Effectively Leveraging CLTs as Early Decision-Making Criteria

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ABSTRACT

Within the construct of an Innovation Stage Gate Process, CLTs are often used as screening tests in early stage gates for their cost and timing efficiencies as well as for their ability to provide a more controlled testing environment. Beyond these advantages, can CLT data be effectively leveraged to provide greater assurance that products advancing to a final decision-making HUT are likely to hurdle action standards and be poised for achieving marketplace success?

All too often, valuable R&D resources remain allocated to innovation opportunities that end up falling short in validation HUTs. Research-on-research findings along with a cross-section of data on beverage variants moving from CLT to HUT provide a framework supporting that results generated in CLT tests can be leveraged to inform on whether next step testing is indicated, optimization is warranted, or resources should be channeled elsewhere.

Given the efficiencies and economies of CLTs, it is beneficial to establish a process and criterion for earlier line of sight on potential success.

BACKGROUND

A variety of Sensory & Consumer Science research methods are utilized by R&D in product development. Quantitative Central Location Tests (CLTs) are typically the last step in the innovation process where sensory scientists have influence and impact. Results from such CLTs incorporating the same key measures as validation HUTs (home use tests) were analyzed from the PepsiCo beverage testing database.

MATERIALS and METHODS

Proof of Principle

Research-on-research was conducted with a diet cola produced and stored under controlled conditions. Three different ages of the product were selected based on sensory screening which determined they were perceptually different from one another: younger age, mid-age, older age. These products were tested in a 6-cell branded monadic design with target consumers. Screening criteria was held constant as was the product concept. The 6 monadic test cells were as follows:

CLT Monadic Cells (N=450 per cell)	HUT Monadic Cells (N=450 per cell)
1. Younger Product (A)	4. Younger Product (A)
2. Mid-Age Product (B)	5. Mid-Age Product (B)
3. Older Product (C)	6. Older Product (C)

In the CLT, each respondent was instructed to consume 6-ounces . In the HUT, 2 cans of the same product were given to each respondent to take home and consume prior to a telephone call-back interview.

Stage Gate Testing: CLT to HUT

Historical consumer data from 24 beverage innovation projects representing 46 variants were identified for study. Requirements for inclusion:

CLTs:
Same methodology
Last test before HUT
Full Concept

HUTs:
Same methodology
Decision-making test
Full Concept

Iterative Process: may reflect concept and/or product tweaks

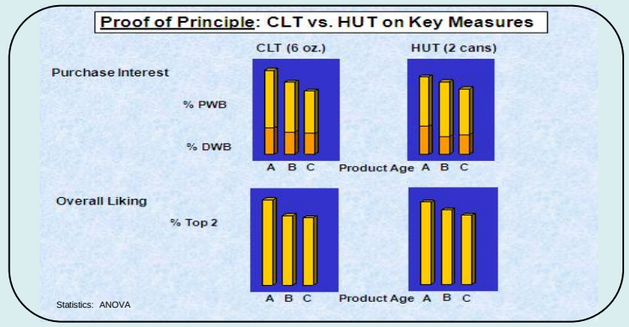
Key performance measures were examined for respondents defined as concept acceptors who are "target consumers" for the proposition.

RESULTS and DISCUSSION

Proof of Principle

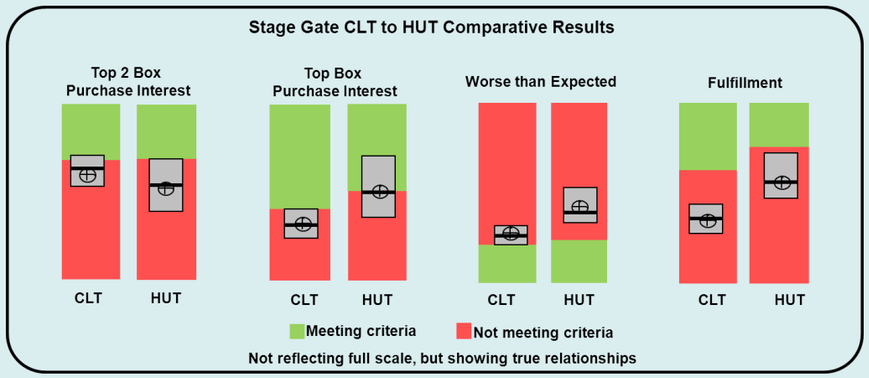
The 6-cell monadic results looking at key performance indicators of Purchase Interest and Overall Liking:

- Confirms similar discrimination by test method
- Supports same decision-making outcome
- Evidences slightly lower performance scores in HUT than in CLT due to method differences



Stage Gate Testing: CLT to HUT

Data from four Key Performance Measures are presented below. The relationship between CLT test scores and HUT test scores show the similarities in results. While absolute hurdle levels differ from CLT to HUT due to methodology, one can see product scores maintain the same relationship to their respective hurdles—largely falling below desired levels for marketplace success.



Statistics: ANOVA, Correlations, and Box Plot Analysis (depicted above)

CONCLUSION

For beverages, monadic CLTs conducted with full concepts among target consumers can be leveraged to inform on whether an initiative is ready for next step HUT testing, needs optimization, or should not move forward. Defining hurdle scores for key performance measures in CLTs and HUTs is required to facilitate comparisons since absolute scores differ based on method.

REFERENCES: 1. PepsiCo PAB R&D research on research library (2005), 2. PepsiCo PAB primary research historical database **ACKNOWLEDGEMENT:** Moji Ogunbiyi