Results of the validation study undertaken for Integration and Young & Rubicam

Prepared

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The purpose of this report is to document the outcome of an independent validation of Integration's claim that the Brand Experience Score (BES) derived from the data collected for their Market ContactAudit™ is a robust and significant predictor of a brand's market share. We report below the findings from our analyses.

Data

Integration provided us with 5 sets of data covering the product categories of credit cards, chocolates, coffee, and diapers. For the latter there were two sets of data; one covering brand awareness (BAR) data and the other without BAR.

The Market ContactAudit™ data provided by Integration, contained raw measures of the informativeness, attractiveness, and the power of the various contacts appropriate for the category. Additionally it contained information about the Contact Clout Factor or CCF, which is a score for each contact that is derived from the measured informativeness, attractiveness, and power for that contact. We also had information on the Brand Experience Score or BES, which is also derived from the ratings and is a brand level indicator of the perceived weight across all contacts for a given brand, relative to competition. Aside from the Market ContactAudit™ data, we were also provided with an assessment of market shares for the various brands in the category. According to Integration these were assessed independently by a third party and provided to them by their clients.

Analyses and Results

The key task for us was to examine whether the Market ContactAudit™ data predicted an independent measure of brand performance in the marketplace, defined by the brand's market share.

As a first cut, the bivariate correlations were computed between market share and BES within each of the categories. As can be seen from table 1, the correlations were all large and significant at the .05 alpha level, the level primarily utilized for testing for statistical significance in scientific research. The smallest of the correlations was, .80 for chocolates. Thus the correlations explained 64% of the variance in the data, or greater.

Having established that the correlations were large and significant, the next step was to see if the size of the correlations was sensitive to the product category under investigation. Stated another way, we wanted to understand if we could, in a statistical sense, say whether the correlations that we were likely to observe in other product categories were also likely to be similar in size.

To do this, a regression equation was estimated using all the data from across the five product categories taken together. Market share served as the dependent variable, and the three terms, BES, a product category dummy variable, and the interaction term between BES and product category, served as the key independent variables.

The analyses, reported in table 2 reveals that the BES*product category interaction term is statistically significant at the .05 alpha level. This indicates that the relationship between BES and market share is not the same across product categories.

Aside from the main analyses reported above, we examined the relationship between the raw measures of contact efficacy: informativeness, attractiveness, and power, and the CCF score. In the model, used for the Market ContactAudit™, raw scores are converted to CCF using a proprietary transformation that we are not privy to. We used a simple linear model to explore the relationship between the contact efficacy measures and CCF. The estimated linear regression model had CCF as the dependent variable and measures of informativeness, attractiveness, and power as the independent variables. As can be seen from table 3, the simple linear regression

model fit the data well, with R^2 being 0.74. Also, as can be seen from the regression coefficients for the predictor variables reported in table 3, the coefficients are all statistically significant. Thus all three of the predictors contribute to the CCF score significantly.

A final set of analyses were conducted wherein we examined whether the contribution of the measured contact efficacy variables, infomativeness, attractiveness, and power, to CCF were similar across product categories, assuming a simple linear additive relationship. The regression model estimated contained CCF as the dependent variable and infomativeness, attractiveness, power, informativeness*product category, attractiveness*product category, and power*product category, as the independent variables. As can be seen from table 4, the analyses revealed that there is variability in the relationship between the contact efficacy scores and CCF as a function of product category as all three interaction terms attained statistical significance at the .05 alpha level. Interestingly, the model explained over 95%; an extremely good fit. Further, the interaction terms, which account for the variability across categories, taken together, account for approximately 20% incremental variance beyond that explained by the main effects of the contact efficacy measures alone.

Conclusions

Taken together, our findings validate Integration's claim that BES is a valid and robust predictor of a brand's market share. All the bivariate correlations were statistically significant and .80 or larger. As well, the raw contact efficacy scores, informativeness, attractiveness, and power are meaningfully related to CCF.

Table 1

Bivariate Correlations between BES and Market Share by Product Category

Credit Cards	Chocolate	Coffee	Diapers Unbranded	Diapers
.93	.80	.89	.84	.83

All correlations significant at $P < .05$ alpha level

Table 2

Relationship between BES and Market Share Across Product Categories

Inependent Variables	*Coefficients*	*Standard Error*	*t Stat*	*P-value*
Intercept	**2,52**	**2,06**	**1,22**	**0,229**
Product Dummy	**-0,95**	**1,07**	**-0,89**	**0,380**
BES	**-3,39**	**20,48**	**-0,17**	**0,870**
Product Dummy x BES	**19,99**	**6,30**	**3,17**	**0,003**

R^2=.62

Table 3

Relationship between Informativeness, Attractiveness, and Power, and Contact Clout Factor (CCF), Collapsed Across Product Categories

Dependent Variables	*Coefficients*	*Standard Error*	*t-Stat*	*P-value*
Intercept	**4.306**	**7.797**	**0.55**	**0.5844**
Informativeness	**-4.053**	**0.594**	**-6.82**	**0.0001**
Attractiveness	**4.452**	**0.593**	**7.50**	**0.0001**
Power	**0.464**	**0.116**	**4.02**	**0.0003**

R^2=0.747

Table 4

Influence of Product Categories (PC) on the Relationship between Contact Efficacy Measures and Contact Clout Factor (CCF)

Dependent Variables	*Coefficients*	*Standard Error*	*t-Stat*	*P-value*
Intercept	**8.140**	**7.219**	**1.13**	**0.2680**
Informativeness	**0.597**	**0.674**	**0.89**	**0.3823**
Attractiveness	**-1.155**	**0.565**	**-2.01**	**0.0495**
Power	**0.937**	**0.122**	**7.68**	**0.0001**
Informativeness*PC	**-0.942**	**0.296**	**-3.18**	**0.0033**
Attractiveness*PC	**1.359**	**0.237**	**5.72**	**0.0001**
Power*PC	**-0.298**	**0.036**	**-4.72**	**0.0001**

R^2=0.967