

ONLINE APPENDIX

“Acquirers’ Cultural Background and the Use of Earnouts”

Corinna Ewelt-Knauer
University of Gießen, Germany
Corinna.Ewelt-Knauer@wirtschaft.uni-giessen.de

Johannes Gefken
University of Münster, Germany
johannes.gefken@gmail.com

Thorsten Knauer
Ruhr-University Bochum, Germany
thorsten.knauer@rub.de

David Wiedemann
University of Münster, Germany
w-david@gmx.de

Table OA I. Cultural factors by country

Country	Individualism	Power distance	Uncertainty avoidance	Masculinity	Long-term orientation
Australia	90	36	51	61	21
Austria	55	11	70	79	60
Canada	80	39	48	52	36
Chile	23	63	86	28	31
China	20	80	30	66	87
Czech Republic	58	57	74	57	70
Germany	67	35	65	66	83
Hungary	80	46	82	88	58
Ireland	70	28	35	68	24
Israel	54	13	81	47	38
Italy	76	50	75	70	61
Japan	46	54	92	95	88
Luxembourg	60	40	70	50	64
Netherlands	80	38	53	14	67
Poland	60	68	93	64	38
Romania	30	90	90	42	52
Serbia	25	86	92	43	52
Slovakia	52	100	51	100	77
Slovenia	27	71	88	19	49
Spain	51	57	86	42	48
Sweden	71	31	29	5	53
Switzerland	68	34	58	70	74
Taiwan	17	58	69	45	93
Turkey	37	66	85	45	46
UK	89	35	35	66	51
USA	91	40	46	62	26

This table shows the values for the different cultural factors provided by Hofstede in 2010 for all countries of origin of the acquirer, the seller or target (source: <https://geert-hofstede.com/countries.html>). Please note that descriptive statistics for the cultural factors are provided in Panel A of Table IV.

Table OA II. Variable definitions

Variable	Description
<i>Earnout use</i>	Dummy variable equal to 1 if an earnout is used, 0 otherwise
<i>IndividualismAcq</i>	Hofstede's measure for the level of individualism for each acquirer according to the country of origin (source: Hofstede et al., 2010)
<i>Power Distance Acq</i>	Hofstede's measure for the level of power distance for each acquirer according to the country of origin (source: Hofstede et al., 2010)
<i>Uncertainty Avoid Acq</i>	Hofstede's measure for the level of uncertainty avoidance for each acquirer according to the country of origin (source: Hofstede et al., 2010)
<i>Masculinity Acq</i>	Hofstede's measure for the level of masculinity for each acquirer according to the country of origin (source: Hofstede et al., 2010)
<i>LT Orientation Acq</i>	Hofstede's measure for the level of long-term orientation for each acquirer according to the country of origin (source: Hofstede et al., 2010)
<i>Deal Value</i>	Logarithm of the deal value. Earnout value is included in the deal value if the earnout period is not greater than two years (source: Mergermarket).
<i>Private Target</i>	Dummy variable equal to 1 if the target is a private firm, 0 otherwise (source: Mergermarket)
<i>MSCI</i>	Monthly standard deviation of industry-level returns using MSCI World Sector Indices, calculated with a three-month lag prior to closing (source: Thomson Reuters Datastream)
<i>Buy and Build</i>	Dummy variable equal to 1 if the target is part of a buy and build strategy, 0 otherwise (source: Mergermarket)
<i>Private Equity</i>	Dummy variable equal to 1 if the acquirer is a private equity investor, 0 otherwise (source: Mergermarket)
<i>MBO</i>	Dummy variable equal to 1 if the transaction is a management buyout, 0 otherwise (source: Mergermarket)
<i>Cross-industry</i>	Dummy variable equal to 1 if the acquirer and the target operate in different industries, 0 otherwise (source: Mergermarket)
<i>Cross-border</i>	Dummy variable equal to 1 if the acquirer and the target are located in different countries, 0 otherwise (source: Mergermarket)
<i>GDP</i>	Country-specific real economic growth rate in the year prior to the transaction (source: World Bank)
<i>Crisis</i>	Country-specific dummy variable equal to 1 if the monthly stock market return in a country was lower than -10% in one of the last twelve months, 0 otherwise (source: Thomson Reuters Datastream)
<i>Yield Spread</i>	Country-specific variable that measures the difference between monthly government bond yields and a reference bond (source: Thomson Reuters Datastream)
<i>Contract Enforcement</i>	Measure of the efficiency of the legal enforcement of contracts across countries (source: World Bank's Doing Business Report)
<i>Investor Protection</i>	Measure of a country's mechanisms for protecting minority shareholders (source: World Bank's Doing Business Report)
<i>Formal Institute</i>	Measure of a country's overall quality of formal institutions by aggregating six of the World Bank's Worldwide Governance Indicators (rule of law, control of corruption, regulatory quality, government effectiveness, voice and accountability, political stability; source: World Bank's Doing Business Report)
<i>IndividualismTar</i>	Hofstede's measure for the level of individualism for each target according to the country of origin (source: Hofstede et al., 2010)
<i>Power Distance Tar</i>	Hofstede's measure for the level of power distance for each target according to the country of origin (source: Hofstede et al., 2010)
<i>Uncertainty Avoid Tar</i>	Hofstede's measure for the level of uncertainty avoidance for each target according to the country of origin (source: Hofstede et al., 2010)

<i>Masculinity Tar</i>	Hofstede's measure for the level of masculinity for each target according to the country of origin (source: Hofstede et al., 2010)
<i>LT Orientation Tar</i>	Hofstede's measure for the level of long-term orientation for each target according to the country of origin (source: Hofstede et al., 2010)
<i>Individualism Sel</i>	Hofstede's measure for the level of individualism for each seller according to the country of origin (source: Hofstede et al., 2010)
<i>Power Distance Sel</i>	Hofstede's measure for the level of power distance for each seller according to the country of origin (source: Hofstede et al., 2010)
<i>Uncertainty Avoid Sel</i>	Hofstede's measure for the level of uncertainty avoidance for each seller according to the country of origin (source: Hofstede et al., 2010)
<i>Masculinity Sel</i>	Hofstede's measure for the level of masculinity for each seller according to the country of origin (source: Hofstede et al., 2010)
<i>LT Orientation Sel</i>	Hofstede's measure for the level of long-term orientation for each seller according to the country of origin (source: Hofstede et al., 2010)

Table OA III. Sensitivity analysis

Variables	Dependent variable: Earnout use (1 = yes, 0 = no)					
	Model 1 (OLS regression)	Model 2 (Probit regression)	Model 3 (excl. acquirers from the UK/USA)	Model 4 (excl. targets from the UK/USA)	Model 5 (excl. sellers from the UK/USA)	Model 6 (excl. acquirers, targets, and sellers from the UK/USA)
Individualism Acq	0.001 (0.15)	0.002 (0.93)	0.006 (0.94)	0.001 (0.02)	0.001 (0.05)	-0.001 (-0.07)
Power Distance Acq	-0.001 * (-1.68)	-0.009 *** (-2.72)	-0.018 *** (-2.96)	-0.031 *** (-3.63)	-0.028 *** (-3.74)	-0.027 *** (-3.51)
Uncertainty Avoid Acq	-0.001 *** (-3.80)	-0.010 *** (-5.29)	-0.012 *** (-2.93)	-0.014 ** (-2.56)	-0.015 *** (-2.76)	-0.018 ** (-2.25)
Masculinity Acq	0.001 * (1.94)	0.003 ** (2.10)	0.003 (1.00)	0.007 ** (2.39)	0.005 * (1.87)	0.007 (1.49)
LT Orientation Acq	0.001 (0.17)	0.001 (0.24)	-0.009 *** (-3.45)	-0.005 (-1.08)	-0.006 * (-1.81)	-0.016 *** (-2.79)
Individualism Tar	0.001 (0.96)	0.005 (1.14)	0.003 (0.33)	0.010 (1.23)	0.014 (1.27)	0.014 (0.97)
Power Distance Tar	0.001 (0.52)	0.004 (0.74)	-0.20 (-1.62)	0.010 (0.79)	-0.003 (-0.32)	-0.017 (-1.48)
Uncertainty Avoid Tar	0.001 (0.50)	0.001 (0.18)	0.001 (0.13)	-0.001 (-0.15)	0.015 ** (2.07)	0.021 * (1.77)
Masculinity Tar	-0.001 (-1.13)	-0.002 (-1.45)	-0.002 (-0.46)	-0.001 (-0.06)	-0.010 *** (-2.63)	-0.013 (-1.48)
LT Orientation Tar	-0.001 * (-1.84)	-0.005 ** (-2.11)	-0.006 (-0.84)	-0.014 ** (-1.98)	-0.014 *** (-2.60)	-0.017 * (-1.75)
Individualism Sel	-0.00039 (-0.56)	-0.003 (-0.68)	-0.002 (-0.20)	-0.005 (-0.57)	-0.007 (-0.62)	-0.007 (-0.81)
Power Distance Sel	-0.001 (-1.18)	-0.005 (-1.32)	-0.001 (-0.12)	-0.017 ** (-2.19)	-0.005 (-0.71)	-0.006 (-0.56)
Uncertainty Avoid Sel	-0.001 (-0.74)	-0.002 (-1.18)	0.004 (0.54)	0.008 (1.45)	-0.009 ** (-2.47)	-0.011 (-1.49)

Variables	Dependent variable: Earnout use (1 = yes, 0 = no)					
	Model 1 (OLS regression)	Model 2 (Probit regression)	Model 3 (excl. acquirers from the UK/USA)	Model 4 (excl. targets from the UK/USA)	Model 5 (excl. sellers from the UK/USA)	Model 6 (excl. acquirers, targets, and sellers from the UK/USA)
Masculinity Sel	0.001 * (1.93)	0.002 (1.61)	0.003 (0.47)	-0.003 (-0.56)	0.008 (2.31)	0.010 (1.44)
LT Orientation Sel	-0.001 (-0.45)	-0.001 (-0.15)	-0.005 (-0.56)	-0.002 (-0.25)	-0.003 (-0.49)	-0.002 (-0.22)
Ln(Deal Value)	-0.009 ** (-2.29)	-0.067 *** (-2.60)	-0.081 (-1.32)	-0.023 (-0.42)	-0.009 (-0.16)	0.067 (0.75)
Private Target	0.061 *** (7.24)	0.521 *** (8.24)	1.361 *** (3.67)	1.190 *** (4.45)	1.286 *** (4.66)	1.458 *** (3.15)
MSCI	-0.049 (-0.43)	-0.451 (-0.49)	-5.470 * (-1.88)	0.694 (0.21)	0.476 (0.16)	-4.734 (-1.34)
Buy and Build	-0.078 *** (-2.84)	-0.667 *** (-2.71)	-0.422 (-0.84)	-1.411 ** (-2.12)	-1.269 * (-1.84)	-1.058 (-1.46)
Private Equity	-0.060 *** (-2.88)	-0.518 *** (-2.78)	-0.163 (-0.42)	-0.535 (-1.24)	-0.538 (-1.30)	0.270 (0.66)
MBO	-0.058 *** (-5.77)	-0.733 *** (-11.24)	-1.733 ** (-2.45)	-1.332 *** (-3.65)	-1.956 *** (-3.03)	-2.243 ** (-2.45)
Cross-industry	-0.001 (-0.37)	-0.037 (-1.22)	-0.074 (-0.48)	-0.336 *** (-2.90)	-0.312 *** (-2.56)	-0.348 (-1.54)
Cross-border	0.019 *** (3.54)	0.167 *** (4.77)	0.611 *** (3.00)	0.459 ** (2.29)	0.419 *** (2.88)	0.494 * (1.86)
GDP	-0.285 * (-1.91)	-2.667 ** (-2.45)	-3.472 (-0.80)	-2.738 (-1.00)	-1.857 (-0.57)	-6.415 (-0.98)
Crisis	0.020 (1.51)	0.152 (1.48)	0.149 (0.56)	0.093 (0.58)	0.022 (0.14)	0.050 (0.17)
Yield Spread	-0.007 ** (-2.56)	-0.070 *** (-2.87)	-0.104 (-0.96)	-0.113 ** (-2.16)	-0.106 ** (-2.15)	-0.144 (-1.31)
Contract Enforcement	0.003 (0.82)	0.015 (0.61)	0.088 (0.93)	0.046 (0.61)	0.068 (1.30)	0.163 (1.38)

Variables	Dependent variable: Earmout use (1 = yes, 0 = no)					
	Model 1 (OLS regression)	Model 2 (Probit regression)	Model 3 (excl. acquirers from the UK/USA)	Model 4 (excl. targets from the UK/USA)	Model 5 (excl. sellers from the UK/USA)	Model 6 (excl. acquirers, targets, and sellers from the UK/USA)
InvestorProtection	-0.001 (-0.19)	0.008 (0.34)	-0.006 (-0.07)	-0.023 (-0.57)	-0.053 (-1.23)	-0.121 (-1.02)
Formal Institute	0.200 *** (3.54)	0.007 (0.16)	-0.093 (-0.72)	-0.003 (-0.02)	-0.040 (-0.36)	-0.260 (-1.50)
Intercept	0.134 ** (2.51)	-1.274 *** (-3.54)	-2.844 * (-1.93)	-1.977 * (-1.71)	-1.705 * (-1.82)	-0.760 (-0.44)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
LR χ^2		768.21 ***	322.31 ***	306.03 ***	315.21 ***	202.84 ***
Log likelihood		-2,285.55	-837.82	-983.49	-994.45	-493.20
F-value	11.96 ***					
Adj. R^2	0.068					
McFadden R^2		0.144	0.161	0.135	0.137	0.171
Number of observations	9,669	9,669	4,739	5,165	5,065	3,227

This table reports results from the additional analysis using the maximum likelihood estimation procedure. In the lower rows, z-values are reported in parentheses. Earmout use represents the dependent variable (1 = yes, 0 = no). Model 1 is the full model, but it uses an OLS regression approach. Model 2 is the full model, but it uses a probit regression. Models 3 to 6 focus on transactions outside the UK/USA and exclude acquirers, targets, and sellers from those countries. Details on the construction of the variables are provided in the appendix. The superscripts *, **, and *** represent statistical significance at the 10%, 5%, and 1% levels, respectively, using two-tailed tests.