	0.960	2.582**
					(0.75)	(2.28)	(0.52)	(2.05)
Total assets of acquirer					–0.440	–0.540**	–0.572	–0.509*
					(–1.33)	(–2.06)	(–1.40)	(–1.85)
Market-to-book of acquirer					–1.318**	–0.695**	–2.075***	–0.595*
					(–2.07)	(–2.46)	(–2.73)	(–1.79)
Leverage of acquirer					3.031	0.993	2.127	0.891
					(0.87)	(0.67)	(0.54)	(0.54)
Prior returns of acquirer					–0.806	0.200	–1.176	0.081
					(–0.31)	(0.21)	(–0.39)	(0.08)
Intercept	0.175	0.763	–0.898	0.633	5.450	5.173**	6.993*	4.880**
	(0.20)	(1.14)	(–0.69)	(1.08)	(1.61)	(2.29)	(1.79)	(2.07)
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes
Adjusted R-squared	0.01	0.01	0.17	0.06	0.11	0.10	0.28	0.13
No. of observations	102	398	102	398	98	372	98	372

Panel D. Regressions of acquirer CAR on HCR for subsamples below and above a 5% change in parent employment

	(1)		(2)		(3)		(4)	
Variable	below	above	below	above	below	above	below	above
HCR	1.841	2.518***	2.387	2.136**	1.241	2.327**	2.293	1.828*
	(1.54)	(3.02)	(1.12)	(2.55)	(0.83)	(2.02)	(1.14)	(1.89)
Relative transaction Size					1.665	2.463**	0.766	2.492*
					(1.18)	(2.12)	(0.45)	(1.88)
Total assets of acquirer					–0.383	–0.553**	–0.605	–0.511*
					(–1.13)	(–2.05)	(–1.57)	(–1.81)
Market-to-book of acquirer					–1.492**	–0.644**	–2.089***	–0.524
					(–2.57)	(–2.22)	(–3.05)	(–1.54)
Leverage of acquirer					1.455	1.378	1.488	1.222
					(0.46)	(0.91)	(0.44)	(0.73)
Prior returns of acquirer					–0.290	0.092	–0.838	0.033
					(–0.11)	(0.09)	(–0.30)	(0.03)
Intercept	0.239	0.761	–1.311	0.702	5.587	5.118**	7.486**	4.842**
	(0.28)	(1.10)	(–1.31)	(1.14)	(1.61)	(2.22)	(2.02)	(1.97)
Year fixed effects	No	No	Yes	Yes	No	No	Yes	Yes
Adjusted R-squared	0.01	0.01	0.18	0.07	0.10	0.10	0.29	0.13
No. of observations	113	387	113	387	109	361	109	361