Geographic location biggest indicator of mobile app preferences

September 5 2018

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Across the globe smartphones and mobile apps have become an integral part of everyday life, but what determines the apps you use?

A new study involving UCL reveals that the country you live in rather than your demographic data is actually the biggest indicator of the types of apps you download and use.

The study, conducted in collaboration with the Insight Centre for Data Analytics, Ireland, University of Helsinki, Finland, and Lancaster University, UK, will be presented at the MobileHCI 2018 conference in Barcelona, Spain, September 3-6.

Researchers found that English-speaking countries, including the UK, USA, Australia, Canada and New Zealand, as well as Japan and South Korea had the highest app usage, with the lowest app usage being found in Argentina, the UAE, Saudi Arabia, Qatar, Pakistan and India.

Dr. Mirco Musolesi, who leads the UCL Intelligent Social System Lab (UCL Geography), said: "Previously studies have not focused on geographic and cultural factors behind app usage, instead choosing to focus on usage patterns and behaviour.

"Our research highlights that even if mobile communications and hyper-connectivity are a global phenomenon, the country we live in plays a huge part in determining our app preferences. Understanding how and when people use phones, and which apps they engage with, is important for the study of individual behaviour and society at large."

The team applied large-scale analysis of geographic, cultural, and demographic factors in mobile usage, using data from 25,323 Android users who used 54,776 mobile applications in 44 countries across Europe, Americas, Asia and Oceania.

While Hofstede's Value Survey Model was used to determine cross-cultural preferences, finding that masculine cultures, as determined by the model, with more pronounced gender roles, like Japan prefer

Personalization apps that help users to more easily customise their device, while collectivist cultures and those with more fluid gender roles such as Russia seem to value Family related categories, such as Education and Parenting applications. "Individualist" cultures such as the US favoured Entertainment apps and other leisure related categories, such as Travel & Local, Sports, Health and Fitness, and Music and Audio.

The most popular categories for the UK are Communication apps, Social, Travel & Local, and News & Magazines. The researchers also observed that the UK is characterised by an application usage pattern that is closer to other English-speaking countries and more distant from that observed in countries in continental Europe.

Socio-economic factors also play an important role when considering mobile usage. The study shows that occupation, education, and how much a person has in savings, are the next most important factors in determining what apps a person will use. Socio-economic factors are more important than age and gender.

People of similar socio-economic status tend to use their smartphones in a similar way across the globe. This is particularly true for people of similar household status, living with or without children, and is also true for professionals and well-educated people.

Dr. Ella Peltonen, lead author on the study and postdoctoral research fellow at the Insight Centre for Data Analytics, Ireland, said: "The results of our work show that there is a strong relationship between the type of apps people use and their geographic and socio-economic factors, suggesting that these different factors should be taken into account when studying mobile data. In addition, our results can be used to better target mobile apps in different countries, and for personalisation."

Dr. Musolesi concluded: "The findings of this research can be exploited in many contexts, not only commercial ones. We can use this information for better targeting applications for positive behaviour intervention or civic participation. One specific application domain is digital health, where understanding which applications are popular in a certain region for a specific socio-economic group is of fundamental importance for effective and systematic actions such as for disease prevention, vaccination campaigns or mental health interventions at local and national level."

Provided by University College London