

Overview of the Reliability and Validity of the Denison Organizational Culture Survey

Instrument Development

The content of the Denison Organizational Culture Survey (DOCS) was developed by Daniel Denison and William Neale on the basis of 15 years of research and practice in organizational settings. The DOCS items were written to tap those aspects of culture that had demonstrated links to organizational effectiveness, such as having a shared sense of responsibility, possessing consistent systems and procedures, being responsive to the marketplace, and having a clear purpose and direction for the organization (e.g., Denison & Mishra, 1995). The DOCS consists of 4 culture traits: involvement, consistency, adaptability, and mission. Each of these traits consists of 3 indexes that are themselves made up of 5 items (60 total items).

Reliability and Validity Evidence

The scales of the DOCS have been examined using both reliability analysis and confirmatory factor analysis. Coefficient alphas range from .70 to .86 for the 12 indexes and from .87 to .92 for the 4 traits, indicating scientifically acceptable levels of consistency within scales. Factor analytic results support the hypothesized structure of the DOCS (60 items making up 12 indexes, which themselves make up 4 culture traits).

A number of analyses have found relationships between scores on the DOCS and measures of organizational effectiveness. For instance, correlations between 160 organizations' culture scores and respondents' mean ratings of their organizations' sales growth, market share, profitability, quality of products and services, and new product development ranged from .10 to .50 (mean $r=.32$).

Other analyses have examined correlations between culture indexes and separate measures of organizational effectiveness, such as customer satisfaction and sales growth. These results have been presented or submitted for presentation at scientific conferences (e.g., Lawry, 2002).

Correlations between culture and organizational effectiveness measures:

- Culture indexes and customer satisfaction
 - Ranged from .10 to .21 (mean $r=.16$) at 338 automotive dealerships
 - Ranged from .21 to .31 (mean $r=.26$) at 90 grocery stores
 - Ranged from .29 to .51 (mean $r=.45$) at 31 markets of a construction company
- Culture indexes and sales growth
 - Ranged from .19 to .24 (mean $r=.22$) at 151 automotive dealerships
- Culture indexes and ROI
 - Ranged from .23 to .36 (mean $r=.29$) at 31 markets of a construction company
- Culture indexes and gross margin
 - Ranged from .01 to .33 (mean $r=.18$) at 31 markets of a construction company



Bringing Organizational Culture and Leadership to the Bottom Line.

These results indicate that an organization's culture, as measured by the Denison Organizational Culture Survey, is directly related to its performance. Overall, the results of these analyses offer support for the psychometric integrity of the Denison Organizational Culture Survey as well as the survey's link to organizational effectiveness.

References

Denison, D.R. & Mishra, A.K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204-223.

Lawry, K. (2002). The Pulte story: How understanding organizational culture contributed to corporate success. Presented at the 17th Annual Conference of the Society for Industrial-Organizational Psychology, Toronto, ON.



Reliability of the DOCS Indexes and Trait Scales

Internal Consistency Estimates for a sample of 35,474 respondents

Index / Trait	# of Items	α
Involvement	15	.89
Empowerment	5	.76
Team Orientation	5	.82
Capability Development	5	.70
Consistency	15	.88
Core Values	5	.71
Agreement	5	.74
Coordination & Integration	5	.78
Adaptability	15	.87
Creating Change	5	.76
Customer Focus	5	.74
Organizational Learning	5	.74
Mission	15	.92
Strategic Direction & Intent	5	.86
Goals & Objectives	5	.80
Vision	5	.79

As this table indicates, the 12 indexes have internal consistencies ranging from .70 to .86 and the 4 traits have internal consistencies ranging from .87 to .92. These results meet scientific standards for acceptable reliability.

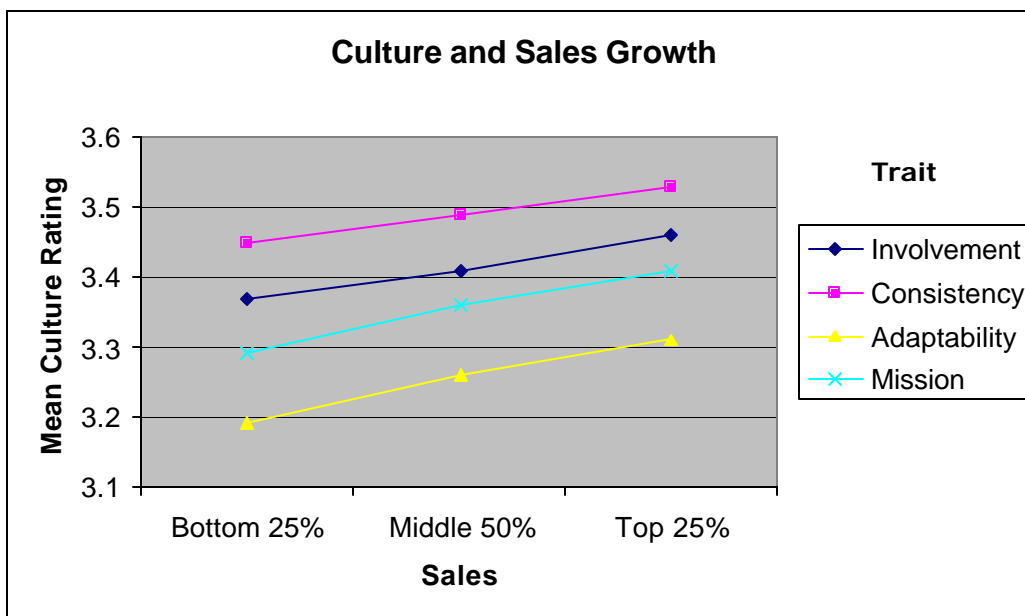
Culture and Sales Growth at a Grocery Store Chain (N=90)

Correlations Between Culture Scores and Sales Growth

Culture Index or Trait	r
Involvement	.28**
Empowerment	.16
Team Orientation	.23*
Capability Development	.32**
Consistency	.27**
Core Values	.17
Agreement	.23*
Coordination & Integration	.31**
Adaptability	.33**
Creating Change	.37**
Customer Focus	.32**
Organizational Learning	.24*
Mission	.30**
Strategic Direction & Intent	.28**
Goals & Objectives	.25*
Vision	.32**

N=90. * $p < .05$. ** $p < .01$.

Taken together, the 12 culture indexes explained 30% of the variance in sales growth ($R = .544$, $F[12,89] = 2.70$, $p < .01$).



Culture, Customer Satisfaction, and Sales Growth at Automotive Dealerships

Correlations Between Perceptions of Organizational Culture, Customer Satisfaction Ratings and Sales Growth at Automotive Dealerships

Culture Indexes	Customer Satisfaction	Sales Growth
<i>N</i> _(dealerships)	338	151
Empowerment	.21*	.24*
Capability Development	.15*	.23*
Team Building	.15*	.18*
Core Values	.15*	.24*
Agreement	.16*	.22*
Coordination & Integration	.18*	.21*
Creating Change	.10*	.22*
Customer Focus	.19*	.19*
Organizational Learning	.13*	.20*
Strategic Direction & Intent	.15*	.23*
Goals and Objectives	.17*	.23*
Vision	.18*	.22*

* $p < .05$.

All culture indexes significantly correlated with customer satisfaction and sales growth. Empowerment and Customer Focus were the highest correlates of customer satisfaction whereas Empowerment, Core Values, Strategic Direction & Intent, and Goals and Objectives were the highest correlates of sales growth.

Culture, ROI, Gross Margin, and Customer Satisfaction at 31 Divisions of a Construction Company

Correlations Between Culture Scores and Effectiveness Measures

Index / Trait	Effectiveness		
	ROI	Gross margin	Customer satisfaction
Involvement	.34	.22	.48*
Empowerment	.36*	.26	.44*
Team Orientation	.32	.17	.50*
Capability Development	.34	.23	.46*
Consistency	.30	.13	.49*
Core Values	.27	.01	.44*
Agreement	.33	.18	.47*
Coordination & Integration	.25	.16	.47*
Adaptability	.28	.30	.49*
Creating Change	.24	.33	.44*
Customer Focus	.24	.25	.46*
Organizational Learning	.33	.28	.51*
Mission	.27	.09	.41*
Strategic Direction & Intent	.32	.14	.44*
Goals & Objectives	.26	.04	.29
Vision	.23	.09	.48*

N=31. * $p < .05$.

These results show a direct relationship between scores on the DOCS indexes and traits and measures of effectiveness, particularly customer satisfaction. Culture scores were not as strongly linked to gross margin as they were to ROI and customer satisfaction (see figures below).

