INTELLECTUAL CAPITAL AND FIRM PERFORMANCE: EVIDENCE FROM HIGH-SENSITIVITY INDUSTRIES IN VIETNAM

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Appendix 1. Variable measurements

Variable name	Symbol	Measurement / Definition	Expected sign	References
Return on Assets	roa	Net income / Total assets (%)		
Intellectual Capital	vaic	VAIC = CEE + HCE + SCE	+	Wang et al. (2016); Inkinen (2015); Delgado-Verde et al. (2016)
Human Capital Efficiency	hce	HCE = VA / HC HC = Human Capital = Total salaries and wages or personnel expenses VA = Total Revenue − Operating Expenses (excluding employee costs)	+	Wang et al. (2016); Mangayarkarasi & Mugunthan (2025); Nguyen (2023); Kim & Tran (2024)
Structural Capital Efficiency	sce	SCE = 1 – HC/VA	+	Kim & Lee (2018); Nguyen et al. (2022)
Capital Employed Efficiency	cee	CEE = VA / CE CE = Capital Employed = Total Assets − Intangible Assets	+	Pulic (2000); Singhania & Panda (2025); Nguyen et al. (2022)
Firm Size	size	Natural logarithm of total assets	-	Nguyen (2023); Kim & Tran (2024)
Leverage	lev	Total debt / Total assets	-	Kweh et al. (2019)
Liquidity	liq	Current assets / Current liabilities	+	Kim & Lee (2018)
Firm Age	age	Number of years since founded	-	Nguyen (2023)
Covid	covid	Dummy variable, 1 if the year are 2020 or 2021, 0 if otherwise	-	Nguyen et al. (2022)

Appendix 2. Descriptive analysis

	Count	Mean	Std	Min	25%	50%	75%	Max	Skew	Kurtosis
ROA	1682	0.07	0.06	-0.17	0.03	0.06	0.10	0.31	0.66	1.85
HCE	1682	0.27	1.10	-9.71	0	0	0.23	11.63	2.54	39.58
SCE	1682	0.73	1.10	-10.63	0.77	1.00	1.00	10.71	-2.54	39.58
CEE	1682	0.10	0.08	-0.20	0.04	0.09	0.13	0.45	0.72	1.54
VAIC	1682	1.10	0.08	0.80	1.04	1.09	1.13	1.45	0.72	1.54
SIZE	1682	26.71	1.62	22.2	25.58	26.82	27.95	31.61	-0.10	-0.41
LEV	1682	0.44	0.22	0	0.26	0.43	0.62	0.97	0.11	-0.89
LIQ	1682	2.55	2.41	0.03	1.21	1.68	2.85	15.81	2.83	8.99
AGE	1682	15.93	8.72	1.00	10.00	15.00	21.00	43.00	0.63	0.15