Special Work Performance 1

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Summary

The purpose of this report is to describe and give an overview of the survey data that was collected regarding different chocolate bars on the German Market from 50 people.

It analyzes the consumption habits: why and how often participants eat chocolate and where they buy it. Social Demographics: Age, Marital Status, living place and whether they follow sport. Respondents perception toward 10 different chocolate bars with 13 different variables (creamy, crunchy, sweet and so on) and which bar they prefer over other.
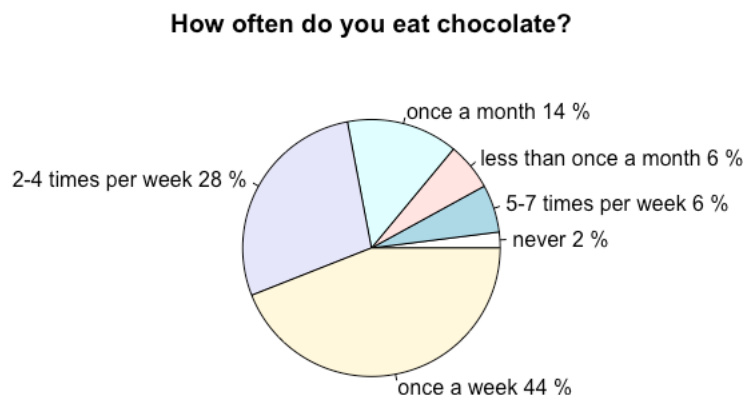
Demographics of the participants

The participants represent 10 out of 16 states of Germany, with majority from Berlin and Sachsen-Anhalt, 38% and 22% respectively. The vast majority of respondents live in cities (92%). The female/male ratio is 58% to 42%, while the age varies between 18 and 31 with a mean of 25.56. Regarding the occupation, most of them are student (52%) and employees(42%).

58% of the respondents do sport 1-3 times per week, followed by 4-7 times per week with 24%. As the data reveals there is no significant relation between marital status and consumption reasons and people tend to enjoy chocolate bars the same way.
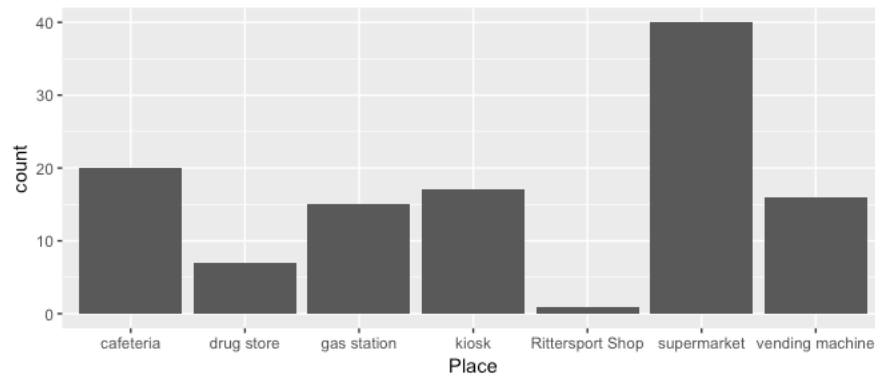
Most of the participants were willing to reveal answers to all question about their Social-Demographics. Least answered question was regarding number of children, with 8 missing values.

General consumption data

Most of the people eat chocolate once a week. Only one person out of 50 gave up eating chocolate.

How often do you eat chocolate?

once a month 14 %
less than once a month 6 %
2-4 times per week 28 %
5-7 times per week 6 %
never 2 %
once a week 44 %

People tend to buy chocolate mostly in Supermarkets.

People in villages compared to cities are more likely to use vending machines 25% vs 13% and drug-stores 12% vs 6% to buy chocolate.

50% of participants would name hunger as the one of the reasons for consumption, followed by being under pressure with 46% andtravelling - 42%. Being bored was reason for 30% of people for consuming chocolate.

Most of the people tasted almost all chocolate bars. Duplo was tasted by all participants, while Balisto Korn-Mix was least tasted, only by 40 people.
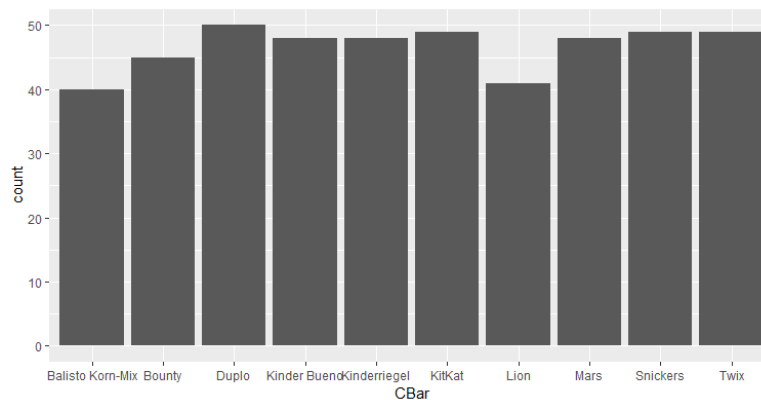

Preference Ratings

The survey tried not only to evaluate the qualities of the different products, but also measure which of them are more preferred by customers. For this purpose there was a question to the participants to give a preference rating to each of the products. This was made with a scale from 1 to 7 (1 – not preferred at all, 7 – greatly preferred).

Using this data, we can conclude that the Kinderriegel is on the top of the table with an average preference rating of 5.86. On the other hand, Mars scored only 3.9. A general comparison could be made with the following boxplot (Plot 3)
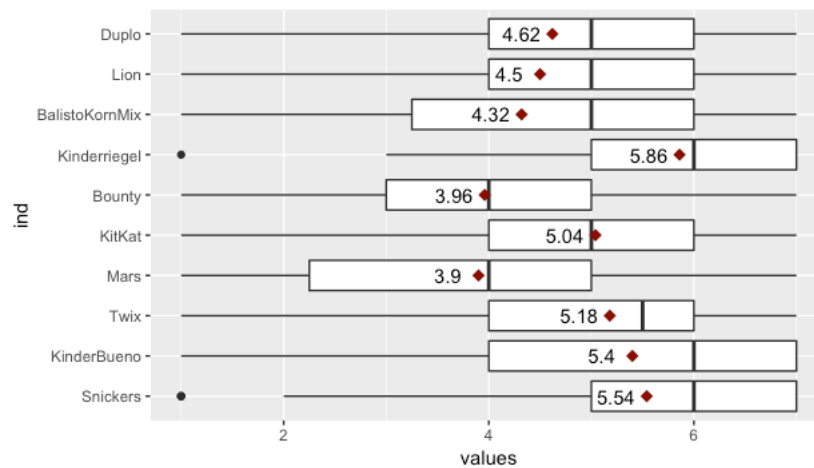

Plot 3

It is worth noting that participants give ratings in different ways – some of them are more critical towards the notes and others give them much easier. The preference ratings data, for example, shows there is one person who gave an average rating of 7 (maximum in this scale) and there is a person whose average amounts to only 2.10. To understand better the difference between participants the following boxplot (Plot 4) could be useful.
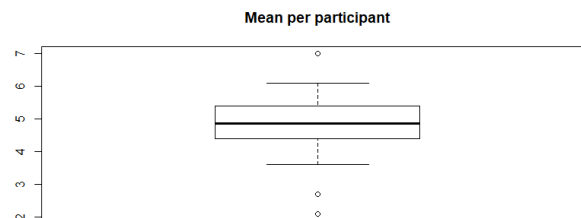

Plot 4

Attribute Ratings

Other than direct comparison with each other, participants were also asked to assess 13 different qualities of each brand. It is a complicated task as some users did not test some brands in their entire lifetime. It is worth to have a look into the overall qualities of the products. The participants characterized the products as sweet, accessible and say they contain many calories. As expected, most of the people considered chocolate bars unhealthy. A better overview of this group of products, can be seen in the following boxplot:
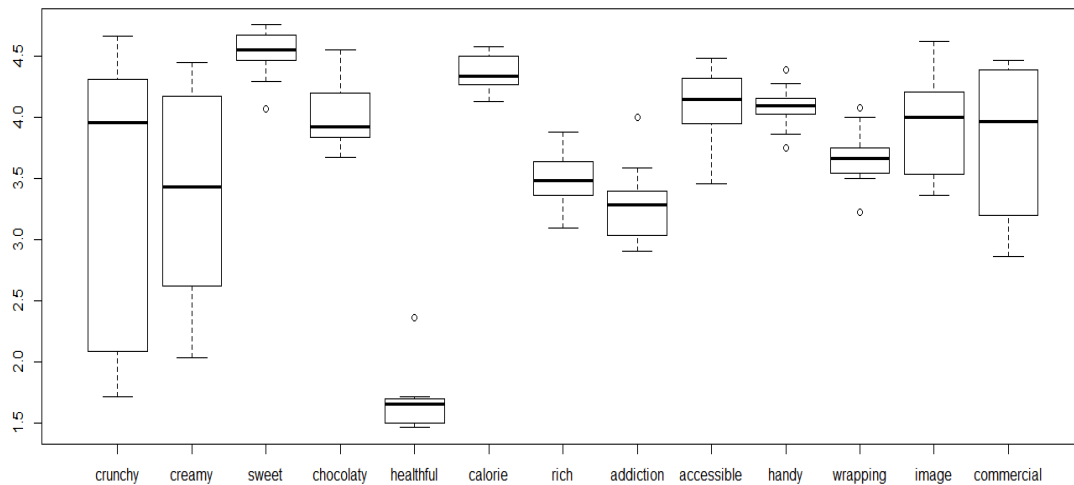
Of course, the different qualities across different products is a valuable information, The most healthy option for respondents was Balisto. Kinder Bueno got most point for creaminess, while Kinder Riegel dominated most of the categories . Full overview can be seen below:

N	Product	Attriute	Max Mean		N	Product	Attriute	Min Mean
1	KinderRiegel	accessible	4,47		1	Balisto	accessible	3,49
2	KinderRiegel	addiction	4,02		2	Mars	addiction	2,89
3	Lion	calorie	4,64		3	Balisto	calorie	4,09
4	KinderRiegel	chocolaty	4,52		4	Bounty	chocolaty	3,44
5	KinderRiegel	commercial	4,45		5	Bounty	commercial	2,9
6	KinderBueno	creamy	4,45		6	Balisto	creamy	1,91
7	KitKat	crunchy	4,54		7	KinderRiegel	crunchy	1,7
8	KinderRiegel	handy	4,41		8	KinderBueno	handy	3,8
9	Balisto	healthful	2,28		9	Snickers	healthful	1,42
10	KinderRiegel	image	4,48		10	Balisto	image	3,16
11	Lion	rich	3,82		11	Duplo	rich	3,09
12	Mars	sweet	4,76		12	Balisto	sweet	4,05
13	KinderRiegel	wrapping	4		13	Snickers	wrapping	3,28

On the average people tend to see less difference in healthfulness, calories, sweetness and wrapping of the chocolate bars. While creaminess, image and commercial are big differentiators More General overview of the data for the different products and qualities can be seen here:
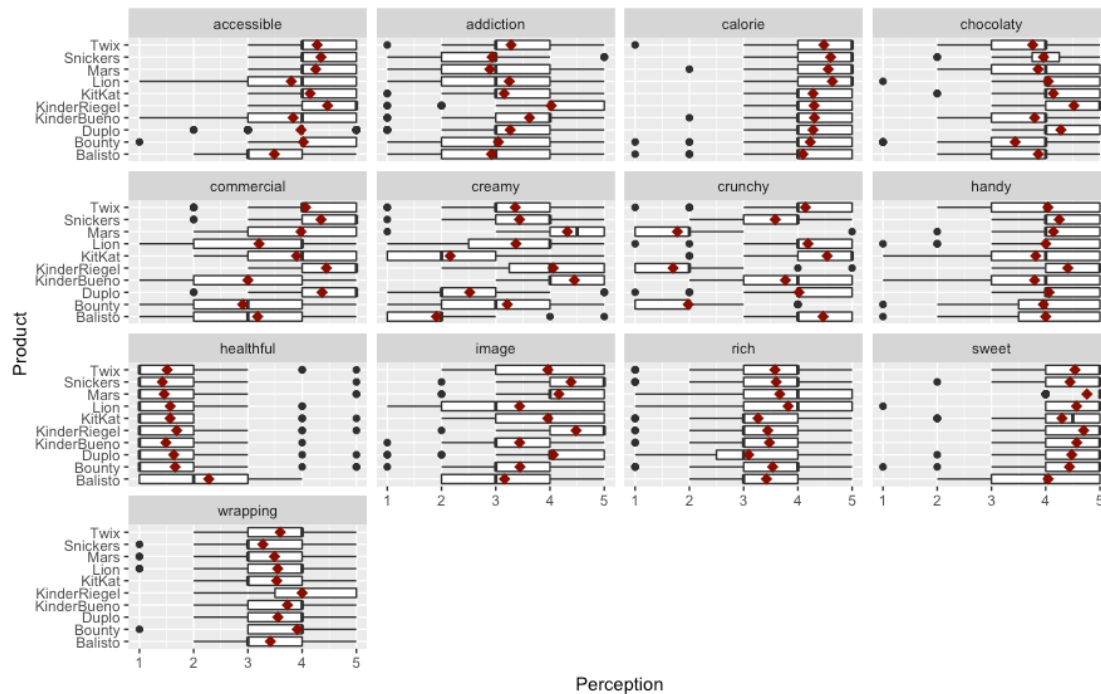
Missing values

Another important value to work with is the number of missing values for the different qualities. There can be seen that on the top is "rich" with 70 missing values, followed by addiction (65) and commercial(49). The reason for it could be the difficulty of people to understand the meaning of the qualities. The quality with the least number of missing values is "sweet". This is understandable as obviously customers were sure about how to evaluate this quality.

When the missing values for the different chocolate are considered, there can be seen a big difference for the products that are not known so well by customers and those who are among the most popular on the market. The both with the highest number of missing values are Balisto and Lion. It is easier to understand the missing value distribution using the following graph: