The effects of market strategy and direction on the performance of Vietnamese startups

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Appendix

Data Analysis Results

1. **Conventional Names:**

No.	Names	Concepts
1	KQHD	Performance Results
2	DHDT/DH_DT	Competitor orientation
3	DHKH/DH_KH	Customer orientation
4	DHPH/DH_PH	Cross functional collaboration
5	Tnien/Tham_nien	Seniority
6	Lvuc/Linh_vuc	Area
7	CLKD	Business strategy
8	Vmien/Vung_mien	Region

2. **The Results of Exploratory Factor Analysis (EFA)**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	10510.041
	df	210
	Sig.	.000

Total Variance Explained							
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.061	43.146	43.146	8.831	42.051	42.051	6.404
2	3.666	17.459	60.605	3.422	16.293	58.345	7.526
3	2.447	11.653	72.259	2.132	10.154	68.498	5.933
4	1.333	6.345	78.604	1.064	5.067	73.566	3.141
5	.718	3.421	82.025				
6	.553	2.635	84.660				
7	.395	1.881	86.541				
8	.335	1.594	88.135				
9	.300	1.426	89.561				
10	.273	1.298	90.859				
11	.241	1.146	92.005				
12	.238	1.135	93.140				
13	.222	1.055	94.196				
14	.216	1.030	95.226				
15	.208	.992	96.218				
16	.199	.947	97.166				
17	.163	.774	97.940				

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18	.138	.658	98.598				
19	.114	.543	99.141				
20	.102	.488	99.629				
21	.078	.371	100.000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Pattern Matrix[a]				
	Factor			
	1	2	3	4
DH_DT4	.931			
DH_DT6	.922			
DH_DT5	.905			
DH_DT3	.899			
DH_DT1	.894			
DH_DT2	.863			
KQHD5		.899		
KQHD6		.886		
KQHD3		.883		
KQHD1		.869		
KQHD2		.849		
KQHD4		.841		
DH_KH2			.972	
DH_KH1			.786	
DH_KH4			.729	
DH_KH3			.666	
DH_KH5			.577	
DH_PH3				.878
DH_PH4				.818
DH_PH2				.778
DH_PH1				.759
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

3. The Results of Reliability Test of Measurement Scales

a. Test Score Reliability of the Scale of Customer orientation

Reliability Statistics

Cronbach's Alpha	N of Items
.879	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
DH_KH1	10.193	14.570	.741	.847
DH_KH2	10.293	13.430	.814	.828
DH_KH3	10.264	14.230	.670	.863
DH_KH4	10.357	13.592	.758	.841
DH_KH5	10.290	14.790	.587	.882

b. Test Score Reliability of the Scale of Competitor orientation

Reliability Statistics

Cronbach's Alpha	N of Items
.964	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
DH_DT1	17.214	25.851	.881	.957
DH_DT2	17.197	26.046	.849	.961
DH_DT3	17.170	25.511	.888	.957
DH_DT4	16.950	25.394	.903	.955

DH_DT5	17.290	25.216	.888	.957
DH_DT6	17.162	25.927	.898	.956

c. Test Score Reliability of the Scale of Cross functional collaboration

Reliability Statistics

Cronbach's Alpha	N of Items
.883	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
DH_PH1	6.515	5.937	.722	.860
DH_PH2	6.442	5.299	.730	.857
DH_PH3	6.369	5.324	.787	.833
DH_PH4	6.237	5.423	.750	.847

d. Test Score Reliability of the Scale of Performance result

Reliability Statistics

Cronbach's Alpha	N of Items
.960	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
KQHD1	12.857	24.332	.872	.952
KQHD2	12.903	24.405	.870	.953
KQHD3	12.981	24.383	.873	.952
KQHD4	12.992	24.317	.876	.952
KQHD5	12.952	24.692	.872	.952
KQHD6	12.959	24.178	.874	.952

4. The Results of Descriptive Statistics for Factors in the Analysis Model

a. Descriptive Statistics for Customer Orientation Factor

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DH_KH1	518	1.0	5.0	2.656	1.0247
DH_KH2	518	1.0	5.0	2.556	1.1263
DH_KH3	518	1.0	5.0	2.585	1.1567
DH_KH4	518	1.0	5.0	2.492	1.1598
DH_KH5	518	1.0	5.0	2.560	1.1666
Valid N (listwise)	518				

b. Descriptive Statistics for Competitor Orientation Factor

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DH_DT1	518	1.0	5.0	3.382	1.0794
DH_DT2	518	1.0	5.0	3.400	1.0900
DH_DT3	518	1.0	5.0	3.427	1.1080
DH_DT4	518	1.0	5.0	3.647	1.1059
DH_DT5	518	1.0	5.0	3.307	1.1403
DH_DT6	518	1.0	5.0	3.434	1.0548

Valid N (listwise)	518				

c. Descriptive Statistics for Cross Functional Collaboration Factor

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DH_PH1	518	1.0	4.0	2.006	.8025
DH_PH2	518	1.0	5.0	2.079	.9512
DH_PH3	518	1.0	5.0	2.153	.9002
DH_PH4	518	1.0	5.0	2.284	.9048
Valid N (listwise)	518				

d. Descriptive Statistics for Business Strategy Factor

CLKD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.0	273	52.7	52.7	52.7
	2.0	245	47.3	47.3	100.0
	Total	518	100.0	100.0	

e. Descriptive Statistics for Performance Result Factor

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
KQHD1	518	1.0	5.0	2.672	1.0846
KQHD2	518	1.0	5.0	2.625	1.0785
KQHD3	518	1.0	5.0	2.548	1.0775
KQHD4	518	1.0	5.0	2.537	1.0816
KQHD5	518	1.0	5.0	2.577	1.0448
KQHD6	518	1.0	5.0	2.569	1.0995
Valid N (listwise)	518				

5. The Results of Confirmatory Factor Analysis (CFA)

a. Estimated Results

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
DH_DT4	<---	DHDT	1.000				
DH_DT6	<---	DHDT	.945	.025	38.019	***	
DH_DT5	<---	DHDT	1.011	.027	36.846	***	
DH_DT3	<---	DHDT	.964	.028	34.619	***	
DH_DT1	<---	DHDT	.945	.027	35.394	***	
DH_DT2	<---	DHDT	.901	.030	30.089	***	
KQHD5	<---	KQHD	1.000				
KQHD6	<---	KQHD	1.055	.034	31.055	***	
KQHD3	<---	KQHD	1.033	.033	30.987	***	
KQHD1	<---	KQHD	1.039	.034	30.893	***	
KQHD2	<---	KQHD	1.033	.033	30.866	***	
KQHD4	<---	KQHD	1.045	.033	31.513	***	
DH_KH2	<---	DHKH	1.000				
DH_KH1	<---	DHKH	.849	.031	26.971	***	
DH_KH4	<---	DHKH	.990	.054	18.385	***	
DH_KH3	<---	DHKH	.899	.055	16.346	***	
DH_KH5	<---	DHKH	.803	.054	14.895	***	
DH_PH3	<---	DHPH	1.000				
DH_PH4	<---	DHPH	.959	.044	21.551	***	
DH_PH2	<---	DHPH	.969	.047	20.451	***	
DH_PH1	<---	DHPH	.809	.040	20.150	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
DH_DT4	<---	DHDT	.930
DH_DT6	<---	DHDT	.921
DH_DT5	<---	DHDT	.912
DH_DT3	<---	DHDT	.895
DH_DT1	<---	DHDT	.901
DH_DT2	<---	DHDT	.850
KQHD5	<---	KQHD	.892
KQHD6	<---	KQHD	.895
KQHD3	<---	KQHD	.894
KQHD1	<---	KQHD	.893
KQHD2	<---	KQHD	.892
KQHD4	<---	KQHD	.900
DH_KH2	<---	DHKH	.833
DH_KH1	<---	DHKH	.776
DH_KH4	<---	DHKH	.801
DH_KH3	<---	DHKH	.731
DH_KH5	<---	DHKH	.646
DH_PH3	<---	DHPH	.858
DH_PH4	<---	DHPH	.818
DH_PH2	<---	DHPH	.786
DH_PH1	<---	DHPH	.778

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
DH_PH1	.605
DH_PH2	.619
DH_PH4	.669
DH_PH3	.735
DH_KH5	.417
DH_KH3	.534
DH_KH4	.641
DH_KH1	.602
DH_KH2	.694
KQHD4	.810
KQHD2	.796
KQHD1	.797
KQHD3	.799
KQHD6	.800
KQHD5	.796
DH_DT2	.723
DH_DT1	.811
DH_DT3	.800
DH_DT5	.832
DH_DT6	.848
DH_DT4	.865

b. Convergent Validity, Discriminant Validity, Reliability in CFA

Model Validity Measures

	CR	AVE	MSV	MaxR(H)	DHDT	KQHD	DHKH	DHPH
DHDT	0.963	0.813	0.226	0.965	**0.902**			
KQHD	0.960	0.800	0.513	0.960	0.475***	**0.894**		
DHKH	0.872	0.578	0.513	0.881	0.380***	0.716***	**0.760**	
DHPH	0.884	0.657	0.084	0.888	0.005	0.290***	0.170***	**0.811**

Validity Concerns

No validity concerns here.

References

Significance of Correlations:
† p < 0.100
* p < 0.050
** p < 0.010
*** p < 0.001

The Testing of Model-fitting in CFA

Chi-square/df(<3)= 3.616

Chi-square= 647.308

df= 179

CFI(>0.9)= 0.955

GFI(>0.9)= 0.902

TLI (>0.9)= 0.947

Pclose(>0.05)= 0.000

RMSEA(<0.05-0.8)= 0.071

P(>0.05)= 0.000

The Results of SEM Model Testing

c. Key Results

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
KQHD	<---	DHDT	.154	.029	5.362	***	
KQHD	<---	DHKH	.513	.040	12.740	***	
KQHD	<---	DHPH	.173	.037	4.727	***	
KQHD	<---	Tham_nien	.045	.040	1.131	.258	
KQHD	<---	Linh_vuc	.385	.051	7.573	***	
KQHD	<---	CLKD	.273	.052	5.273	***	
KQHD	<---	Vung_mien	-.059	.039	-1.507	.132	
DH_DT4	<---	DHDT	1.000				
DH_DT6	<---	DHDT	.945	.025	38.006	***	
DH_DT5	<---	DHDT	1.011	.027	36.797	***	

			Estimate	S.E.	C.R.	P	Label
DH_DT3	<---	DHDT	.964	.028	34.608	***	
DH_DT1	<---	DHDT	.946	.027	35.392	***	
DH_DT2	<---	DHDT	.902	.030	30.087	***	
KQHD5	<---	KQHD	1.000				
KQHD6	<---	KQHD	1.055	.034	30.966	***	
KQHD3	<---	KQHD	1.033	.033	30.915	***	
KQHD1	<---	KQHD	1.040	.034	30.953	***	
KQHD2	<---	KQHD	1.033	.033	30.888	***	
KQHD4	<---	KQHD	1.047	.033	31.625	***	
DH_KH2	<---	DHKH	1.000				
DH_KH1	<---	DHKH	.844	.031	26.816	***	
DH_KH4	<---	DHKH	1.010	.054	18.667	***	
DH_KH3	<---	DHKH	.911	.055	16.456	***	
DH_KH5	<---	DHKH	.811	.054	14.925	***	
DH_PH3	<---	DHPH	1.000				
DH_PH4	<---	DHPH	.959	.044	21.596	***	
DH_PH2	<---	DHPH	.968	.047	20.459	***	
DH_PH1	<---	DHPH	.807	.040	20.127	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
KQHD	<---	DHDT	.170
KQHD	<---	DHKH	.512
KQHD	<---	DHPH	.143
KQHD	<---	Tham_nien	.038
KQHD	<---	Linh_vuc	.332
KQHD	<---	CLKD	.146
KQHD	<---	Vung_mien	-.053
DH_DT4	<---	DHDT	.930
DH_DT6	<---	DHDT	.921
DH_DT5	<---	DHDT	.912
DH_DT3	<---	DHDT	.895

			Estimate
DH_DT1	<---	DHDT	.901
DH_DT2	<---	DHDT	.850
KQHD5	<---	KQHD	.891
KQHD6	<---	KQHD	.893
KQHD3	<---	KQHD	.893
KQHD1	<---	KQHD	.893
KQHD2	<---	KQHD	.893
KQHD4	<---	KQHD	.901
DH_KH2	<---	DHKH	.826
DH_KH1	<---	DHKH	.765
DH_KH4	<---	DHKH	.810
DH_KH3	<---	DHKH	.734
DH_KH5	<---	DHKH	.647
DH_PH3	<---	DHPH	.858
DH_PH4	<---	DHPH	.819
DH_PH2	<---	DHPH	.786
DH_PH1	<---	DHPH	.777

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
KQHD	.709
DH_PH1	.604
DH_PH2	.618
DH_PH4	.670
DH_PH3	.736
DH_KH5	.418
DH_KH3	.539
DH_KH4	.656
DH_KH1	.585
DH_KH2	.683
KQHD4	.812
KQHD2	.797

	Estimate
KQHD1	.798
KQHD3	.797
KQHD6	.798
KQHD5	.795
DH_DT2	.723
DH_DT1	.812
DH_DT3	.800
DH_DT5	.832
DH_DT6	.849
DH_DT4	.864

Assessment of Model Fit

Chi-square/df(<3)= 3.080

Chi-square= 760.798

df= 247

CFI(>0.9)= 0.954

GFI(>0.9)= 0.902

TLI (>0.9)= 0.944

Pclose(>0.05)= 0.000

RMSEA(<0.05-0.8)= 0.063

P(>0.05)= 0.000

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