

## Evaluation of Test-Retest Reliability:

### Culture Index

To determine if the Culture Index has temporal stability, 112 applicants for positions at a variety of companies located across the continental United States completed the Culture Index on two occasions. The first time they completed the personality inventory, they did so as one aspect of the job application process. They were asked to complete the measure a second time for research purposes. A majority of applicants completed the Culture Index the second time on the same day as the first administration. For other applicants the time interval between tests ranged from one to sixteen days.

### Statistical Results and Findings

The means and standard deviations were calculated for each scale for both testings. These results can be seen below.

Scale	A	B	C	D	L	I	EU
Mean: First Administration	8.67	12.13	7.17	13.26	3.08	8.88	41.23
Standard Deviation	4.80	5.65	4.40	7.03	3.16	5.97	17.86
Mean: Second Administration	9.04	12.39	7.56	13.47	3.04	9.59	42.47
Standard Deviation	4.95	5.74	4.52	7.52	3.01	6.23	18.83

As can be seen from these results, the scores on all the scales were highly similar on both testing occasions. In no case did the mean difference approach statistical significance.

To determine the test-retest reliability of the scales on the Culture Index, Pearson product-moment correlation coefficients were calculated for each scale for the two test administrations. The results of this statistical analysis can be seen below.

Scale	A	B	C	D	L	I	EU
Reliability Coefficient	0.95	0.95	0.94	0.96	0.86	0.94	0.96

These correlation coefficients are all of substantial magnitude indicating considerable stability of test results over time. The only correlation to fall below .90 was on the Logic (L) scale and this statistic, at 0.86, was only somewhat smaller. An examination of the distribution of scores on the Logic scale reveals that it is highly skewed. While there are 33 items on this scale, the mean score was only slightly above three. This means that there was relatively little variability in scores on this scale (as reflected in the standard deviations) so

it is not surprising that the correlation coefficient would be smaller than on the other scales whose distributions more closely approximated normal curves.

## Conclusions

The results of this study indicate a high degree of temporal stability. One issue that would be useful to address in subsequent research would be the time interval between test administrations. It would be ideal to have all test respondents have an interval of between seven and fourteen days. As stated previously, a majority of the test respondents in this study completed the second testing on the same day as the first. Although caution must be exercised in interpreting these results, it does provide good reason to believe that there is relatively little error variance that results from time sampling.

These results regarding test-retest reliability, taken together with data previously collected regarding internal consistency, are quite encouraging. As previously reported the coefficient alphas for the Culture Index were as follows:

Scale	A	B	C	D	L	I	EU
Coefficient Alpha	0.87	0.87	0.82	0.87	0.89	0.89	0.94

These two sets of data provide good evidence of the reliability of the Culture Index. It is also important to note that there is no information available that is not consistent with the above reports. While it is always useful to collect additional information, it would appear that the reliability of the Culture Index has been established.