

# Does the perceived origin of chocolate affect the assessment of its taste?

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## Abstract

This study investigates the relationship between the perceived origins of chocolate and the subjective tastes of chocolate. Sixty Niigata university students participated in this study. The researcher randomly divided the sixty participants into two groups of thirty people. Next, the researcher told group one participants that a piece of Meiji chocolate was Godiva chocolate, and then the participants ate the Meiji chocolate. After that, group one participants then evaluated how tasty the chocolate was on a nine-point Likert scale (1 = very bad taste; 9 = very good taste). Next, the researcher told group two participants that a piece of Meiji chocolate was Meiji chocolate, and then the participants ate the chocolate. After that, group two participants then evaluated how tasty the chocolate was on the same nine-point Likert scale (1 = very bad taste; 9 = very good taste). The results of the experiment show that although the group one participants rated the chocolate as tastier than group two participants, an independent groups *t* test revealed that this difference is not statistically significant. Therefore, this study concludes that the perceived origin of chocolate is unrelated to its taste.

**Keywords:** chocolate, COO, taste, Godiva chocolate, Meiji chocolate

## 1 Introduction

Everyone likes chocolate. Whether it is chocolate ice-cream, chocolate cake, or chocolate sauce, everyone likes chocolate. This, of course, does not mean that everyone likes all chocolate equally. Some kinds of chocolate have better reputations than other kinds of chocolate. For example, in Japan, Belgian chocolates (e.g., Godiva) and American chocolates (e.g., Häagen-Dazs) have an expensive reputation. Some people will claim that Godiva and Häagen-Dazs chocolates taste good because the chocolate really does taste better than other chocolates. However, other people will

claim that Godiva and Häagen-Dazs chocolate does not actually taste better than other chocolates; the reputation of those companies just affects the taste in some way. In other words, the perceived origin of the chocolate affects its taste.

Some research suggests that the perceived origins of food affects its taste. Zachary, Yichao & Sangwon (2016) discovered that the country-of-origin (COO) has a subtle effect on the reputation of a brand name. In a series of experiments, participants were told that the same brand of product originated in different countries, and then participants evaluated how desirable the brand was. Zachary et al. (2016) that COO interacts with brands: when a participant was told that a brand originated in Italy, the brand was positively assessed; however, when a participant was told that a brand originated in Romania, the same brand was negatively assessed. Berry, Mukherjee, Burton & Howlett (2015) found something very similar. Based on the perceived COO, experiment participants were more likely to purchase products. That is, if someone is told that a product is created in a certain country, consumers are more likely to want to buy it (Berry et al., 2015).

The purpose of this study is to examine the relationship between the perceived origins of chocolate and the subjective tastes of chocolate. Because previous research (e.g., Zachary et al., 2016; Berry et al., 2015) suggests that COO has an impact on product reputation and desirability, the researcher expects that chocolate that is perceived to be from Belgium will taste better than chocolate that is perceived to be from Japan. As such, this study will answer the following research question: does the perceived origin of chocolate affect the assessment of its taste? In order to answer this research question, this study proposes the following hypotheses:

H<sub>1</sub>: Chocolate that is perceived as Godiva chocolate (Belgian chocolate) will be rated as better tasting than chocolate that is perceived as Meiji chocolate (Japanese chocolate) even if the chocolate is actually the same.

H<sub>0</sub>: No relationship exists between the perceived origins of chocolate and the subjective tastes of chocolate.

## **2 Methodology**

Experimental research methods were used to answer the research question because it is relatively easy to conduct an experiment into this research question. The sample size was declared to be 60 before any data was gathered, so 60 Niigata University students (N men = 11; N women = 49; Japanese = 45; Non-Japanese = 15) were randomly selected from the student population to

participate in this experiment. The researcher continued to gather data for four weeks until a generalizable sample size was procured. The Japanese students were selected from the author's English, Korean, and engineering classes, students at the FL-SALC, students in the author's archery club, and students at an international house party. Each participant was informed that the author was gathering information on food origins and food taste. Each participant was asked to sign a consent form before the experiment began (see Appendix A). Each participant was randomly assigned to either group one or group two.

In order to assess the extent to which the perceived origins of chocolate affect the subjective tastes of chocolate, the experiment participants were asked to evaluate the taste of a small piece of Meiji chocolate. Participants in group one were led through the following experimental procedure. First, each participant in group one was given a small piece of Meiji chocolate, but was told that the chocolate was Godiva chocolate. In order to convince participants that the Meiji chocolate was Godiva chocolate, the Meiji chocolate was taken out of a Godiva chocolate box. Then, each participant was asked to evaluate the taste of the chocolate on a 9-point Likert scale (1 = very bad taste; 9 = very good taste). The participants were asked to write their answers on the consent form (see Appendix A). Participants in group two, on the other hand, were led through the following experimental procedure. First, each participant in group two was given a small piece of Meiji chocolate, and was told that the chocolate was Meiji chocolate. The chocolate was taken out of a Meiji chocolate box. Then, each participant in group two was asked to evaluate the taste of the chocolate on a 9-point Likert scale (1 = very bad taste; 9 = very good taste). As such, the taste of chocolate is operationalized as a 9-point Likert scale score. The participants were asked to write their answers on the consent form (see Appendix A).

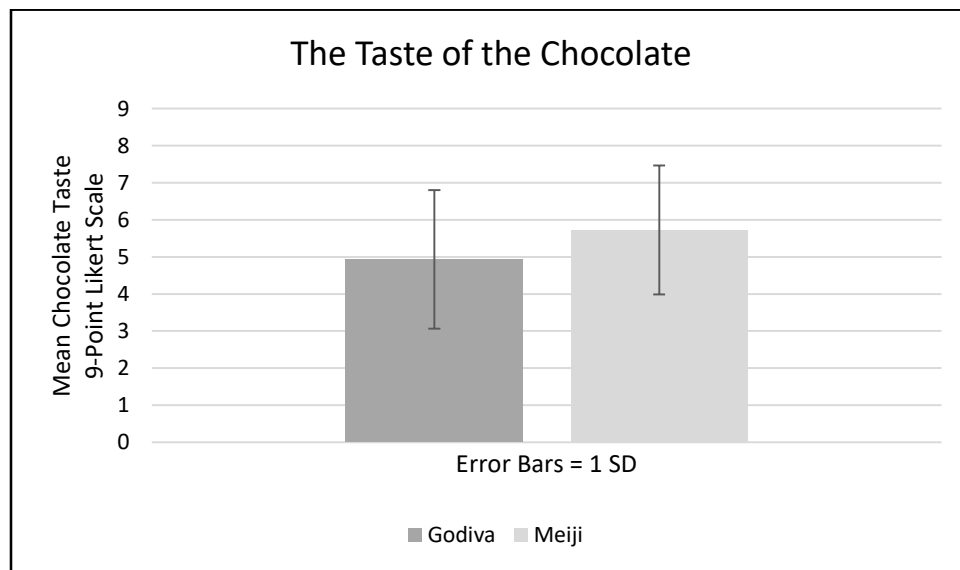
### **3 Results**

In order to ascertain whether the perceived origins of chocolate affect the subjective tastes of two independent groups of chocolate tastings, the experiment data subjected to an independent groups *t* test. An alpha level of .05 was adopted. Normal procedures were used to assess whether the data meets the assumptions of an independent *t* test. First, the dependent variable is continuous, even though the taste of the chocolate was measured as a discrete variable. Second, random sampling was used to create the two independent groups. Third, the sample size is large enough to assume that the central limit theorem is operative ( $N = 30/\text{group}$ ) so deviations from a normal distribution

of means are unlikely. Fourth, visual inspections of box and whisker plots showed that the variances of both groups were very similar.

The taste ratings among the group one participants ( $M = 4.93$ ;  $SD = 1.87$ ) were lower than the group two participants ( $M = 5.73$ ;  $SD = 1.74$ ) but this difference did not attain statistical significance,  $t(58) = 1.71$ ,  $p = .09$ ,  $d = 0.44$  (equal variances assumed). Accordingly, the null hypothesis cannot be rejected (see Chart 1 below). Furthermore, because the null hypothesis cannot be rejected, the data does not support the hypothesis either.

Chart 1: Mean Chocolate Taste



#### 4 Discussion

The results of this experiment seem to suggest the perceived origins of chocolate have little effect on the subjective taste of chocolate. It seems that participants might not be deceived by this experiment; that is, it is possible that the participants objectively assessed the taste of the chocolate regardless from which chocolate box (Godiva or Meiji) the chocolate emerged. It could also be that the subjective taste of the chocolate was slight among the participants. That is, the participants might not have strong feelings about or experience with Belgian chocolate. This result might demonstrate that the perceived origins of chocolate does little to the actual taste of chocolate. This, in turn, suggests that maybe COO has only a small effect on other attributes of a product.

The results of this study do not support the findings of Zachary et al. (2016) and Berry et al. (2015). These two studies claimed both that COO has an effect on product reputation and

evaluations. The results of this study, however, COO seems to have no major impact on the subjective taste of one product, chocolate. Accordingly, this study and those studies are in discord.

This experiment seems to have several weaknesses that could be fixed in a replication study. First, this experiment was expensive. The researcher had to buy a lot of chocolate to conduct this experiment. The researcher also had to buy some actual Godiva chocolate to get a Godiva chocolate box for the experiment. In total, the researcher spent 7000¥ on this project. Second, breaking the chocolate into small pieces was not easy; some participants ate more chocolate than other participants. Accordingly, the size of the piece of the chocolate was an unintended additional independent variable. This could seriously affect the validity of this experiment.

## References

- Berry, C., Mukherjee, A., Burton, S., & Howlett, E. (2015). A COOL effect: The direct and indirect impact of country-of-origin disclosures on purchase intentions for retail food products. *Journal of Retailing*, 91(3), 533-542.
- Zachary, J., Yichao, T., & Sangwon, L. (2016). Country-of-origin fit: When does a discrepancy between brand origin and country of manufacture reduce consumer's product evaluations? *Journal of Brand Management*, 23(4), 403-418.

## Appendix A: Consent Form

Thank you for participating in my study. I am gathering information on the relationship between food origins and food taste. You will be given a piece of chocolate. Please eat the piece of chocolate and then assess how good the taste is. Please sign below if you agree to participate in this study. You may withdraw from the study at any time and for any reason.

Sign: \_\_\_\_\_

After you eat the piece of chocolate, please assess the taste of the chocolate: (1 = very bad taste; 9 = very good taste).

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