

Colourism in the East and South Asian Beauty Markets*

Laura Lee-Chu

April 19, 2023

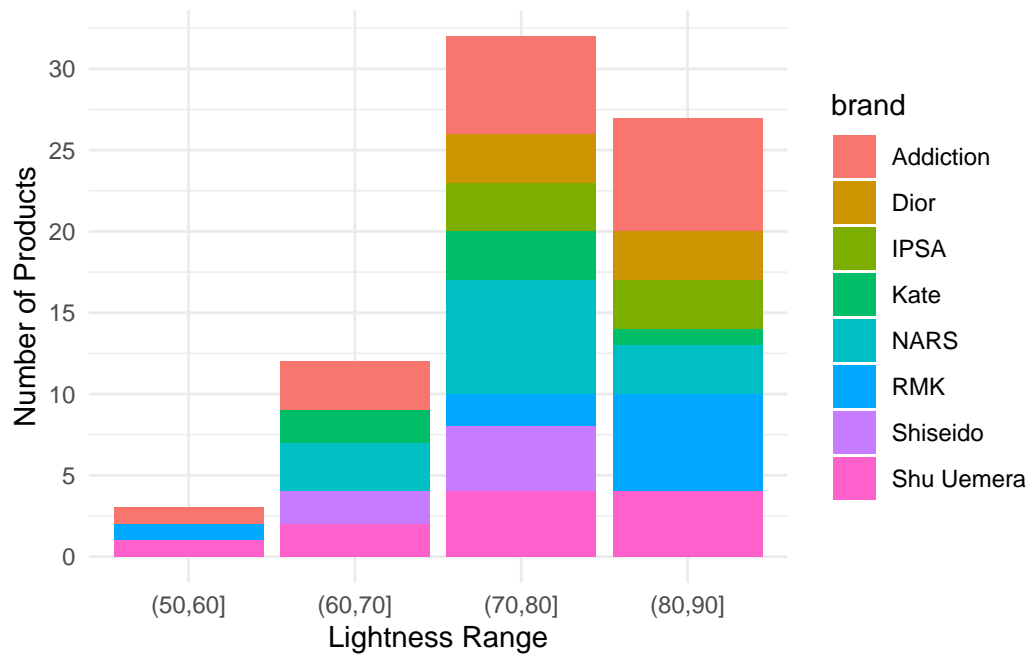
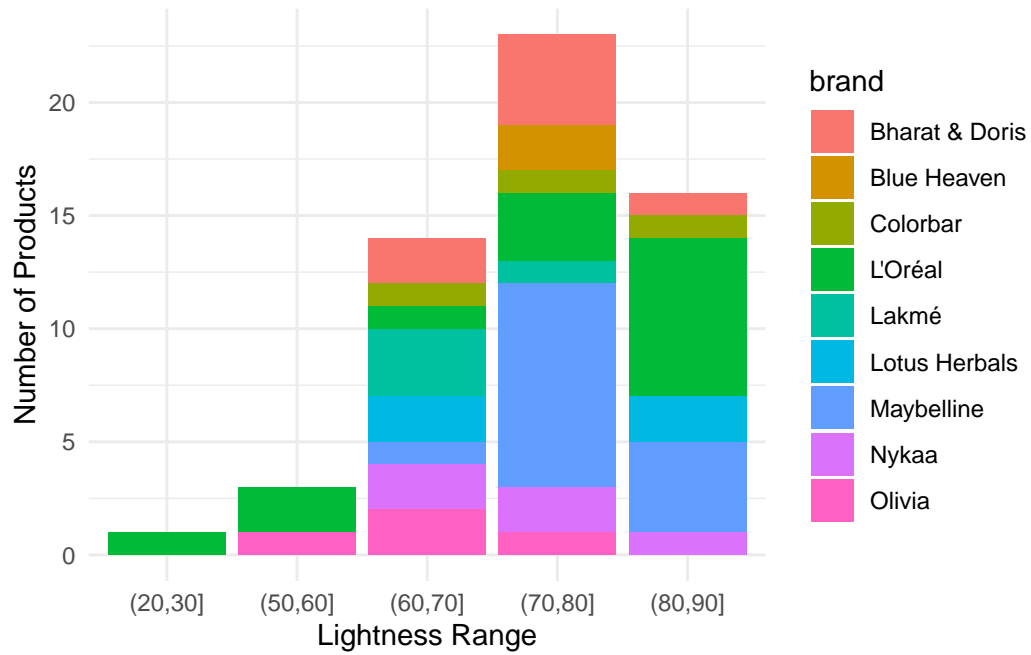
The cosmetic industry has been instrumental in perpetuating and exacerbating colorism across Asia. This study employs data from The Pudding to analyze the relationship between foundation shades offered by popular makeup brands and the range of skin tones in Japan and India. Based on the findings, there is a noticeable similarity in the distribution of lightness among foundation shades in both Indian and Japanese cosmetics. The findings reveal that while certain Japanese beauty brands offer foundation shades that are suitable for East Asian skin tones, the range of available colors is biased towards lighter skin tones. Conversely, foundation shades available in India are considerably brighter than the natural skin tone of South Asians. The results demonstrate the influence of colorism and the pursuit of proximity to whiteness.

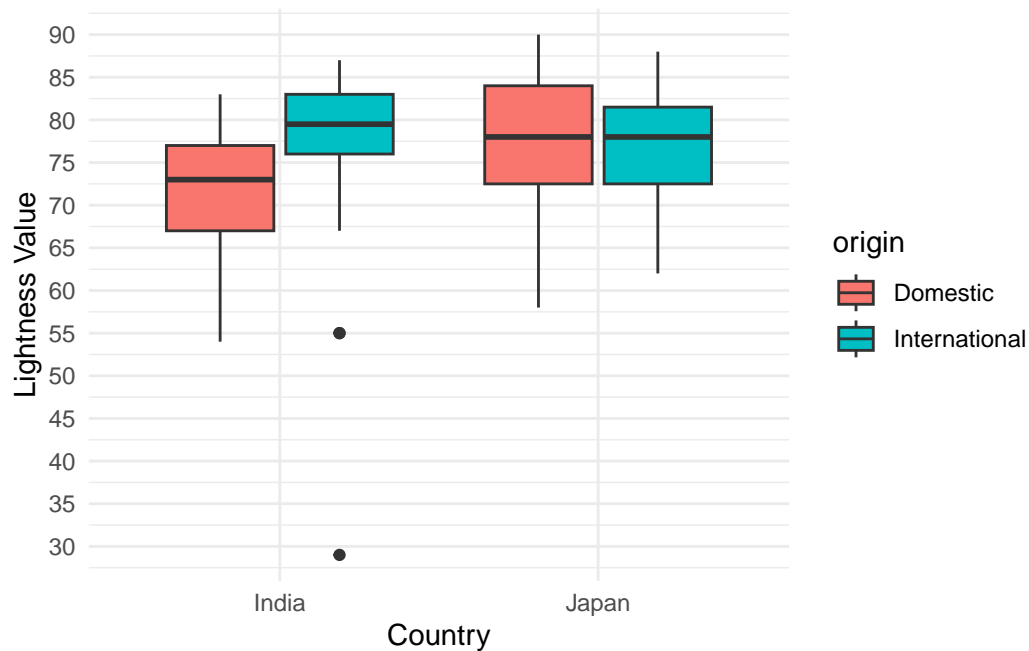
Table of contents

0.1	Appendix	6
0.2	References	7

group	(20,30]	(50,60]	(60,70]	(70,80]	(80,90]	Total
India	1	3	14	23	16	57
Japan	0	3	12	32	27	74

*Code and data supporting this analysis is available at:





```
# A tibble: 1 x 0
```

```
model <- lm(L ~ group, data = brand_origin)

summary(model)
```

Call:

```
lm(formula = L ~ group, data = brand_origin)
```

Residuals:

Min	1Q	Median	3Q	Max
-45.228	-5.228	1.772	6.406	13.041

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	74.228	1.202	61.733	<2e-16 ***
groupJapan	2.731	1.600	1.707	0.0902 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 9.078 on 129 degrees of freedom

Multiple R-squared: 0.0221, Adjusted R-squared: 0.01452
F-statistic: 2.915 on 1 and 129 DF, p-value: 0.09017

$$H_{ij} = \mu + \alpha_i + \beta_j + (\alpha\beta)_{ij} + \epsilon_{ij}$$

where:

H_{ij} is the hue value of the i th group and the j th brand μ is the overall mean hue value α_i is the effect of the i th group (i.e., country) β_j is the effect of the j th brand $(\alpha\beta)_{ij}$ is the interaction effect between the i th group and the j th brand ϵ_{ij} is the error term for the i th group and the j th brand

Data Acknowledgement

Resources Acknowledgment

The primary tool used to analyse data in this paper is R, an open-source statistical programming language (R Core Team 2022b). The paper also uses a number of R packages, including: dplyr (Wickham et al. 2022), foreign (R Core Team 2022a), ggplot2 (Wickham 2016), here (Müller 2020), janitor (Firke 2021), kableExtra (Zhu 2021), knitr (Xie 2023), lubridate (Grolemund and Wickham 2011), readr (Wickham, Hester, and Bryan 2022), RColorBrewer (Neuwirth 2022), scales (Wickham and Seidel 2022), and tidyverse (Wickham et al. 2019).

0.1 Appendix

0.2 References

- Firke, Sam. 2021. *Janitor: Simple Tools for Examining and Cleaning Dirty Data*. <https://CRAN.R-project.org/package=janitor>.
- Grolemund, Garrett, and Hadley Wickham. 2011. “Dates and Times Made Easy with lubridate.” *Journal of Statistical Software* 40 (3): 1–25. <https://www.jstatsoft.org/v40/i03/>.
- Müller, Kirill. 2020. *Here: A Simpler Way to Find Your Files*. <https://CRAN.R-project.org/package=here>.
- Neuwirth, Erich. 2022. *RColorBrewer: ColorBrewer Palettes*. <https://CRAN.R-project.org/package=RColorBrewer>.
- R Core Team. 2022a. *Foreign: Read Data Stored by 'Minitab', 's', 'SAS', 'SPSS', 'Stata', 'Sysstat', 'Weka', 'dBase', ...* <https://CRAN.R-project.org/package=foreign>.
- . 2022b. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. <https://ggplot2.tidyverse.org>.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D’Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. “Welcome to the tidyverse.” *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.
- Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. 2022. *Dplyr: A Grammar of Data Manipulation*. <https://CRAN.R-project.org/package=dplyr>.
- Wickham, Hadley, Jim Hester, and Jennifer Bryan. 2022. *Readr: Read Rectangular Text Data*. <https://CRAN.R-project.org/package=readr>.
- Wickham, Hadley, and Dana Seidel. 2022. *Scales: Scale Functions for Visualization*. <https://CRAN.R-project.org/package=scales>.
- Xie, Yihui. 2023. *Knitr: A General-Purpose Package for Dynamic Report Generation in r*. <https://yihui.org/knitr/>.
- Zhu, Hao. 2021. *kableExtra: Construct Complex Table with 'Kable' and Pipe Syntax*. <https://CRAN.R-project.org/package=kableExtra>.