

DD 398 Design Project II

# **A cross cultural study of UI layout preference for eCommerce websites across India and UK.**

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## What

A study to find out whether customers from the United Kingdom and India have different preferences in UI design of eCommerce websites.

## Why

Although previous researches have examined the impact of cultural differences on general website designs, few have empirical backing. This study looks at eCommerce specifically and gathers data from users to get answers to posed questions.

## How

I conducted an online experiment with 63 participants divided between two countries. The participants were exposed to different layouts and asked for their preference. Using Hofstede's cultural dimensions and previous works in this domain, we correlate the specific elements of the UI and their application to the dimensions in which the two countries differ; PDI, individuality and Indulgence.





Today, there exist **12M-14M eCommerce websites** on the web and there are expected to be over **2B digital buyers** in the world in 2020



India is currently the **fastest growing ecommerce market**. It is expected to jump by 31.9% to 46.05 billion USD in sales this year



Cultural differences manifest themselves greatly in the form of the website. Many authors have written about the importance of an **effective website design** in the success of electronic commerce.



A study by the Localization Industry Standards Association (LISA) found that for every \$1 spent on localization, the return on investment **(ROI) is \$25.**



Papers read: 30

Time span: 1992 - 2020

**“Next Billion Users”**, a concept that says that the next wave of internet activity is going to be the inclusion of tier 2 and tier 3 cities. People who have recently gained access to the internet through revolutionary schemes by the Jio company.

**Hofstede** proposed 6 dimensions and measured each cultural based on it: Power distance (PDI), Individualism (IDV), Masculinity (MAS), Uncertainty avoidance (UAI), Long-term vs. short-term orientation (LTO), Indulgence

Studies show content and quality are strong factors in building user trust and effect of **trust** is more significant than the effect of user satisfaction on **loyalty**

Many studies have been done to find relations between interface elements and cultural dimensions but few have **empirical evidence** to support them.



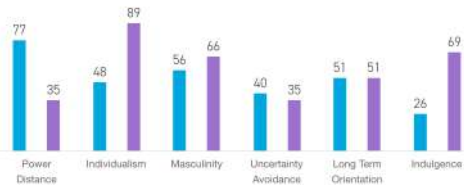
# 1

## Pose Questions

Countries chosen

India

United Kingdom



The 2 countries score fairly equal on the dimensions of Masculinity, LTO and UVI. The other 3 dimensions i.e. PDI, Individuality and Indulgence were used to pose questions by correlating them with aspects of the website.

Do users from UK and India have similar or different preferences in UI design of e-commerce website?

**Q1.** Will Indian users prefer more hierarchy in the structure of site and UK users will prefer less hierarchy in the structure of the site?

**Q2.** Will Indian users be more interested in other customer reviews more than the product details and UK users be more interested in the full details of the product before reading customer reviews?

**Q3.** Will Indian users be interested in a product more based on the written information rather than just visual images and UK users be interested a product more based on their visual images rather than emphasis on written description?

# 2

## Design structure

# 3

## Detailing



1

Pose Questions

2

Design structure

1

### **Consent**

Questions confirming their consent to participate in the study and their responses being published

2

### **Demographics**

Questions on their age, gender, ethnicity, internet habits and ecommerce usage were asked

3

### **Design Treatment**

Layouts created based on the hypothesis to understand user preferences

3

Detailing

1

Pose Questions

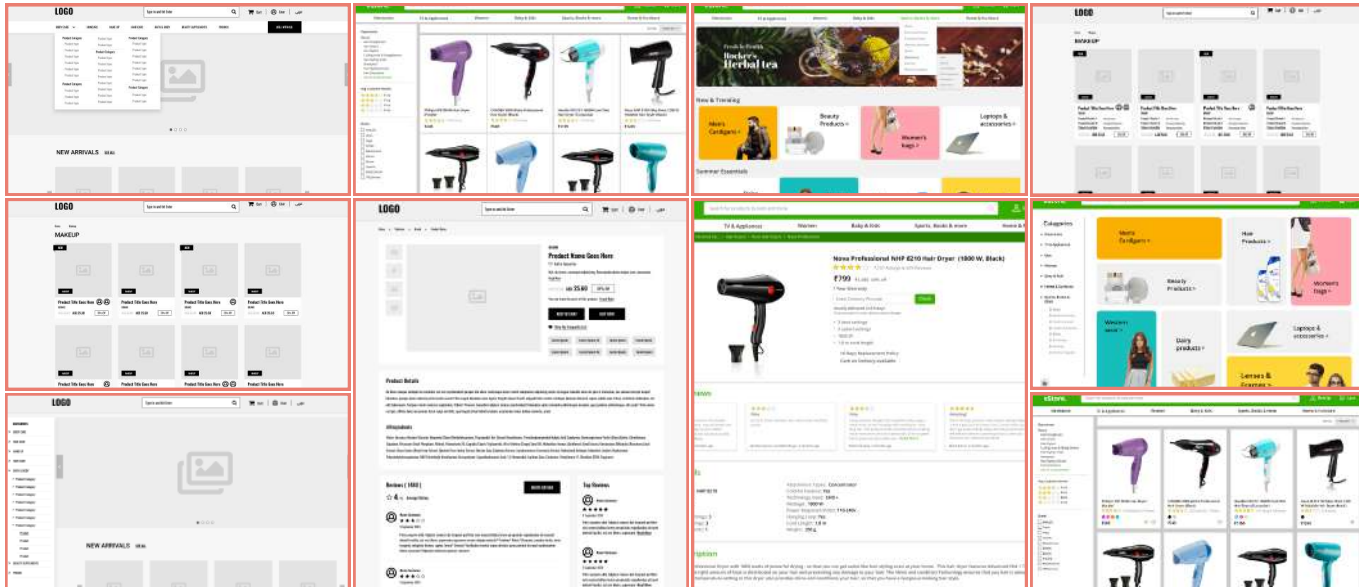
2

Design structure

3

Detailing

## ITERATIONS



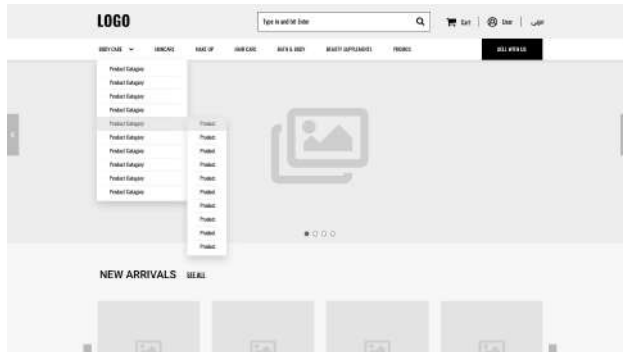
## QUESTION 1

### Power distance index (PDI)

#### Previous studies:

- Linked to **navigation structure**
- Countries which score high on PDI would prefer more **hierarchical structure** whereas countries scoring lower would prefer lesser hierarchy in its structure.

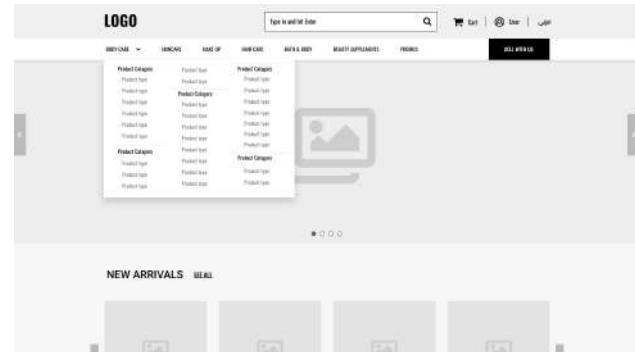
**Application:** home screen layout.



#### Set 1:

Due to progressive disclosure, the user would have to use an extra step to reach their desired product but end up avoiding the clutter

1



#### Set 2:

Due to everything being displayed together, user can directly choose their desired product without having to take an extra step.

2

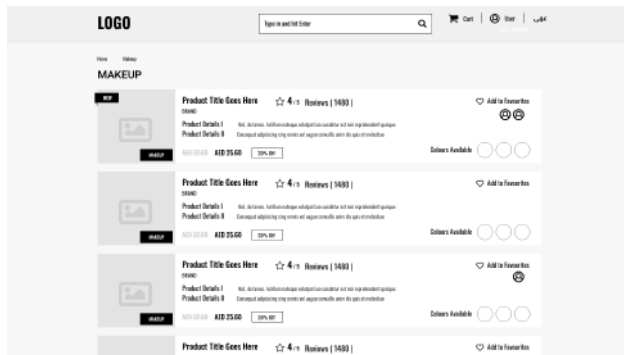
## QUESTION 2

### Indulgence

#### Previous studies:

- Linked to **image to content ratio**
- Countries which score high on Indulgence would prefer a higher image to content ratio and **larger images** whereas countries scoring lower would prefer lower image to text ratio and prioritise **information over images**.

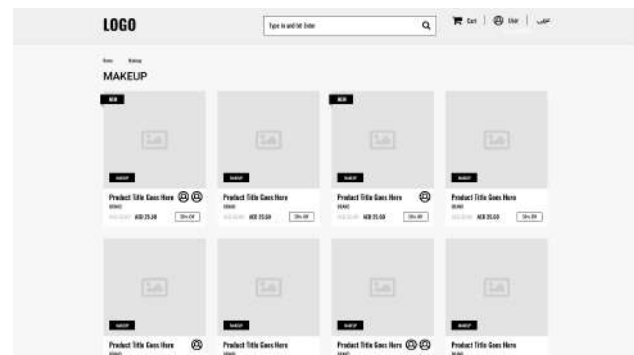
**Application:** image grids when searching for a product.



#### Set 1:

Search results for a product page with relatively smaller images and more text description (list)

1



#### Set 2:

Search results for a product page with large images and less description (grid)

2

## Individuality

**Application:** product detail page.

- Countries which score high on Individuality would prioritise product details more whereas countries scoring lower will be prioritise community reviews more.



1



2

## QUESTION 4

### Individuality

#### Additional Question:

**Application:** product sorting feature.

- Countries which score high on Individuality would be less influenced by the popular choices whereas countries scoring lower will be more influenced by the popular choices.

Sort by: Popular ▼

Set 1:

Sort by popularity feature

1

Sort by: Latest ▼

Set 2:

Sort by latest feature

2





### Process:

Link with a questionnaire was sent to people in India and the UK within the age range of **15 to 30 years**. In both the countries, the groups were exposed to both the sets in **randomising order**. Their preference for each question/screen was asked by opting for one set out of the two options



### Participant gathering:

- survey platforms like Surveycircle and Pollpool
- facebook groups which aid participant recruitment for thesis and surveys.
- snowballing



### Experiment details:

The experiment was conducted **within group**.

**Independent variable:** Cultural dimensions

**Dependant variable:** Preference

**Design treatment:** Screens

**Final Survey link**

<https://research-participation.paperform.co/>



## Screen-grabs of the Survey

## Research study volunteer

I am Priyaa Shrivastava, a prefinal year design student of the Indian Institute of Technology, Guwahati. I am conducting a **cross-cultural study** of visual user interface preference for eCommerce websites across **India and the UK**. If you are a resident of these countries and between the ages of 15 to 30 years you qualify for the study.

The survey contains a few versions of an eCommerce website layout. Answer the questions according to your preference.

For your comfort, open the form on a laptop or a large screen

2

Which country do you represent?

India

United Kingdom

What is your ethnicity?

Since when have you been in this country?

Please enter your age?

Please enter your gender?

Male

Female

Other

How many hours do you spend on the internet in a day?

What is your occupation?

How many online shopping orders do you place in a year on an average? (before Covid19)?

## Consent form

Project: A study of visual UI preference for eCommerce websites in India and UK to create a culture oriented guideline

Responsible Researcher: Priyal Shrivastava  
Research Guide: Dr. Debayan Dhar, Project Guide

1. I agree to participate in the research study. I understand the purpose and nature of this study and I am participating voluntarily. I understand that I can withdraw from the study at any time, without any penalty or consequences."



Yes

2. I grant permission for the data generated from this survey to be used in the researcher's publications on this topic?

Yes

Please type your name in the box below to indicate agreement to participate in this study.

Please enter today's date

12/12/2017

The figure shows two versions of a web page layout. The top version is cluttered, featuring a search bar, a large red circle with the number 6, and a grid of items. A tooltip is visible over one item. The bottom version is clean and organized, with a search bar, a grid of items, and a tooltip. The bottom layout is the recommended design.

Which layout out of the two do you prefer?

5

Which layout out of the two do you prefer?\*

4

The image displays two versions of a web application interface, likely for a clothing or fashion brand, side-by-side for comparison. Both versions feature a top navigation bar with a logo, a search bar, and links for Home, About, Contact, and New Arrivals. The main content area is divided into sections, including a 'New Arrivals' section with a grid of product cards. The top version shows a grid of four product cards, while the bottom version shows a grid of three product cards. The bottom version also features a larger image of a person wearing a jacket, which is not present in the top version. The interface is clean and modern, with a focus on product display and navigation.



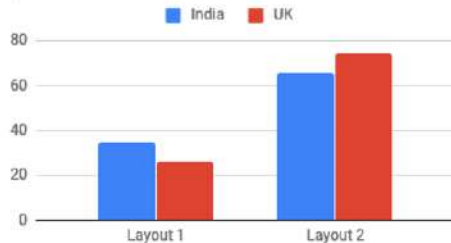
### Characteristics of the Sample:

The survey was collected over a span of three weeks and responses of **75 participants** were collected out of which 63 were used (**India: 33, UK: 30**). The rest were discarded as they did not fulfil the age and minimum of 5 years stay criteria

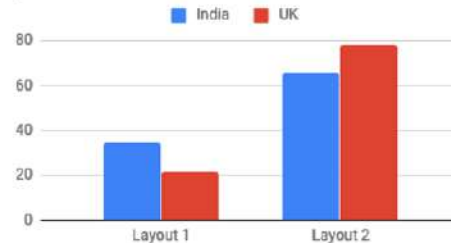
### Demographics of the samples:

| Mean                 | India                | United Kingdom         |
|----------------------|----------------------|------------------------|
| Age                  | 23.25 years          | 26.52 years            |
| Female               | 43.56%               | 52.17%                 |
| Male                 | 56.44%               | 47.83%                 |
| Daily Internet Usage | 6.54 hours (SD:2.95) | 6.80 hours (SD: 3.013) |
| Resident duration    | 23.63 years          | 12.28 years            |

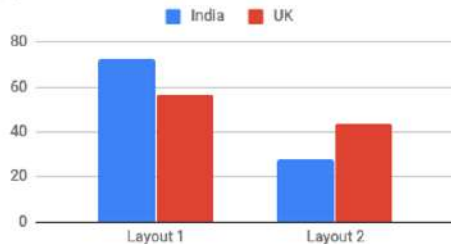
Question 1



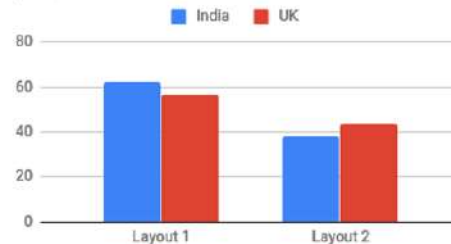
QUESTION 2



QUESTION 3



QUESTION 4





## Answers to the posed questions

**A1.** Within the Indian sample, more Indian users preferred more hierarchy in the structure of site and within the UK sample, more UK users preferred less hierarchy in the structure of the site

**A2.** Within the Indian sample, more Indian users were interested in other customer reviews more than the product details and within the UK sample, more UK users were more interested in the full details of the product before reading customer reviews

**A3.** Within the Indian sample, more Indian users were interested in a product more based on the written information rather than just visual images and within the UK sample, more UK users were interested in a product more based on their visual images rather than emphasis on written description

## Conclusion

While there is visible preference towards the same layout in all the cases, we can still see more Indian citizens compared to UK citizens opting for Layout 1 and more UK citizens as compared to Indian citizens opting for layout 2.

## Discussion

- Huge **gap in resident duration** between the two countries.
- Low fidelity wireframes may make it **hard for people to visualise** the actual website.
- The **cultural influence on acceptability** of the product may have reduced since all countries are looking at same UIs for most of the globalised products. This could be a reason for less pronounced result as well.

## Contribution

If even after more data collection the questions are answered negative, the study is a great contribution in the field and an eye opener to the changing times and adaptation level of the society.