

# Government Guidelines to Transform the Online Shopping Experience for Customers

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## ABSTRACT

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Digital Transformation and Innovation are always essential parts of continuous growth in any field and business, through which any business model can adjust and adapt to the ever-changing world. E-Commerce is also one example of it, which in the past decade has been a smart way because of the online shopping experience, but after covid-19, its importance has increased even more. That is why we believe that in order to make E-Commerce relevant in the future, it is crucial to make innovations in it to transform it according to the customer requirement. So, This Article will give guidelines and direction from the government end to Private Sector in order to change the dynamics of Online Shopping and make it adaptable according to future technological advancement and expectations through different ideas that we will be going to discuss here. We will clarify through findings here that it is vital to emphasize now, and planning for it accordingly will provide ease and an advantage over others in the future. We attempted to map out each stage of online and offline purchasing in order to detect any gaps that may currently exist. The causes of the gaps were uncovered, and eventually, ways to automate the process and incorporate it into the online shopping experience were discovered, which we will discuss in detail in paper. As a result, the key to this study is government research, which is then implemented as recommendations to the private sector to continue improving the online shopping experience.

*Keywords:* Artificial Intelligence, Bargain, Algorithm, E-Commerce

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## 1. INTRODUCTION

In this information age, people around the world have experienced drastic changes in different ways of day-to-day activities done previously. It evolved every aspect of human life and gave them more ease and services through the invention of so many digital solutions. Out of Many revolutionary things are being done, the one of the highlighted solutions of them was the creation of E-Commerce. The E-commerce Technology really changed the way of traditional buying and selling shopping of items are being done by customers; it just shifted the same flow process to a digital space environment. So, now customers can able to find the brands or shops or outlets which they like, then can easily search for the product or item of their choice. Also, they can book the order and ask for the item of their need, and finally, the product will come to their doorstep, where they can pay for the items they ordered [1].

This means everything is being done and processed online, and customers don't have to go anywhere. They just sit in their house and can ask for anything online, and the thing will come to them. This is the biggest advantage of Ecommerce, which made this technology viable and successful. Ecommerce provides the customer's comfort through the option to order anything from anywhere at any time. It also saves time and effort for customers who usually have to make to do shopping by going out and then traveling to the shopping mall and visiting shops to shops trying to find the correct product, and finally coming back again to the house with the buying items. This whole process takes lots of time and effort. But with Ecommerce, they can do the same thing anywhere with few clicks. It even gives the customer flexibility and information through which they can view any product of their need and find with it detailed information about it, that what are its

features, what are its qualities, what are the customer reviews on it who previously bought it, and also, they can compare the prices and make decisions to buy it [2].

All these things of information were previously human-dependent, which they got from the shop employee when they will physically visit the shop. But now all info is openly available, which gives customers confidence about the product they are about to buy. The researchers in this paper so much appreciate the achievement being done by Ecommerce, but at the same time, raising the question of the future of Ecommerce that what is next, and what customers will want to have in it for the future. Because we believe so many times, people get this misconception about technology evolution that technology gets better from time to time automatically without any effort and technology will only continue to get better with time, and it does not deteriorate, which in actuality is not correct for the majority of the cases like take the example of Moon Landing done at 1969 and after we couldn't be able to advance this space travel technology, and after that, we haven't able to go back to Moon again. It shows us clearly that without having the vision and the proper continuous research behind the technology, technology can't be able to become advanced on its own; instead, it gets weak and becomes irrelevant with time passed by.

That is the reason we believe that for Ecommerce technology sustainability, we have to work from now to find the options and ways to make it better and to make it sync with the time so it can sustain and survive in the future and meets the customer expectations. In order to do it, we have done extensive research and studied the current way of Online shopping [3] and then compared it with offline shopping, which customers do physically by visiting the shopping mall. We have tried to map out each step of online and offline shopping and then try to find the gaps areas which are currently in it. Then we found out the reasons for the gaps, and then finally, we have found ways to automate it and make the missing process part of the online shopping experience, which we will discuss in detail in the paper. So, research from the government end and then implementation of it in terms of guidelines to the private sector to keep evolving the online shopping experience is the key to this research. The world of online shopping has experienced tremendous growth in recent years.

As a result, governments around the world have been working on developing guidelines to improve the online shopping experience for customers. These guidelines aim to protect the rights of consumers, ensure their privacy, and provide them with an easy and seamless shopping experience. The new measures include regulations on product quality, delivery services, and consumer protection. This article will delve into the latest government guidelines and how they aim to transform the online shopping experience for customers.

## 2. LITERATURE REVIEW

The main terms that will be used in the articles will be covered in this section.

### 2.1 *Online Shopping*

Online shopping, sometimes known as e-commerce, is the process of looking for and buying products and services using a web browser to access the Internet. The fundamental draw of internet shopping is that customers can locate and buy the products they need without ever leaving the house (and have them delivered to their front door). Today, practically everything can be purchased online, generating billions of dollars in sales each year [4]. Today, the majority of brick-and-mortar stores have websites where customers can shop online and either have their purchases delivered to their homes or picked up at a nearby store. This kind of buying experience is provided by Walmart, Best Buy, Sears, and other retailers. Some businesses do not have physical stores; instead, they primarily offer goods online. Examples include Amazon, TigerDirect, and NewEgg, which only do business online. Intershop Online, an online shopping software system created in 1995 by Intershop Communications AG, was used by many of the early websites for online buying [1]. The Intershop

Online program helped companies add e-commerce or online purchasing features to their websites more quickly and securely for their customers.

### *2.2 Algorithm*

An algorithm is a process used to carry out a computation or solve a problem. In either hardware-based or software-based routines, algorithms function as a detailed sequence of instructions that carry out predetermined operations sequentially [5]. All aspects of information technology employ algorithms extensively. A simple technique that resolves a recurring issue is typically referred to as an algorithm in mathematics and computer science. Algorithms are essential to automated systems because they serve as specifications for processing data. An algorithm may be employed for simple tasks like sorting lists of numbers or for more challenging ones like suggesting user content on social media [6]. The starting input and instructions for an algorithm's computation are often provided. When the calculation is finished, an output is created.

### *2.3 Artificial Intelligence*

The main drawback of describing AI as merely "creating machines that are intelligent" is that it fails to define AI and explain what constitutes an intelligent machine. Although there are many different approaches to the interdisciplinary science of artificial intelligence (AI), advances in machine learning and deep learning are causing a paradigm change in almost every area of the tech industry. A 2019 research study titled "On the Measure of Intelligence" is one example of a new test that has been suggested recently and has generally received positive reviews [7]. In the article, François Chollet, a seasoned expert in deep learning and a Google employee, makes the claim that intelligence is defined as the "pace at which a learner transforms their existing knowledge and experience into new skills at worthwhile activities that include uncertainty and adaptation." In other words, the most intelligent algorithms are able to predict what will happen in a variety of situations with only a tiny quantity of experience [7]. In contrast, Stuart Russell and Peter Norvig address the idea of AI by organizing their work around the theme of intelligent agents in machines in their book *Artificial Intelligence: A Modern Approach*. In this light, artificial intelligence (AI) is defined as "the study of agents that acquire perceptions from the environment and perform actions."

### *2.4 Metaverse Technology*

The Metaverse is a spatial computing platform built on blockchain technology that offers virtual worlds that may be used as an alternative to or a copy of the actual world, complete with social interactions, money, trade, and property ownership. It seems acceptable to compare the Metaverse to the internet in the 1970s and 1980s [8]. As the framework for the new communication form was established, speculation about its appearance and intended use developed. Many people talked about it, but few knew what it meant or how it would work. In hindsight, things did not turn out quite as some had hoped. But as the market for the Metaverse is expected to reach \$800 billion by 2024, it's time to clarify this hazy and convoluted phrase. Tech behemoths, including Facebook, Microsoft, Apple, and Google, are making significant investments to make it a reality. A browser, a smartphone app, or a headset can be used to access the 3-dimensional worlds that make up Metaverse. People could engage and experience things in real-time while separated by great distances. The result will be a huge ecosystem of web applications [9].

### *2.5 Bargain Shopping*

There are numerous methods of shopping. Some people regard shopping as a chore and treat it as such. These customers go to the store, buy what they require, and then depart. Others simply enjoy shopping. These people can spend a whole day window shopping and buy absolutely nothing. To some, myself included, shopping is a blend of both of the above described [3]. Shopping for a deal is what I prefer to refer to since it implies that you are looking for the finest deal possible in addition to the thing you desire. It mixes having a clear idea of what you want with searching around to find the greatest deal. Here are a few various strategies that may be employed when

shopping for apparel to guarantee to get the greatest deal. Of course, there are newspapers stuffed with vendor adverts offering a 25% discount on everything in the store [2]. This site is useful for getting an idea of what one wants and for starting the search for the greatest deals.

### 3. METHODS

The studied data were in a textual format; hence this research used the "qualitative research" approach. Since we didn't use the definition's phrase precisely as it is written but instead modified it in our words, we used the in-direct citation method for the literature review. The "NVIVO Software' Technique, which we used to evaluate the study data, is a valuable way for reviewing the data from qualitative research. To that aim, we were given information from research articles on the subject, and after using a procedure to glean the main idea from them, we delved even more to unearth the subjects covered in the result and discussion section. This article will analyze the government guidelines that aim to transform the online shopping experience using NVIVO software. The first step in the research method was to identify the relevant government guidelines related to online shopping.

The NVIVO software was used to collect and organize the data from various sources such as government websites, reports, and articles. The data was then coded and categorized based on the different types of guidelines. One of the government guidelines that have been implemented to transform the online shopping experience for customers is the introduction of data protection regulations. The NVIVO software was used to analyze the impact of these regulations on the online shopping experience for customers. The data showed that the introduction of data protection regulations has helped to increase the level of trust between customers and online retailers. This has resulted in increased customer satisfaction and a higher level of customer loyalty. Another guideline that was analyzed using the NVIVO software was the introduction of consumer rights and protections.

The data showed that the introduction of consumer rights and protections has helped to increase the level of trust between customers and online retailers. This has resulted in increased customer satisfaction and a higher level of customer loyalty. The NVIVO software was also used to analyze the impact of the government's efforts to improve the delivery and returns process for online shopping. The data showed that the introduction of streamlined delivery and returns processes has helped to increase the level of trust between customers and online retailers. This has resulted in increased customer satisfaction and a higher level of customer loyalty. Finally, the NVIVO software was used to analyze the impact of the government's efforts to improve the payment processes for online shopping. The data showed that the introduction of secure payment processes has helped to increase the level of trust between customers and online retailers. This has resulted in increased customer satisfaction and a higher level of customer loyalty. The NVIVO software was an effective tool for analyzing the impact of these government guidelines on the online shopping experience for customers.

### 4. RESULTS AND DISCUSSION

To Transform the online shopping experience, it is very important that Ecommerce sites should interact and engage with Online users in a better way, which provides them with better service and also give them features that are value-added for them. In Order to do that, an out of box thinking and approach is needed, and for it, research and innovative development required to be done. That is why the government can play a role in order to guide and invest in research to trial and test the solutions which will decide the future of online shopping and then outsource it to the private sector to want to implement it. So, the following are the solution defined below;

#### ***4.1 Bargaining Feature for Customers in Online Shopping***

The major difference between online and physically visiting a Shop for shopping is the bargaining interaction that you can make with the shopkeeper and come to a conclusion about what actually customers want and what item is best suited for them. That is the reason that Bargaining interaction between Online Shoppers and Online Customers needs to be made part of the online shopping experience. In Order to do it, there are the following ways which can make possible this communication which are;

##### ***4.1.1 Bargaining Powered by Hard-Coded Algorithm***

One of the ways to make it conceivable is to create a hard-coded algorithm in the back end of Online shopping, which will cover all the possible scenarios about what Customers usually ask when they doing their shopping and what are the possible answers of it. To do it, firstly and session needed to be done with the Online Shops and take feedback from them about it and then compile those feedback and do programming of it accordingly. So, when it is implemented, then there will be an option for Online Customers against any Online Item on the Ecommerce Site, through which they can type and ask questions regarding the item they want to purchase and also they can negotiate the rates of the items, so based on the hard-coded replies they can get information of the items and also they can negotiate rates of the items with hard values that how much the cost can get down of item based on the feedback of online shopper coded behind the bargaining feature. The replies will constantly be updated and revised based on the feedback of online customers, and also new replies will be added to them.

##### ***4.1.2 Bargaining Powered by AI-Based Solution***

The other way to make the same flow of engagement between Online customers and Online shoppers is to create an AI-based (Artificial intelligence) solution, which means instead of hard coding all the replies, we can get the help of AI and generate answers based on the questions of Online customers and try to find and prepare the best possible replies. In that way, the constant updating of code according to the feedback will be minimized by automating it, and also possible questions will also be searched based on analytics and made part of the Bargaining interaction solution even without the customer being asked the question so through this proactive approach interaction will be fully automated without manual interventions, and also a customer will always get a reply the scenario of a customer not get a reply due to the asked question haven't been hardcoded in the solution will be minimized. The bargaining on the rates also will be handled innovatively with the strategy to meet the customer budget, and if not, then suggest to the customer on runtime what item matches the customer budget and also its requirement.

##### ***4.1.3 Bargaining Through Real-Time Chat***

The last proposed technique to create this Bargaining solution is to make a seamless communicating channel between online customers and online shoppers. So, instead of hard-coded replies or AI-based replies, we just create the channel through which Live Chat can be possible, so from both ends, the question and answers will be given in real-time. In that way, replies from Online Shops to the customers will be more accurate and personalized, and it will increase the chances of successful orders from customers. If we add video chat also in it, then it will enhance the experience better then. Online shoppers can give a tour of the shop to the customer and show the items in a video call. With its help of it, overall online shopping will become good, and also this solution can be merged with the above-mentioned solutions within working hours. Online Shoppers can take questions from customers themselves, and after, they can be transferred to Hard-Coded or AI-Based replies. Just one restriction in it that Online shoppers have to have many resources in order to handle the chats from Multiple customers at the same time. That is why a hybrid solution with Hard-Coded and AI-based replies will make this solution work

#### ***4.2 Online Shopping Through Metaverse Technology***

Future Online Shopping will become more interactive and will change its dynamics forever by making Online shopping available from everywhere through Metaverse Technology. So, Online

Customers don't have to visit Shops physically, and with the help of Metaverse Technology, Online Customers Virtually will be done. The reason for Online shopping is been preferred by customers because they don't want to go out and they want the items to come to their home, but for this ease, they just have to compromise on the Online shopping experience, but now with Metaverse Technology, that gap will also be filled. With the help of Metaverse, Online Customers can shop on e-commerce sites regardless of how far or close they are physically from the physical store or whether they are in another city or country. They simply need to put on their Metaverse Technology headset, visit the Store virtually, and on another end, the Shopper also wears the same Metaverse Technology Headset. Soon they get a notification that the Customer is available for shopping virtually, then the Customer will check items, and the Shopper will give him the tour and facilitate him to picking items similarly as it is done on the Customer's Physical visit. Also, customers can run or, in terms of clothing, can wear the dress virtually to see how it will look good and fit.

#### ***4.3 Customer Chooses Order Delivery Partner and Time***

It is also the new effective feature to be given to Online Customers by Online Shoppers to provide them the flexibility to choose the time of their Online Ordered item delivery according to their time of availability. With it, Online Customers also have the option to choose the Delivery Agent of their choice based on their past experience of Receiving Online Order but some cases it will not be applicable in every case because many e-commerce sites don't outsource their delivery operations to third parties, but if they do, then it will be a great option for Online Customers. But Choosing the Delivery Time of their choice will always be efficient in every case and help customers to receive Online Order easily and also decreases the possibility of Delivery Attempt Failure. A superb online shopping experience will be developed as a result of providing such a feature to customers, which will help them to continue their buying commitment towards online shoppers.

#### ***4.4 Chat with Visiting Customer***

With the Help of This Feature, Online Shoppers can Chat with Customers who are Visiting the Ecommerce Website even before they pick any item; customers just open the link and look or searching the items. So, Online Shoppers can find Customers looking for the items searching but confused, so Online shoppers can play the role of Guide through this feature and can talk to Customers and Guide them to Buy or Choose Products effectively according to their needs without wasting time on finding them. It will Create a Win-win Situation for Customers and Shoppers. Customer Can Easily Find the Right Product, and Shoppers can create Sales.

#### ***4.5 Loyalty Subscription Program for Customer***

Also, one of the effective growing features which some Online Shoppers are providing to Customers and which needs to be provided by everyone is the Loyalty (Subscription) Program. So, with this Subscription, the Customers who regularly buy items from a Particular eCommerce site will sign up for their customer loyalty program and will pay small monthly charges, in return e-commerce site will give the customer some value-added features as a reward for being a regular customer and also being the member of its loyalty program, which can be following;

- Customers don't have to pay any additional delivery charges for orders and get FREE Delivery Services on ordered items.
- Special Discounts and Coupons for buying products.
- Fixed Discounts on Products ordered Online.
- Value Added Services on Delivery orders like Open Parcels, Order Returns, Order exchanges, Reverse Pickup, etc., will be provided.
- Other Features like free campaign products, referral codes, or links to help them get incentives or gift cards, etc., will be given for being a valued member.

In this way, the customer will stay loyal to the online shoppers, and in return, the Customer will get benefits from them so that a great online shopping experience will be created.

## CONCLUSION

Overall, our results demonstrate a strong commitment towards the creation of an outline that will transform the Online shopping experience through E-commerce websites or Mobile applications for Customers or consignees. It is essential in order from time to time to bring changes and innovations to the features and services being given online, so not only does the technology gets better and better through it, but also technology gets relevant with ever-changing time. That is the reason we have stressed the need to transform online shopping way by adding new interactive and interesting features, and through the research which we have done in this field, we have been able to find and develop some ideas which can be exciting for the future of e-commerce shopping and presented in detail with the concept behind it and also the need which it will fulfill of the customer. the government's guidelines to transform the online shopping experience for customers is a step in the right direction. It seeks to address the challenges faced by online shoppers, such as security concerns, lack of trust, and lack of transparency.

By providing clear and concise guidelines, the government can help online retailers to improve their services and customer satisfaction, and help to grow the online retail industry. With the proper implementation, the government's guidelines will provide a safer and more convenient online shopping experience for consumers and encourage the growth of e-commerce in the country. Overall, these guidelines are a valuable resource for online retailers and customers alike and will play a crucial role in the continued growth and development of the online retail industry.

Therefore, the government will provide guidelines and necessary expertise support in order to help the private sector of e-commerce to grow their business and increase their customer base, and government can also work and develop the features on their own and can outsource them to the private sector and also can work with the private sector to develop these features. Either way, if the innovation is done and is successfully implemented, then it will give a technological advantage to the country over the world. So, let's see who takes the initiative first and acquire the market.

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