MEMO

Re: Premium Trier Market Segment Presents Best Opportunity
To: Deb Henretta
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Overview: In simulations that forecast the projected revenues of both the Premium and Value Diaper Market, at 90% confidence, the Premium market has a higher probability of meeting $3.6MM. Thus said, when focusing on the Premium Market, mothers that are young (age 20 to 35) and wealthy, and have fewer children and smaller families are the most likely purchasers at the premium price of $0.36.

The Concept Test Sample: A recent survey of 97 mothers who had given birth to preemies at two local hospitals was put together to gauge purchase intentions after trying the Preemie diapers on their babies. All results in this analysis are derived from the results of the survey, and the sample that was used for this survey is representative of all preemie mothers' buying intentions.

Concept Test Measures: Participants were asked whether or not they would purchase diapers at a price of $0.36 (Premium), and a price of $0.27 (Value). Their responses were recorded as "Definitely Would Not Try" = 0.05, "Probably Would Not Try" = 0.25, "Maybe Would Try" = 0.50, "Probably Would Try" = 0.75, and "Definitely Would Try" = 0.95. Based on the participants' answers, they were identified as a Likely Trier or an Unlikely Trier. For both Premium and Value prices, a Likely Trier at that respective price would have answered with a score $>= 0.75$, while a score < 0.75 would indicate that the mother was an Unlikely Trier. Participants' age (*age*), annual household income (*income*), number of other children in the home (*other children*), and family size including the new baby (*family size*) were also recorded.

Concept Test Results: 40% of mothers are considered Likely Triers at both Premium and Value Prices with a margin of error of +/- 10.15%, based on the conservative approximate 95% confidence interval. 20% of mothers would be Likely Triers at the Premium price, while 30% would be Likely Triers at the Value price. 10% of mothers sampled indicated that they would not purchase at either price point.

Conclusions: Upon initial review of the results, it appears that P&G has a larger demand for the Preemie Diapers at the Value price; the number of women interested at that price being 10% greater than the number interested at the Premium price. After further analysis, a simulation, conducted at 90% confidence, revealed that the Premium Market is forecasted to generate over $3.6MM at 82.14% certainty. Whereas the Value

Market is forecasted to only generate that level of revenue at 17.60% certainty, thus concluding the Premium Market as the more lucrative.
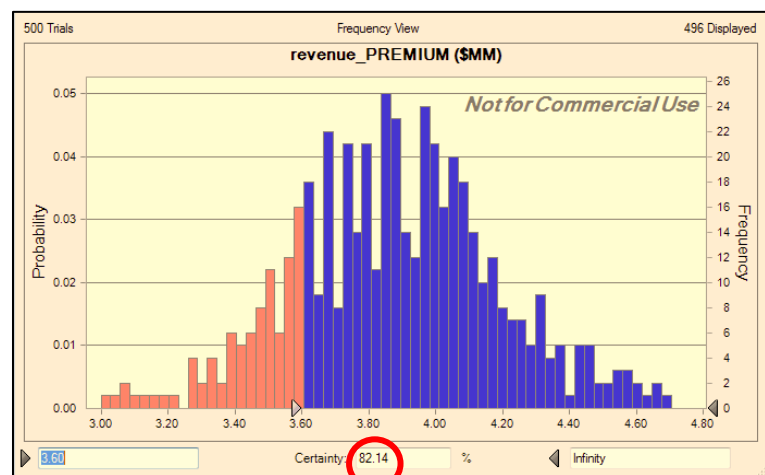
Other Potential Drivers: Considering the additional demographic information, the Premium Diaper Market is also impacted by Income, Age, Number of Other Children, and Family Size, at varying levels of significance. Overall, P&G should target older mothers that are wealthy, have fewer children, and have a smaller family size.

Additional Thoughts: Preemie mothers are interested in trying the diapers at both prices, but our analysis has shown that pricing the diapers at the Premium price will result in a greater probability of surpassing $3.6MM. Although we know which price point provides a more lucrative market, it is essential to do some additional analysis to find exactly which market to target by consulting the demographic information provided. It would be valuable to conduct a multiple regression to see which of the factors (income, age, number of other children, and family size) is most significant in driving a preemie mother's

Likely Triers are Categorized as Young, Wealthy, with Fewer Children, and a Smaller Family Size
Margin of Error Varies per Demographic

decision to buy, as that would allow us to properly market the product. We can assume income is an important factor, but this brings up additional questions such as at what income level and is income correlated to any of the other variables.
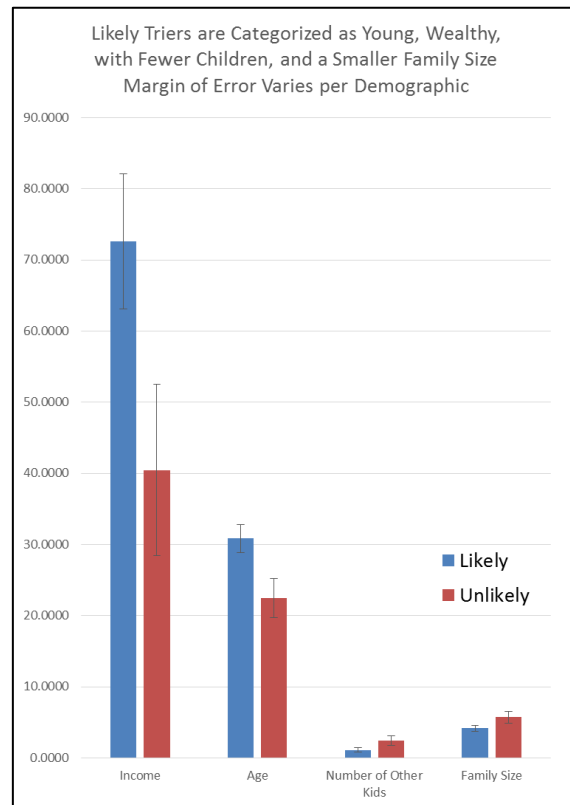
In deciding which factor is the most significant one, we ran a multivariate binary logistic regression of binary response (likely triers or not) on income, age, number of other children and family size using R software. The finding reveals that the number of other children and family size are non-significant factors at significance level of even 0.1. Thus, we dropped these two factors and ran the regression once again. The result shows that age is the most significant factor at 0.01 level and income is significant at 0.05 level. Both factors show good fit at the level of significance 0.01. This regression model is basically predicting the odds of the dependent variable [odds = $p/(1-p)$]. Therefore, we can know the probability of the binary response $p=1/(1+odds)$. From the analysis, we know that age and income are two of the most important factors contributed to the willingness to try Premium Diapers, and thus should be heavily considered when allocating marketing resources.