Business Agility: Which Are the Factors That Really Matter?

Xavier Bronlet
Lecturer "Organization & Leadership" SUPSI MSc Innovation Management,
University of Applied Sciences and Arts of Southern Switzerland

Abstract
Business Agility is identified as the set of practices that help organizations thriving in volatile, uncertain, complex and ambiguous operating context. While the literature reports numerous qualitative papers, there is few quantitative studies that provide a consistent analysis of the factors that matter. The purpose of this study is to review under the lenses of structural equation modeling the model suggested by the Business Agility Institute.

This model suggests 4 dimensions made of 13 domains that reflects the Business Agility Maturity of an organization. Since 2018, the Institute collects data worldwide with a questionnaire based on that very model. This provides a unique opportunity to review the model using Confirmatory Factor Analysis leveraging on the collected observations to confirm the proper reflection of all items on their respective domain and the goodness of fit of the model.

Most of the indicators suggest that observations are fitting with the suggested model and report a fair convergent validity while the discriminant validity appears under the desired level due to the cross-charging characteristics of various items; this may be attributed to the systemic characteristics of the Business Agility.

This paper may therefore contribute to the body of knowledge around the future and work. It does provide a basis for further research and a framework for companies who are interested in developing their Business Agility.

Keywords: Business Agility, Organizational development, Confirmatory Factor Analysis, Structural Equation Modeling, Future of Work.

1. Introduction

Business Agility has been identified as critical to the survival of organizations in turbulent environments characterized by rapid shifts in technologies, customer preferences and competitive landscape (Juneja, Kothari, & Rai, 2018). There are numerous definitions of agility since the subject has been discussed in the literature and there seems to be no single universally accepted definition (Gallager & Worell, 2007). Business Agility has been defined as the set of business initiatives that a company can readily implement with a pre-determined competencies with managed cost and risk (Westerman, Weill, & McDonald, 2006) or as the ability to swiftly change businesses and business processes beyond the normal level of flexibility to effectively manage highly uncertain and unexpected but potentially consequential internal or external events based on the capabilities to sense, respond and learn (Oosterhout, 2010). The concept of Business Agility is now also encompassing sustainability challenges to looks for the greater good

of all the involved parties (Ghosh & Barman, 2021).We may therefore refer to an assembly of those concepts of Business Agility when we refer those very conditions that are made of culture and strategy.

With the intent to provide a neutral benchmark and state of the art of the Business Agility around the world, the Business Agility Institute is measuring the Business Agility Maturity through a yearly survey since 2018 and publish a yearly report.

On their side, the organizations who are willing to transform and embrace Business Agility in part or totally are searching for their way (Barroca, Dingsøyr, & Mikalsen, 2019). Consulting companies called to support the transitions are usually using qualitative approaches to capture the initial situation and plan for the transformation. Being a cultural transformation, it requires time to develop the factors that really matter. Regular measures may help to pilot the transformation and therefore a validated questionnaire may be useful to support the organization in their journey (Bronlet, 2021).

In this very context, this research aims to confirm the validity of the model suggested by the Business Agility Institute and provide a sound basis for further research and for organizational development purpose as the model has been developed empirically and its validity nevere assessed. The research is based on data collected by the Institute during the survey campaign of 2019, 2020 and 2021. It's not a longitudinal study and all observations have been consolidated in a single data set. The methodology used to assess the validity of the factors is leveraging on Structural Equation Modeling (SEM).

2. The Business Agility Institute's model

The Business Agility Institute is an independent research and advocacy organization who wants to drive industry change through applied research, pragmatic guidance and building networks of individuals and organizations.

In that very context and to support its mission, the Institute has elaborated this model with the intent to provide structure in the field through a common referential.

The model is made of 4 dimensions and each dimension is made of 3 to 4 domains.

Figure 1: Business Agility model. Reprinted from Business Agility Institute
Website https://businessagility.institute (June, 2022)

2.1 The Relationship dimension:
This dimension is highly contextual and the specific definitions change depending on the organization type (e.g. private company, public company, not-for-profit, government organization, etc.). Whatever the organization structure, the Workforce is responsible for delivering value to customers. The Board of Directors is the highest expression of shareholder intent and ownership. And the Partners are the vendors, distributors and other strategic partners who enable your business.
The relationship dimension is made of Customers, Board of Directors, Workforce and External partner domains.

2.2 The Leadership dimension:
Those domains govern how to shape an agile organization. In this context, leadership is a mindset with associated capabilities and techniques. Everyone can be a leader, whether they have institutional authority or not. Finally, it is agile leaders (who may not be managers) who orchestrate and guide the organization towards business agility. Leaders who help align the organization to a single purpose, enabling individuals and teams, and taking corrective action where needed.
The leadership dimension is made of People Management, One Team and Strategic Agility.

2.3 The individual dimension:
Those domains address the Individual and how to deliver work promoting experimentation and learning from failure, delivering high-quality work, regardless of function or subject matter, in an agile and empowered way.

The individual dimension is made of Growth Mindset, Craft Excellence and Ownership & Accountability.

2.4 The operations dimension:
This defines how an agile organization works thanks to the relationships between individuals, teams & divisions encompassing an individual value stream as the combination of discrete activities that are undertaken by teams and projects. Agility at scales enables the organization to operate with agility globally.
The operations dimension is made of Structural Agility, Process Agility and Enterprise Agility.

2.5 The model as path diagram:
The dimensions and domains established by the Business Agility Institute may be modelled with a 2nd order constructs reflected by the observable items defined in their survey.

Figure 2. Business Agility model elaborated by the author
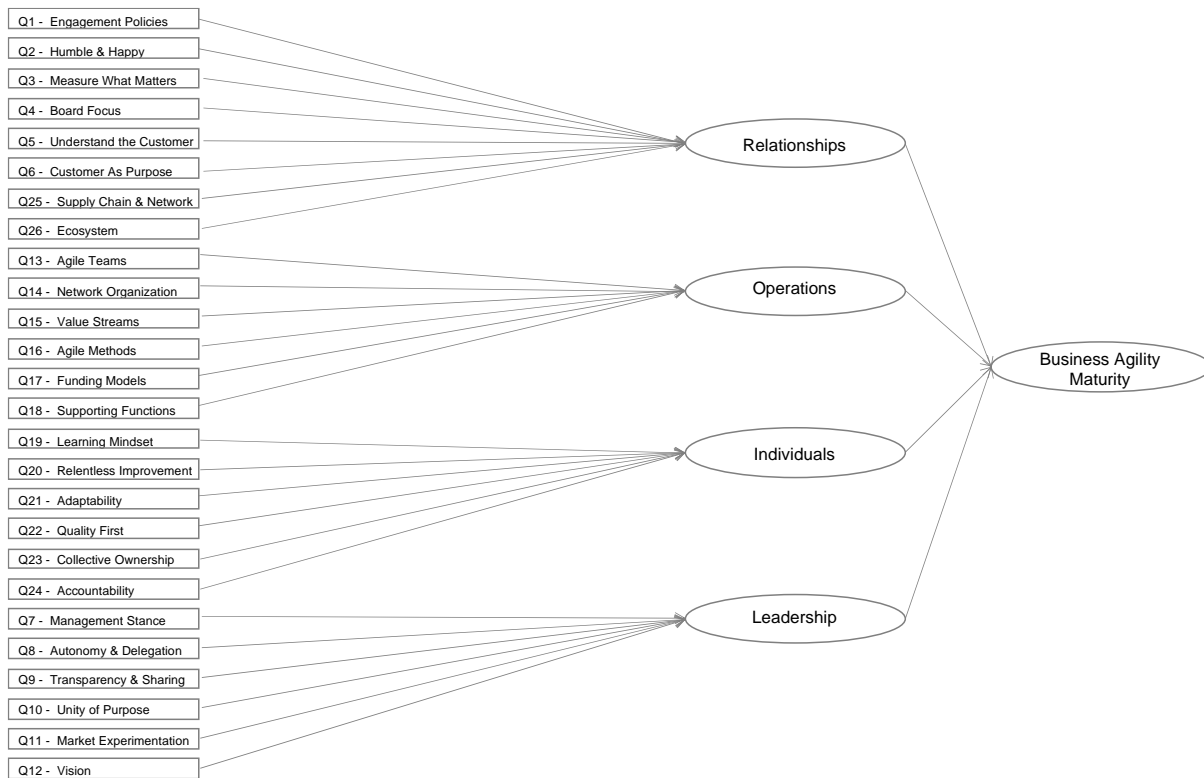
In essence, the purpose of the study is to confirm the goodness of fit of this very model and confirm the factors that really matters to reflect the Business Agility Maturity of an organization. The domains suggested in the Business Agility Institute approach have been omitted on purpose to have a significant number of items reflected in each construct (Gaskin, 2022).

3. Methodology

The applied research based on explanatory methods summarized in this paper aimed to confirm the factors that matter in assessing the business agility maturity of an organization leveraging deductive analysis to confirm the goodness of Business Agility Institute's model using the observations gathered during the yearly global assessment run by the organization over the last 3 years. The analysis is therefore based on quantitative secondary data (Likert scale that range from 0 to 10) collected by the Business Agility Institute. The categorical and qualitative information have been let aside for future research.

The method used to analyze the factors that contributes to business agility maturity is based on Structured Equation Modeling (SEM):

- is a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables (Hoyle, 1995).

- is a methodology for representing, estimating, and testing a theoretical network of (mostly) linear relations between variables (Rigdon, 1998).

- tests hypothesized patterns of directional and nondirectional relationships among a set of observed and latent variables (MacCallum & Austin, 2000).

The purpose of the modelis to account for variation and covariation of the measured variables (MVs). Path analysis tests models and relationships among MVs. Confirmatory factor analysis tests models of relationships between latent variables (LVs or common factors) and MVs which are indicators of common factors.

The Confirmatory Factor Analysis (CFA) has been carried forward using R and package Latent Variable Analysis Lavaan (version 0.6-11) while the data preparation has been performed using IBM SPSS (version 28.0.1.1)

During the preparation of the data, the missing observations have been substituted using aseriesmean approach. Over a total of 28'704 values, 712 were missing and have been therefore replaced. All the observations have been controlled for normal distribution as prerequisite for CFA with a positive outcome. To check for the presence of multivariate outliers, a comparison of the respective Mahalanobis Distances to a chi-square distribution with the same degrees of freedom has been carried forward leading to the exclusion of 87 observations resulting as multivariate outliers.

4. Observations used in the research

The secondary data have been gathered with a questionnaire that collect the perceptions of the respondents on the maturity achieved by their respective organization. Further to the questions reported below, a description of the maturity levels is provided for each of the items to enforce consistency of the observations.

Table 1: questionnaire used to collect maturity observations

Id	Questions
Q1	How would you rate your organization's Engagement Policies maturity?
Q2	How would you rate your organization's Humble & Happy maturity?
Q3	How would you rate your organization's Measure What Matters maturity?
Q4	How would you rate your organization's Board Focus maturity?
Q5	How would you rate your organization's Understand the Customer maturity?
Q6	How would you rate your organization's Customer As Purpose maturity?
Q7	How would you rate your organization's Management Stance maturity?
Q8	How would you rate your organization's Autonomy & Delegation maturity?
Q9	How would you rate your organization's Transparency & Sharing maturity?
Q10	How would you rate your organization's Unity of Purpose maturity?
Q11	How would you rate your organization's Market Experimentation maturity?
Q12	How would you rate your organization's Vision maturity?
Q13	How would you rate your organization's Agile Teams maturity?
Q14	How would you rate your organization's Network Organization maturity?
Q15	How would you rate your organization's Value Streams maturity?
Q16	How would you rate your organization's Agile Methods maturity?
Q17	How would you rate your organization's Funding Models maturity?
Q18	How would you rate your organization's Supporting Functions maturity?
Q19	How would you rate your organization's Learning Mindset maturity?
Q20	How would you rate your organization's Relentless Improvement maturity?
Q21	How would you rate your organization's Adaptability maturity?
Q22	How would you rate your organization's Quality First maturity?
Q23	How would you rate your organization's Collective Ownership maturity?
Q24	How would you rate your organization's Accountability maturity?
Q25	How would you rate your organization's Supply Chain & Network maturity?
Q26	How would you rate your organization's Ecosystem maturity?

4.1 Observations' analysis and demographic

Out of 1104 observations coming from the global assessment survey from 2019, 2020 and 2021, 1'017 have been used to perform the Confirmatory Factor Analysis and correspond to the following demographics:

Table 2: distribution of observations by survey's year

Year	Frequency	Percent
2019	345	33.9
2020	402	39.5
2021	270	26.5
Total	1017	100.0

Table 3: distribution of observations respondents' sectors

Sectors	Frequency	Percent
Aerospace	9	0.9
Agriculture	6	0.6
Chemical & Pharmaceutical	6	0.6
Computer	22	2.2
Construction	12	1.2
Consulting	261	25.7
Defense	3	0.3
Education	25	2.5
Energy	35	3.4
Entertainment	13	1.3
Financial services & Insurance	171	16.8
Food	11	1.1
Government	6	0.6
Health care	33	3.2
Sectors	Frequency	Percent
Hospitality	4	0.4
Information Technology	161	15.8
Internet & Publishing	9	0.9
Manufacturing & Automotive	41	4.0
Mass Media	5	0.5
Mining	5	0.5
NFP & Association	7	0.7
Other	67	6.6
Retail	8	0.8
Software Vendor	41	4.0
Telecommunications	36	3.5
Transport	16	1.6
Water	4	0.4
Total	1017	100.0

Table 4: distribution of observations by respondents' regions

Regions	Frequency	Percent
Africa	31	3.0
Asia	127	12.5
Central America	11	1.1
Eastern Europe	41	4.0
Europe	173	17.0
Middle East	17	1.7
Regions	Frequency	Percent
North America	178	17.5
Oceania	92	9.0
South America	85	8.4
The Caribbean	1	0.1
Worldwide	261	25.7
Total	1017	100.0

Table 5: distribution of observations by respondents' company size

Company Size	Frequency	Percent
0 - 10 employees	119	11.7
11 - 50 employees	95	9.3
51 - 200 employees	120	11.8
201 - 1;000 employees	130	12.8
1'001 – 5'000 employees	184	18.1
5'001 – 10'000 employees	62	6.1
10'001+ employees	307	30.2
Total	1017	100.0

Table 6: distribution of observations by respondents' roles

Roles	Frequency	Percent
C-Level	141	10.4
Individual Contributor	192	14.2
LOB/Division Leader	88	6.6
Manager	264	18.2
Senior Executive	135	9.4
Supplier/Partner/Consultant	197	14.7
Total	1017	100.0

4.2 Normal distribution analysis

The P-P Plot analysis performed in SPSS confirmed the normal distribution of the answers provided by the respondents for the 26 items with a linear regression of the dots y=x.

A Skewness and Kurtosis analysis has also been carried forward with the following results:

Table 7: Skewness and Kurtosis analysis for the 26 observations

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
Skewness	0.25	0.29	0.25	0.00	-0.21	0.26	0.37	0.06	0.44	0.23	0.31	0.26	0.33
Std. Error of Skew.	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Kurtosis	-0.48	-0.87	-0.68	-0.73	-0.90	-0.56	-0.52	-0.66	-0.43	-0.68	-0.79	-0.43	-0.59
Std. Error of Kurtosis	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26
Skewness	0.35	0.19	0.41	0.33	0.49	0.44	0.44	0.46	0.41	0.31	0.29	0.29	0.10
Std. Error of Skew.	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Kurtosis	-0.57	-0.59	-0.48	-0.56	-0.36	-0.55	-0.48	-0.70	-0.66	-0.50	-0.71	-0.49	-0.41
Std. Error of Kurtosis	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15

The values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010). Data is normal if skewness is between -2 to +2(Hair, Black, Babin, & Anderson, 2010).

The normal distribution of the observation opens the door to the Confirmatory Factor Analysis(Treiblmaier & Filzmoser, 2010).

5. Model analysis
5.1 Statistical significance of the observations
An initial confirmatory factor analysis has been carried forward based on Business Agility model for an initial check to establish the statistical significance based on reported p-values and standardized loading of the gathered observations leading to the following results.

Table 8: Initial path analysis based on Business Agility Institute model

	Item	Estimate	Std. Err	z-value	P(>|z|)	Std.lv	Std. all
Relationships	Q5	1.603	0.065	24.678	0.000	1.603	0.688
	Q6	1.850	0.059	31.410	0.000	1.850	0.816
	Q1	1.608	0.057	28.091	0.000	1.608	0.756
	Q2	1.954	0.062	31.301	0.000	1.954	0.814
	Q4	1.767	0.070	25.390	0.000	1.767	0.703
	Q3	1.688	0.059	28.374	0.000	1.688	0.761
	Q25	1.839	0.060	30.816	0.000	1.839	0.806
	Q26	1.747	0.055	31.630	0.000	1.747	0.819
Operations	Q17	1.867	0.057	32.836	0.000	1.867	0.838
	Q18	1.874	0.059	32.012	0.000	1.874	0.825
	Q13	1.844	0.059	30.995	0.000	1.844	0.807
	Q14	1.901	0.058	32.537	0.000	1.901	0.833
	Q15	1.830	0.057	32.041	0.000	1.830	0.825
	Q16	1.894	0.056	33.643	0.000	1.894	0.851
Individuals	Q21	2.144	0.060	35.763	0.000	2.144	0.883
	Q22	2.066	0.060	34.568	0.000	2.066	0.865
	Q19	1.967	0.062	31.620	0.000	1.967	0.817
	Q20	1.999	0.059	33.971	0.000	1.999	0.856
	Q23	1.912	0.054	35.290	0.000	1.912	0.876
	Q24	1.994	0.060	32.974	0.000	1.994	0.840
Leadership	Q7	1.774	0.066	26.769	0.000	1.774	0.729
	Q8	1.773	0.061	29.124	0.000	1.773	0.774
	Q9	1.892	0.058	32.753	0.000	1.892	0.837
	Q10	2.000	0.059	34.017	0.000	2.000	0.857
	Q11	2.032	0.062	32.827	0.000	2.032	0.838
	Q12	1.816	0.056	32.463	0.000	1.816	0.832

The outcome of this initial factor analysis indicates that all the observations are statistically significant as all the p-value < 0.05 and standardized loading are ranging from 0.688 on Q5 to 0.883 on Q23.

Because the exclusion of Q5 does not provide any improvement to the composite reliability, Q5 has been kept into the model.

5.2 Internal consistency of reviewed model
The internal consistency of the reviewed model has been measured through the Cronbach's alpha test.This test provides information on multiple-questions Likert scale surveys reliability.

Table 9: Cronbach's Alpha test performed on observations

	Alpha	Bootstrap 95% CI (1000 samples)	
		2.50%	97.50%
Cronbach's Alpha tests	0.973	0.971	0.976

The alpha value >= 0.9 must be considered as excellent (George & Mallery, 2003)and confirm the reliability of the questionnaire while the low standard deviation observed with bootstrapped 95% confidence interval is outstanding thanks to the large sample used in the study.

5.3 Convergent and discriminant validity
The Average Variance Extracted (AVE) provides us with the amount of variance that is captured by the constructs in relation to the amount of variance due to measurement error and together with the Composite Reliability (CR) that provides us with internal consistency in scale item and it's an "indicator of the shared variance among the observed variables used as an indicator of a latent construct"(Fornell & Larcker, 1981). AVE and CR provide indications on convergent validity. Discriminant validity refers to the correlative distance between factors and is established by comparing the square root of AVE with any correlation with other factors. The discriminant validity is obtained when the positive value of AVE square root is greater than any correlation.

Table 10: Average variance extracted (AVE), Composite reliability (CR), square root of AVE and correlation between constructs

Factors	AVE	CR	Relationship	Organization	Individuals	Leadership
Relationship	0.609	0.784	0.780			
Organization	0.689	0.816	0.931	0.830		
Individuals	0.733	0.846	0.932	0.970	0.856	
Leadership	0.658	0.793	0.969	0.954	0.945	0.811

Convergent validity is confirmed by AVE value >= 0.5 and CR >= 0.7 (Fornell & Larcker, 1981).

Because the correlation between the factors is greater than the square root of AVE (in bold in the table x), the model does respond to the Forell-Larckerdiscriminant validity criterion.

5.4 Coefficient of determination R2
The coefficient of determination explains the variations in the dependent variable accounted for by the independent variable.

Table 11: R2, coefficient of determination

Items	R2	Items	R2
Q6	0.671**	Q22	0.751***
Q2	0.663**	Q19	0.668**
Q25	0.655**	Q20	0.730**
Q26	0.663**	Q23	0.766***
Q5	0.469*	Q24	0.709**
Q4	0.494*	Q7	0.530**
Q1	0.576**	Q8	0.590**
Q3	0.576**	Q9	0.701**
Q17	0.701**	Q10	0.739**
Q18	0.676**	Q11	0.709**
Q13	0.654**	Q12	0.689**
Q14	0.698**	Relationships	0.925
Q15	0.682**	Operations	0.959
Q16	0.723**	Individuals	0.947
Q21	0.778***	Leadership	0.964

Value may be interpreted as R2 < 0.25 very weak, 0.25 <= R2 < 0.5 weak (*), 0.5 <= R2 < 0.75 moderate (**) and 0.75 <= R2 substantial (***) (Hair, Ringle, & Sarstedt, 2O11).

The coefficients of determination are on average moderate, Q4 (Board focus maturity) and Q5 (Understand the customer) exposed a weak value while Q21(Adaptability), Q22(Quality first) and Q23 (Collective ownership) are substantial.

5.5 Model fit

Table 12: model fit principal measures

Fit measures	Value
Chi-square	1540
Degrees of freedom(df)	295
Chi-square/df	5.2
P-value (Chi-square)	0.000
Comparative Fit Index (CFI)	0.950
Tucker-Lewis Index (TLI)	0.945
Root Mean Square Error of Approximation (RMSEA)	0.064
P-value (RMSEA)	0.000
Standardized Root Mean Square Residual (SRMR)	0.028

Although there is no consensus regarding an acceptable ratio for the Chi-square /df statistic, with a ratio of 5.2, we may be slightly outside the recommendations of maximum 5.0 (Wheaton, Muthen, Alwin, & Summers, 1977).

The CFI statistic assumes that all latent variables are uncorrelated (null/independence model) and compares the sample covariance matrix with this null model. The value of CFI $\geq$ 0.95 is presently recognized as indicative of good fit(Hu & Bentler, 1999).

For the TLI statistic, also known as Non-Normed Fit Index (NNFI), a minimum value of 0.9 is recommended (Byrne, 1994) even if a more recent publication recommend a value $>=$ 0.95 (Schumacker & Lomax, 2004). TLI is above Byrne suggestion but slightly below the more recent one.

The Root Mean Square Error of Approximation (RMSEA) is a parsimony-adjusted index. RMSEA. A value of <0.05 indicates a close fit, and a value of<0.08 suggests a reasonable model–data fit(Browne & Cudeck, 1993) revealing for this model a fair fit.

Finally, the SRMR is satisfactory as expected to be < 0.08 (Hu & Bentler, 1999).

5.6 Modeling the factors that reflects the Business Agility maturity
In line with the analysis, we obtain a model with the factors that matter to reflect the Business Agility maturity.
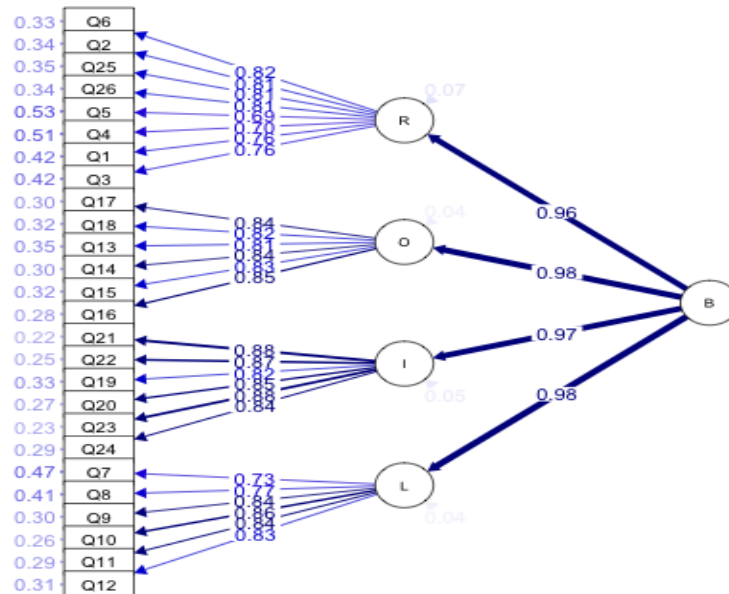

Figure 3: Path diagram with standardized factors loading (R using Lavaan 0.6-11, semPlot 1.1.5)

6. Discussion

The Confirmatory Factor Analysis provide us with positive results that confirm the factors that reflects the Business Agility Maturity, and all the fit indexes provide fair fit indication. The missing discriminant validity due to the high correlation between the latent variables is calling for further analysis and discussion as we high correlation may not invalidate measurement and hypothesis (Rönkkö & Cho, 2022). The latent variables suggested by the model are reflecting elements of different nature:

- Individual dimension reflects characteristics of the singles
- Relationship dimension reflects intersubjective characteristics
- Operation dimension reflects the production patterns
- Leadership dimension reflects the management stance

Despite being of different nature and reflecting different characteristics, those characteristics are interconnected as organizations are consistent system, each dimension being balanced and serving the others. The observations have been gathered over a large number of organizations and therefore the potential unbalanced responses set is hardly visible through this analysis.

Willing to rank the factors by their significance using R2 value and standardized loading, we may consider the following order:

Table13: Factors by importance growing to reflect Business Agility maturity

Id	Item	R2
Q21	Adaptability	0.778
Q23	Collective Ownership	0.766
Q22	Quality First	0.751
Q10	Unity of Purpose	0.739
Q20	Relentless Improvement	0.730
Q16	Agile Methods	0.723
Q11	Market Experimentation	0.709
Q24	Accountability	0.709
Q9	Transparency & Sharing	0.701
Q17	Funding Models	0.701
Q14	Network Organization	0.698
Q12	Vision	0.689
Q15	Value Streams	0.682
Id	Item	R2
Q18	Supporting Functions	0.676
Q6	Customer As Purpose	0.671
Q19	Learning Mindset	0.668
Q2	Humble & Happy	0.663
Q26	Ecosystem	0.663
Q25	Supply Chain & Network	0.655
Q13	Agile Teams	0.654
Q8	Autonomy & Delegation	0.590
Q1	Engagement Policies	0.576
Q3	Measure What Matters	0.576
Q7	Management Stance	0.530
Q4	Board Focus	0.494
Q5	Understand the Customer	0.469

In this ranking, the lower the R2, the higher the influence of other factors, potentially not identified by the questionnaire.

7. Conclusions

The model suggested by the Business Agility Institute tend to be appropriate to measure the Business Agility of an organization considering all the finding of the Confirmatory Factor Analysis. The poor discriminant factor analysis results from the highest correlation between the first order constructs. All the observable variables are reflected in the constructs of first order, that are reflected in the Business Agility Maturity.

The validation of the factors that matters may be useful for organizational development practice taking into consideration what matters to develop the ability of an organization to embrace agility. Further to this, the model may be used for further research to explore the relationship between the Business Agility and other subject such as:

- Well-being
- Organizational stress
- Global performance
- Collective intelligence

Further to this, it may be interesting to include categorical information available in the data set to explore the influence of company size, sector, role of the respondent on the Business Agility.

Bibliography

Barroca, L., Dingsøyr, T., & Mikalsen, M. (2019). Agile Transformation: A Summary and Research Agenda from the First International Workshop.

Bronlet, X. (2021). Systemic Agility, a gauge to measure organizatin adaptation to Volatile, Uncertain, Complex and Ambiguous environment. EBOR. Varsovia.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long, Testing structural equation models (pp. 136–162). Newbury Park: Sage.

Byrne, B. M. (1994). Structural equation modeling with EQS and EQS/Windows. Thousand Oaks, US: Sage publication.

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research, 39-50.

Gallager, K., & Worell, J. (2007). Organizing IT to promote agility. Information Technology and Management, 71-88.

Gaskin, J. (2022, June 17). SEM Guidelines. From StatWiki: https://statwiki.gaskination.com/index.php/Guidelines

George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon.

Ghosh, S., & Barman, A. (2021). AGILITY IN BUSINESS PRACTICE FOR SUSTAINABILITY-EXAMINING COMPONENTS COMMONALITY. The George Washington law review, 173-184.

Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis (7th ed.). Upper Saddle River, US NJ: Pearson Educational International.

Hair, J., Ringle, C. M., & Sarstedt, M. (2O11). PLS-SEM: Indeed a silver bullet. Journal of Marketing theory and Practice, 139-152.

Hu, L., & Bentler, P. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. Structural Equation Modeling, 1-55.

Juneja, C., Kothari, H., & Rai, R. S. (2018). Business Agility: A Systematic Review of Literature and Design Oriented Research Synthesis. Journal of Advances and Scholarly Researches in Allied Education, 198 - 218.

Oosterhout, M. (2010). Business Agility and Information Technology in Service Organizations. Erasmus University Rotterdam: ERIM PhD Series in Research in Management.

Rönkkö, M., & Cho, E. (2022). An Updated Guideline for Assessing Discriminant Validity. Organizational Research Methods, 6–47.

Schumacker, R. E., & Lomax, R. G. (2004). A beginner's guide to structural equation modeling. Mahwah, US NJ: Lawrence Erlbaum Associates.

Treiblmaier, H., & Filzmoser, P. (2010). Exploratory factor analysis revisited: How robust methods support the detection of hidden multivariate data structures in IS research. Information & management, 197-207.

Westerman, G., Weill, P., & McDonald, M. (2006). Business Agility and ITS Capabilities. CISR Research Briefings.

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. (1977). Assessing Reliability and Stability in Panel Models. Sociological Methodology, 84-136.