Mobile applications for government: a framework for evaluating their economic impact

Johansen, Elias

7 May 2021

Mobile Applications for Government: A Framework for Evaluating Their Economic Impact

Elias Johansen

Abstract

An implementation strategy for a mobile app must be adjusted as the app progresses through different stages of maturity as it progresses through different stages of development as it progresses through different stages of maturity. A challenge that can arise when it comes to assessing the quality of mobile apps that are used by governments is the assessment of their quality. The reason for this is that they are progressing from the infancy stage of their use to the maturity stage of it. Through the use of a multi-item scale, this study intends to assess the quality of mobile apps offered by the governments that involve transactions in order to determine whether or not these apps are of a high quality. The results of a comprehensive review of scientific research that has been carried out by academic scholars and practitioners has led to the identification of a number of factors that influence the quality of mobile apps developed by government agencies based on a comprehensive review of scientific research. It was the purpose of our study to conduct a survey of fully functional mobile apps in order to develop a questionnaire that would be used to gather feedback from users based on an analysis of reviews and interviews with users in order to develop a survey of fully functional mobile apps. Following the quantitative analysis of the data, an appropriate scale was able to be developed based on the responses that had been received as a result of the quantitative analysis of the data. By evaluating the perceived value of government mobile applications, citizens can be able to evaluate the perceived quality of government mobile applications and the perceived value of government services. It has been found that, based on the analysis of the data, seven constructs can be used as a way of evaluating the quality of government apps on the basis of demand. A number of constructs are included in these constructs, such as user friendliness, transaction transparency, loading speeds, flexibility, complete information, trust and safety, as well as efficiency of the apps.

Keywords: Mobile apps for economic development, government mobile apps, mobile apps for competitiveness, mobile apps for quality assessment, mobile apps for economic development

Introduction

It can be considered an example of e-government when the government uses the Internet as a means to provide services, collect data, and develop new applications through the use of the Internet. A few of the examples of e-government include direct information technology, e-government, and institutional change. In the public sector, the use of technology has been around since the 1970s when it started to be widely used in government and has continued to be widely used even in the post-internet era, which began in the early 1980s. In order for these technologies to be successful, it is essential that organizational culture plays a crucial role in determining the outcome of their implementation in government. This effort was initially undertaken with the primary purpose of developing internal government applications that would assist the government in defending the country, monitoring its economy, planning and managing the country's election, census, and tax administration processes by providing data-intensive functions that would assist the government in these areas. In the past few years, mobile phones have become increasingly prevalent in our lives, and with this proliferation, the digital divide, that is, the ability to access online services, has also been narrowing because of this. There is a higher proportion of minorities who own smartphones, and a higher proportion of them using them to access the Internet, as compared with the general population.

A significant amount of time is spent on apps by African Americans and Hispanic adults as compared to the average user. Additionally, households that have a low household income are also much more likely to use smartphones to access the internet compared to households with a high household income in terms of accessing the internet. There is a greater chance that social services will be able to be delivered through smartphones as smartphones are becoming more accessible to traditionally underserved populations. A second phase of computerization emerged with the advent of the "internet era" in the late 1980s. This era gave rise to pioneering efforts in the field of e-government that subsequently evolved into mobile applications in the years that followed. In the course of the digital age, it is expected that the government's role, and how it will be structured in the future, will change as well, and as technology advances. Between 1980 and 2001, it has been found that across many countries, both the structural and policy aspects of government departments have changed significantly as a result of globalization and privatization in the period of 1980-2001. Having a clear understanding of how the relationship between political and economic policy in relation to technology is explained in the UN report.

Research Objective

Mobile apps are designed by developers, while they are implemented by the tech departments, and developers are responsible for the actual design of the app. There has been a suggestion that mobile government will evolve into a service paradigm that covers a comprehensive coverage of mobile applications as well as the impact they will have on citizens in the future. This means that the designers are responsible for designing mobile apps and the tech departments are responsible for supervising the implementation of these apps. There were a number of problems with the apps that

were developed two decades ago, as they lacked a clear focus on the objectives of the service, a commitment to resources, as well as a perspective from the point of view of the citizen. Due to the fact that these apps are multilingual, they often encounter challenges that are related to the presentation of features, the multitude of services, interoperability, and communication. These challenges are related to the fact that they are multilingual. As a result of the inefficiency of the system, one of the main reasons why citizens are not able to fully utilize online services to the fullest extent possible is the inconsistency in how apps are managed, which is a result of the inefficiency of the system. Compared to traditional methods of interacting with government, mobile apps, because of their impersonal nature, are more distant and less personal when compared to traditional methods of interacting with the government. As a result of the lack of trust and reliability created by mobile applications, citizens feel mistrustful, dissatisfied, and dissatisfied with their governments, and, as a result, they experience a feeling of mistrust, dissatisfaction, and dissatisfaction with their government, which in turn creates a feeling of mistrust, dissatisfaction, and dissatisfaction with their government itself.

As a result of research and practice in the field of "citizen centricity", researchers and practitioners have been able to identify a generic and fundamental mission that should guide the future efforts of these institutions. For the purpose of gaining a deeper understanding of the subject of service quality from the perspective of the consumer, the author of this study has attempted to concentrate on the perception of service quality from the perspective of the consumer. It is intended that, in order to achieve the objectives of this study, a detailed analysis of the services that government applications provide to citizens in the United States will be conducted, in addition to an evaluation of the extent to which these services meet citizens' needs as they relate to government applications. The objective of this study is to conduct an empirical study based on citizen experiences with the aim of evaluating the quality of service provided to citizens in order to be able to carry out an empirical study on the level of quality of service provided to citizens.

Government and Mobile Apps

In order to adapt to the mobile environment, each state as well as local government (county/city) has its own set of policies and mandates. In order to adhere to which there are several ways in which each has adapted. There can never be enough emphasis placed on the importance of improving customer service at the local and state levels. As a matter of fact, these are the ones who provide direct services to the citizenry on a daily basis (for example, they provide services related to schools, hospitals, law enforcement, public works, transportation, etc.). In order to facilitate citizen day-to-day activities, governments at every level have created a variety of mobile apps to facilitate citizen day-to-day work and engagement. Since the invention of mobile devices two and a half decades ago, there has been a

considerable amount of academic research on mobile apps. There was a confluence of the development of information technology (IT) and the application used by government entities in the early stages of their implementation when mobile apps were first introduced. This is going to be a new chapter in the digital transformation of government; it is more than just shifting existing public services on-line; it will mean that government is utilizing technology in order to redefine its "social technologies" so that it will remain relevant in an era that is becoming increasingly participatory, interactive, and informational. In the past, the complexity of government work procedures has always been an issue when it comes to providing citizens and other stakeholders with easy access to government services.

As a result, there is a perception that government has moved from the desktop to the mobile device, yet government apps encapsulate the complexity and intricacy of dependent departments within a government, giving the impression that government has moved from the desktop to the mobile device. From searching for information to complex transactions such as the e-filing of tax returns, self-services are available in all kinds of ways, and they provide a full range of self-service offerings. In the same app you can also obtain new permits for your business, upload tenders or download documents for tenders, bid on auctions that are held by the government or promote business-to-business transactions, as the app can also serve as an ideal platform for all of these items. There is a great opportunity to reorient services around citizens' needs through the use of government apps as well as consolidating back office functions at the same time through the use of government apps.

Recommendations

The following recommendations have been compiled based on the author's research and have been based on the author's experiences.

1. A lot of mobile apps are available at the local level that are geared more toward citizen-centric features and are more geared towards the needs of citizens. The second category of enterprise-oriented apps, which are focused on employee interaction internally, is still in its infancy, as they are targeted more towards internal employee interaction. There are a large number of apps available in counties and cities that are related to transit, public services, and other types of public services that citizens can use. Using an app that can be downloaded for either the bus or the train, it is possible to get a lot of real-time information on the schedules of buses and trains in real-time. Citizens have access to an application that facilitates the submission of support requests to the public service, so they are able to submit their support requests, track their progress on a regular basis, and provide feedback on their requests. There are numerous cities and counties that provide information on tourism and recreation that details the leisure and entertainment activities that visitors can take part in while they are on vacation as part of their tourism and recreation services, which they provide as part of the tourism and recreation services that they provide. There are several types of apps of this type, and most of them are hyperlocal in nature, and they are designed to improve citizen experience at a local level when it comes to gaining information and access to services. The reality is that cities and counties are closer to the

communities that they serve, therefore they have to be more responsive to those communities' immediate needs, as well as the needs of the citizens who live in those communities. The location-based features that are provided by some of these apps are intended to provide users with information that is specific to the context in which the device is being used.

2. For an organization to be able to accomplish its mission in the most effective and efficient manner possible, it is imperative that enterprise-focused apps are developed in order to facilitate this goal. The best and most efficient way to do so is through this method, which is the best and most efficient. Through the use of these apps, it may become possible for an organization to streamline existing practices that are already in place and be able to significantly transform the internal administrative processes within the organization through these apps in a more positive direction through the use of these apps. I believe that there is a need to establish enterprise security standards that specify that apps inside the firewall of the enterprise should be operated in a secure manner, and also ensure that the enterprise's security standards are followed as well. There is no doubt that enterprise-oriented apps are capable of performing a wide range of functions, but despite the fact that they are capable of performing a variety of functions, they are more useful to streamline internal field operations than to streamline external field operations, regardless of how versatile they are. Smart phones and tablets have the ability to be used in the field to interact directly with an organization's database system, which is also known as the computing system located inside the organization's data center, which is referred to as a computing system. Using the organization's app, which is available for smart phones and tablets, users will be able to access their systems directly from their mobile devices. These apps offer a lot of advantages, especially for front-line workers, since they are able to access and report information in real time without having to leave their desks and this is especially beneficial to their job performance, since they are able to access and report information in real time without having to leave their desks. Firefighters, foster care workers, law enforcement officials and field inspectors are just some of the first responders who work in the field, such as emergency responders (firefighters and other emergency workers), foster care caseworkers, law enforcement officials and field inspectors.
3. It is important to recognize that there are a number of paths that are followed during the process of designing an app, and it is important to acknowledge them. As entrepreneurs become more aware of the potential of mobile applications, they either develop them in-house or contract them out to experienced web design companies in order to help them get started in the development of mobile applications. To implement a top-down strategy, agencies are mandated by the federal government to introduce at least two mobile applications targeted at their customers as part of the top-down policy. With the help of a new policy tool developed by the federal government, civic hackers are being encouraged to develop health-related mobile apps based on open government data from HealthData.gov, combined with citizen input on what they would like to see. Using this policy instrument, referred to as "Prizes and Challenges", civic hackers are encouraged to design mobile applications relating to health matters. There are a number of major obstacles which must be actively managed by the agencies in order to be able to effectively promote mobile apps on their websites and within their app stores in order to be able to effectively promote mobile apps throughout the development process as well as on the companies' websites.
4. In general, the development of Smartphone Apps is a task that is primarily carried out by government agencies, independent agencies, government secretaries, and individual citizens who have access to government resources. There is evidence that smartphone applications have the

potential to improve transparency, accountability, government efficiency, and economic development through an increase in transparency, accountability, and efficiency as a result of improved transparency, accountability, and efficiency in the smartphone industry. People around the world, especially younger generations, are increasingly using smartphones to access the Internet as opposed to computers as their preferred method of accessing the Internet. It is not an easy task for governments to create applications for smartphones that satisfy the expectations and needs of the people since they have to develop applications that are highly mature in order to be successful. The design of smartphone applications must be based on the needs and expectations of the users in order for them to be effective. There is therefore a need to place a greater emphasis on the quality of the work rather than the quantity of the work that is done. For a smartphone to be truly useful, it must address the most significant aspects of people's lives in order to reach its full potential. An example of this would be the provision of location-based and context-aware services as an important element of government service provision, particularly in disaster management situations. Due to the enormous penetration rate of smartphones equipped with GPS systems, this type of service is becoming more and more popular as a result of the increased use of smartphones equipped with GPS systems. There are also a number of factors that will have a bearing on the level of satisfaction users have with their smartphones. Several factors play a crucial role in determining the level of satisfaction with smartphones, including the features of the smartphone, the enthusiasm for its use, and the purpose for which it is used.

5. In this article we are going to explain how emerging technologies can be used to support the development of mobile apps that can be developed using emerging technologies as part of the development process. This can be seen in many areas, for example social networking, new generations of mobile devices and services, geographical localization tools, crowd-sourcing tools, modeling and visualization, semantic web, the internet of things, cloud computing, and so on. By giving users a stronger voice in the process of designing, delivering, and personalizing the services that they consume in the future, these approaches can enable users to play a much more active role in the design, delivery, and personalization of the services that they consume in the future. To create a service value chain that is open, transparent, engaging, and porous that is open to a variety of stakeholders, intermediaries, and channels, as well as a more open, participatory, and porous form of governance, a change in the back-office is also needed, as well as an open, participatory, and porous form of governance.

Methodology

A survey and interview were conducted with 150 people who used the government's mobile apps to find out how they found them. In an attempt to investigate how scientists understand their own explanations and motivations for changing their practices in the face of these changes, the author conducted a series of surveys to examine how they interpret these changes. Based on our findings, the author conducted a series of surveys in order to gain a better understanding of how people interpret the changes in their practices that result from our findings. A survey was sent out to the participants in order to assess their attitudes towards institutional politics; their use of mobile apps launched by the government, their perceived benefits to people, as well as their impact on economic well-being. In order to measure whether expectations were met following the implementation of the program, a survey was

conducted after the process had been completed. As a means of forming a conclusion, we compared them with those that had developed after the start of implementation in order to be able to form an opinion.

As a result of the increased use of government mobile apps, the economy has been impacted significantly, and government mobile apps have played an important role in many fields. As part of the survey, respondents were asked to rate the questionnaire on a five-point Likert scale, from 5 points (strongly agree) to 1 point (strongly disagree) on a five-point Likert scale. Based on the above scale, respondents were asked to indicate their level of agreement with the following statement according to the scale above. Using Cronbach's alpha as a tool to determine the validity of the questions, we calculated the reliability of the questions. It has been calculated by SPSS for the reliability statistics that Cronbach's alpha for the 20 items in the questionnaire of the paper titled "Evaluating the Competitiveness of Government Mobile Apps: An Assessment of Their Impact on Economic" is 0.751 as calculated by SPSS for the reliability statistics. As a result of these results, it can be concluded that the data are reliable and suitable for further analysis. There is no doubt that this value is far above the minimum value of 0.6, since it is well above it.

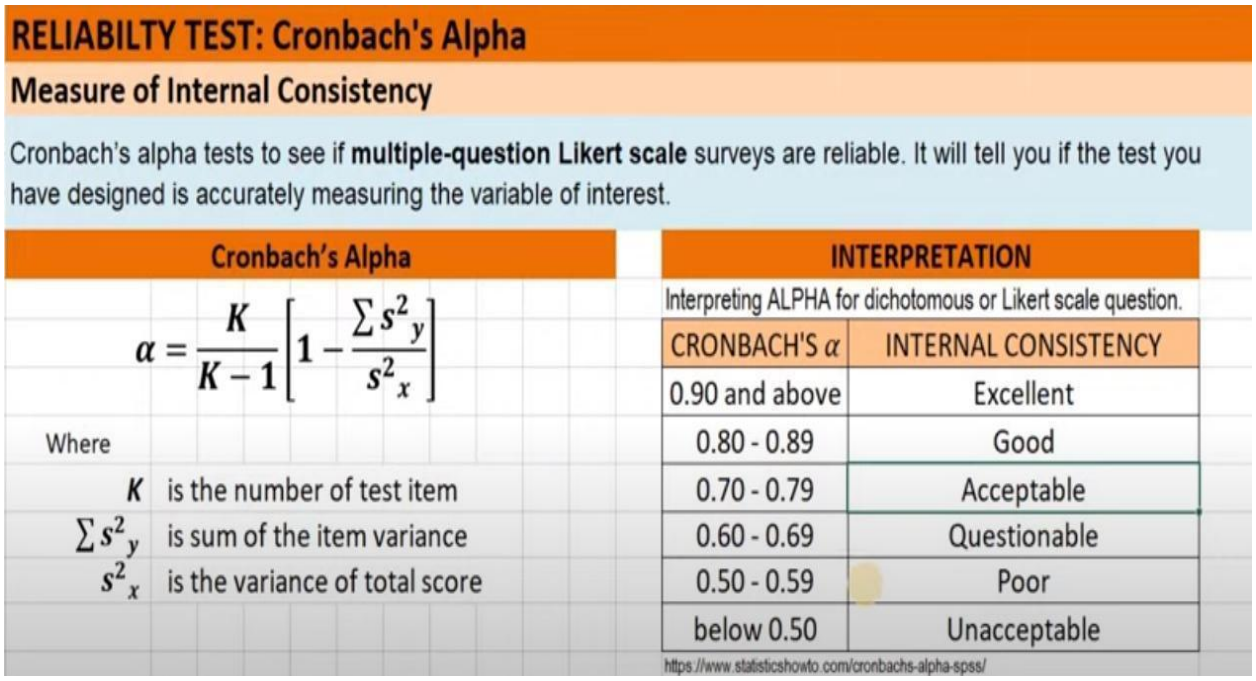


Table - Reliability Statistics

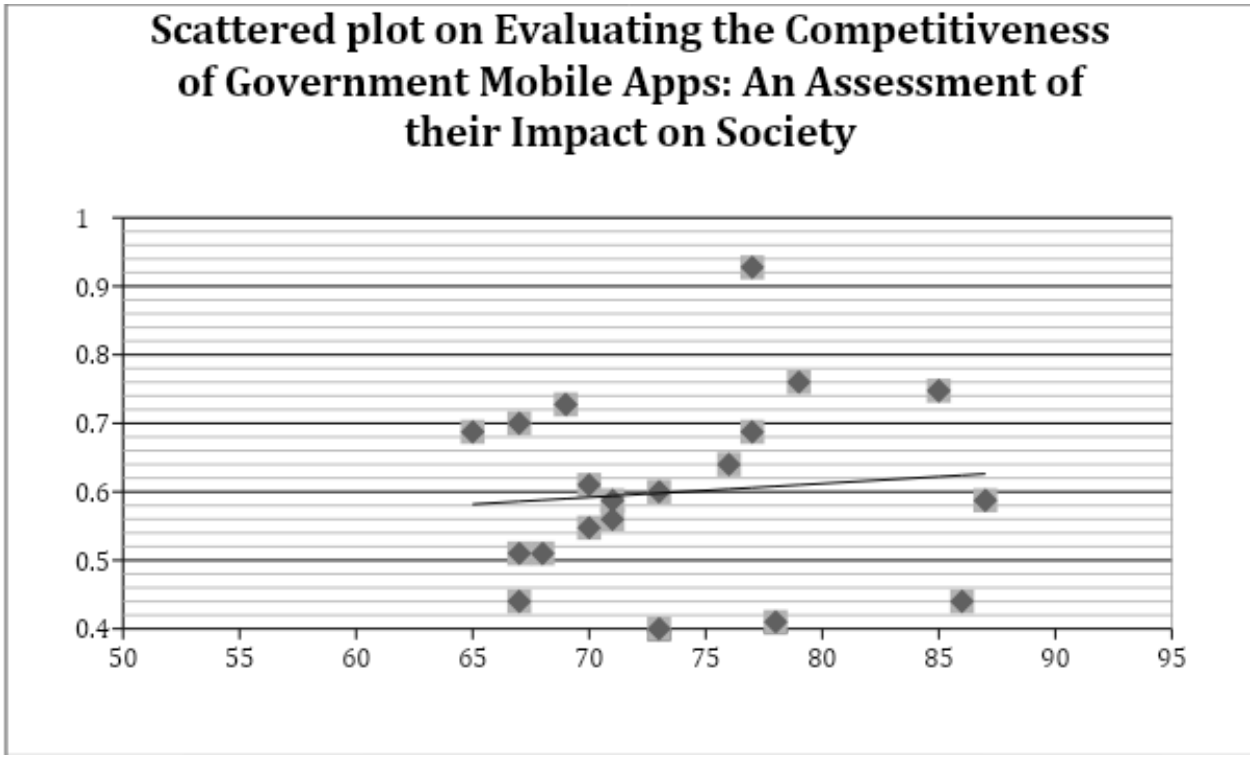
Cronbach's Alpha	N of Items

.751	20

Data Collection

1. **Primary data:** These primary data were collected from the selected samples of participants using government mobile apps and based on a questionnaire consisting of 20 questions asked to them about the impact that such apps have on the economy as a whole, based on the questionnaire.
2. **Linear Regression:** The primary objective of the study was to prove or disprove a correlation between the competitiveness of government mobile apps and their impact on the economy by using the former as an independent variable and the latter as a dependent variable. In the study, a simple linear method, which is considered to be a statistical method, was used to establish a strong relationship between the two variables. In order to illustrate the general flow of the points based on the x-axis and the y-axis of the questionnaire as well as the results of the analysis in Excel, the data from the questionnaire as well as the analysis in Excel were used. In this study, there is a strong correlation between the competitiveness of government mobile apps and the effect they have on economics, as indicated by the regression line, where the y-intercept is 0.002 and the m-intercept is 0.45, as indicated by the regression line. A slope can be defined as the difference between two points on a line divided by the difference between two points on the line.

Fig – Linear Regression



Conclusion

In order to design mobile applications for governments, there is still a long way to go, as there are still a lot of things to learn for the benefit of the national economy when it comes to designing mobile applications. In light of the increasing use of mobile devices, public agencies are beginning to adopt a "mobile first" strategy as their use of mobile devices becomes more widespread as a result of the proliferation of mobile devices. In order to determine which online services would be the most valuable on a variety of mobile devices, all levels of government need to conduct a strategic assessment of the online services they offer. It is also important to engage the public in determining what services would be most beneficial for the economy, as well as at all levels of government, including the federal, state, and local levels. In light of the fact that there are so many different types of mobile devices available on the market and that there are a great number of app design considerations that must be taken into consideration, it becomes imperative to design apps that can work on all of these different types of mobile devices. It is important to consider both the strengths and limitations of a government mobile application. The use of smartphones and applications has led to a significant increase in citizen participation due to an increased use of smartphones and applications. There has been an increase in the intensity of dialogue and electronic participation among citizens and politicians alike as a result of the penetration of social media and mobile devices among citizens and politicians alike through the use of social media and mobile devices. The research has been concluded that the use of M-Government combined with ICT tools increases social capital and civic engagement, while the use of smartphones when combined with M-Government has a detrimental impact on civic engagement in recent years.

References

Barbará, D. (1999). Mobile computing and databases-a survey. *IEEE transactions on Knowledge and Data Engineering*, *11*(1), 108-117.

Baisya, R. K., & Tiwari, S. P. (2008). E-governance Challenges and Strategies for Better-managed Projects. Emerging Technologies in E-Government, 203-208.

Caceres, R., & Iftode, L. (1995). Improving the performance of reliable transport protocols in mobile computing environments. *IEEE journal on selected areas in communications*, *13*(5), 850-857.

Chalmers, D., & Sloman, M. (1999). A survey of quality of service in mobile computing environments. *IEEE Communications surveys*, *2*(2), 2-10.

Forman, G. H., & Zahorjan, J. (1994). The challenges of mobile computing. Computer, 27(4), 38-47.

Joseph, A. D., Tauber, J. A., & Kaashoek, M. F. (1997). Mobile computing with the Rover toolkit. *IEEE Transactions on computers*, *46*(3), 337-352.

Schilit, B. N., Adams, N., Gold, R., Tso, M. M., & Want, R. (1993, October). The PARCTAB mobile computing system. In *Proceedings of IEEE 4th Workshop on Workstation Operating Systems. WWOS-III* (pp. 34-39). IEEE.

Satyanarayanan, M. (1996, May). Fundamental challenges in mobile computing. In Proceedings of the fifteenth annual ACM symposium on Principles of distributed computing (pp. 1-7).

Tiwari, S. P. (2011). Diversity and its importance in today's corporate environment.

Tiwari, S. P. (2014). Editorial: Project and Technology Management Foundation (PTMF) Newsletter.

Tiwari, S. P. (2014). Exploring the Linkage between a Successful Digital Campaign and Gaming.

Tiwari, S.P., & Baisya, R.K.(2014). E–governance and its impact on enterprise competitiveness: Trends, Status and Challenges. MDI, Gurgaon INDIA in Association with Australian Centre for Asian Business, University of South Australia, Adelaide, AUSTRALIA, 108.

Tiwari, S. P. (2015). Strengthening E-Commerce Product Launches-Improving Efficiencies from Development to Production. Project And Technology Management Foundation (A Non-Profit Organization) Member of Asia Pacific Federation of Project Management, 1(2), 4-6.

Tiwari, S. P. (2015). Editorial: Project and Technology Management Foundation (PTMF) Newsletter, 3-1.

Tiwari, S. P. (2015). Knowledge Sharing and Content Creator Best Practices Online.

Tiwari, S. P. (2017). Emerging trends in soybean industry.

Tiwari, S. P., & Tiwari, S. P. (2018). Is export-oriented and currency dynamics-based Indian soybean revolution environment-friendly. Current Science, 114(08), 1604-1605.

Want, R., Schilit, B. N., Adams, N. I., Gold, R., Petersen, K., Goldberg, D., ... & Weiser, M. (1996). The PARCTAB ubiquitous computing experiment. In *Mobile computing* (pp. 45-101). Springer, Boston, MA.