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# Identifying the effect of mobile app adoption in online dating

# Introduction

Many companies are investing their major resources on mobile application development after the invention of mobile devices and other smartphones. In the context of online dating, research will explore the changes in users' behavior induced by mobile application adoption, in term of finding the outcome of matching and engagement. The creation of mobile devices and smartphones has led many companies to spend their resources in the development of mobiles alternatives for customers. Research shows that from 2014 to 2020, mobile data traffic will grow nine times by the increase of per subscriber data consumption and the number of smartphone subscriptions (Ericson, pp. 63). Studies show that during 2019-2020 mobile data traffic of smartphones will be more than the mobile data traffic at the end of 2013. Industries reports show that companies are ready to use their resources for the maintenance and development of mobile applications.

 The main focus of the study is to find the online dating platform, which is linked with the investment of the firm shifts from the web to mobile. Study focus on the mechanisms of disinhibition, impulsiveness, and ubiquity, which are applying to digital channel shift (from the web to mobile). The strategy which is used in the research is propensity score matching associated with difference-in-differences: joined with a rigorous falsification test to check the validity of the strategy identifications. To create mobile applications companies are investing a large amount of money and they also need practical and theoretical guidance for such investments. This gap will be identified in our paper which is present in the literature.

# Discussion

 The main purpose of the study is to know about the relationship drivers between the adoption of mobile application and social engagement. Previous research has found the features of the effect of mobile use on behavior (e.g., the effect of smaller screen size) which do not clear the mechanism of the relationship between the adoption of mobile application and user behavior. In a relationship, the key drive factors are impulsivity, ubiquitous and disinhibition.

 Data can be collected from big information about 100,000 approx. website users at the same time which are joined at the same platform. People who instantly register on the website to adopt mobile app are the “immediate adopters” and “late adopters” and “very late adopters” are the one who takes time to register themselves on website. Majority of people are “immediate adopters” who immediately adopt the mobile app upon registering on the website. The study will only focus on late adopters which primarily use strategy in adoption. Immediate adopters in spite of doing it automatically, intentionally deciding to choose adoption. In matching procedure, this approach gives us two benefits, first, excluding immediate adopters match nonadopters with adopters allow us to make matching better which have the same characteristics to nonadopters and immediate adopters. Secondly, by using behavioral data we can find the relationship between the adopters to other adopters.

The main problem with explaining a perfect success measure emerges from the fact that any relationship is a continues process. The relationship may fail at any stage and it is not possible to know about the match, that will it be successful or not successful. To make the research more successful create a perfect variable that measures successful online communication rather than successful online dating. Without this critical and initial step of successful online communication, the research will be not accurate.

 DID model is used to find the falsification test with same data, functional form, propensity score matching, model parameters are constraints but with a very small change; we use one-time earlier shift of AfterMobileAdoptionit. Actual mobile adoption is denoted by variable AfterMobileAdoptionit will be equal to “1” week. Two week earlier the mobile adoption will be equal to “0” two weeks due to the time shift.

Falsification test for the expected behavior of our model is as follows: AfterMobileAdoptionit is equal to "1" when the indicator is not shifted during the actual week of user's adoption, there is a significant difference among the control group and treatment group which is detected by the model. When the variable shifted by one period it will be equal to 1 which is right before the actual adoption. If the model shows significant results and fails the test even when the indicator AfterMobileAdoptionit point out before the actual adoption, then we can't trust the main results. Following potential issue are discovered which have a higher degree;

1.Inappropriate matching. Overly broad caliper size, a code bug, and a bad predictive model are the main causes of inappropriate matching. Users are matched together when matching is not appropriate, to discover the significant results it is very easy.

2. Inappropriate main model. The cause of this issue arises when matching is a correct but overly sensitive or statistically inappropriate model is used. When the researcher forgets to use autocorrelation and heteroscedasticity test etc. and the model gives significant results for even random noise.

3. The existence of nonremovable differences. This problem may be faced when its existence lies among the control group and treatment group which is impossible to remove with matching procedure.

Results show that there is a strong significant effect of treatment seen after the treatment, whereas at the same time our falsification test shows insignificant results by applying the same model as before the treatment has occurred there is no treatment effect possible. Ubiquitous access and universal access are the two features of the mobile environment, which allow the users to get information at any time or any place. Time is a priceless resource which is limited for maximum people, mobile internet has fewer restrictions related to space and time. Mobile devices create many capabilities which enable users to make usage ubiquitous, which includes simultaneity, continuity, immediacy, searchability, portability. Ubiquitous access growth stems from mobile devices personal nature, which is the main cause that most of the people use their mobile devices in the new environment. To capture the degree of diligence (or lack of) we operationalize impulsivity which is shown by the focal user when someone massages her. Without diligence, if an action happens it is impulsive (reply without checking the profile of the user sender). The measure in which focul user checking the profile replies without impulsively is called GetNoCheckReply. It is used to check how frequently focal user replies without impulsively checking the profile. Mobile app adoption-related engagement could be done by disinhibited behavior.

**Conclusion**

In a mobile environment, three unique mechanisms impulsivity, ubiquity, and disinhibiting are identified. These mechanisms were unpublished previously in the literature and make the behavior to shift, which includes. Results show that the adoption of mobile applications makes users more socially engaged. As per key engagement metrics, they significantly send more massages, visiting more profiles and achieving more matches. The research shows that many mechanisms which are helping to this increase in engagement make more users log in for long hours in a day. Research shows that after the adoption mobile app, men act more impetuously and less interested to check their profile as compared to females who continuously checking their profile and reply earlier than men. According to results, both men and women show disinhibition, in that users take actions to a set of a more diverse potential partner for education, race, and height.