

Metaverse in E-Commerce

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I. Introduction

Metaverse is a futuristic technology consisting of a virtual universe where people interact with each other through avatars. It is a form of cyberspace where individuals can immerse themselves through Virtual Reality (VR) and Augmented Reality (AR), which could be accessed through tools like VR goggles, NFT galleries, etc. With the evolution of the ecommerce industry in recent years, adoption of metaverse is emerging as a unique shopping experience which provides customers with virtual stores, virtual agents, near-reality tryouts, etc. which not only makes the customers feel confident about their purchase but also keeps them engaged. With metaverse ecommerce, transactions are also secured by block chain technology which makes it secure for both customers and businesses.

Slowly, businesses are moving towards the digital world which is elevating the e-commerce industry, and with the introduction of metaverse in e-commerce, transformation with respect to how businesses conduct business and how consumers participate is taking place. The metaverse will eventually become an alternate reality for people to exist in as it continues to grow. The Consumer Protection Act of 2019ⁱ regulates businesses in general to stop them from engaging in unfair business practices. It would be very difficult to enforce and regulate these practices in the metaverse. As numerous individuals and marketplaces have already reported, digital avatar abuse and harassment occurs frequently in metaverse encounters.ⁱⁱ Since digital avatars are anonymous, it has always been difficult to deter crime in virtual environments.

Even though a few e-commerce marketplaces (like Amazon and Flipkart) have begun to adopt metaverse-related technologies, these technologies are still in the early stages of development and will eventually reveal a universe of metaverses to us, changing the way consumers interact with brands, shop, and make decisions about what to buy. However, the Metaverse is still in its early stages of development, and much work in this subject still remains. When interactions in the virtual world increasingly resemble those in the physical one, there will inevitably be legal concerns around data security and privacy, consumer protection, antitrust, intellectual property rights, and digital currency. And to prevent the abuse of this very new emerging technology, requirement of new laws is paramount.

II. Adoption Of Metaverse In E-Commerce

The popular AR and VR technology is driving market growth of metaverse in e-commerce. Since shopping giants are incorporating these AR and VR technologies, customers are now able to make real time purchases through their all new shopping experience. This technology is not only benefiting the sellers by providing high sales value but is also providing consumers with a convenient and life-like shopping experience. *As per a report, the estimated growth of metaverse in the e-commerce market is more than \$60 billion by the year 2026ⁱⁱⁱ.* Additionally, customers are now able to get these services using blockchain technology enabling a competitive marketplace for businesses. Businesses may benefit from the low barrier to entry associated with virtual worlds and retain clients by utilizing the newest trends and technology available in the metaverse. Not only

this, businesses are now able to expand their reach to new customers all over the world without having a geographical barrier, which also allows the customers to purchase goods and services as per their needs and requirements.

The buzz of metaverse started in 2021 when Zuckerberg rebranded Facebook as Meta as a mission to help people grow their businesses and find their communities. Then, at the end of the year, Disney filed a patent for a “virtual-world simulator” in an attempt to create a virtual experience in a real-world avenue. As per Disney, this simulator will allow experiencing an augmented reality even without the need of headsets. The patent was granted by the US Patent Office on Dec 23, 2022. The automobile giant - Hyundai, launched their own metaverse space (Mobility Adventure) featuring their own mobility products and future solutions. This was a creative effort to establish long lasting relationships with their customers. Brands like Nike, Gucci, Coca-Cola, Microsoft, etc. followed with their own campaigns.

Talking specifically about the ecommerce industry, brands like Amazon and Walmart weaseled their way into the metaverse space to increase engagement and sales. With Amazon's “AR view” feature, customers can now design and decorate their homes with Augmented Reality. As of now, this feature is limited to furniture and home decor products, but the same has helped in a boost in their sales over time. Walmart, on the other hand, announced their plan to acquire Zeekit, an Israeli company that consists of a virtual fitting room in order to provide their customers with an enhanced personalized experience. Walmart also has announced that it will be launching their own cryptocurrency in furtherance to sell virtual appliances.^{iv} Infact, Amazon, as a part of their promotions, pioneered the “Amazon Metaworld” in India at the Amazon Great India Festival where it presented their own physical experience centers where people could create their own virtual avatars and participate in various games with other players^v.

However, if we look into adoption of metaverse in the Indian market, it is yet in an emerging phase. India is yet to cope up with the developing technologies, as even the regulatory position on the

use of virtual digital assets is still unclear. Other factors like limited understanding of the technology, risks associated with investment and concerns regarding privacy also exist. India's ecommerce giant, Flipkart launched their own metaverse “Flipverse” which is an interactive space for customers where other brands like Puma, Nivea, Campus, etc are collaborating to set up their own experience theaters. Though this offering is still at an experimental stage, the company is confident that with the growing interest in Metaverse, it is definitely going to become a big hit. Though undoubtedly, India, being among the top five global markets is home to a massive user base of video games, social media users, and ecommerce websites, and thus once the country starts creating its user base in the metaverse space, it is likely to play a major role in the growth of the new technology.^{vi}

III. Legal Areas Impacted By Metaverse/Key Challenges

Considering the growth of engagement over Metaverse, issues revolving around various sectors like data protection, consumer protection, intellectual property, etc. are bound to happen. People have started to invest substantially in digital assets to facilitate their migration into this virtual world as a result of information technology powerhouses like Meta and Google's interest in establishing the metaverse. This necessitates that all governments pay attention to and start planning for the impact of virtual worlds on the future.

- **Data Privacy and Security:** While the engineering powerhouses in India have great plans for emergence and growth of Metaverse, it comes along with its share of risks and concerns. The AR-VR technology requires data concerning an individual's biological and personal information. This could be a big threat to one's privacy and security as the players in these businesses will have access to these personal data. Since such personal data is being collected for accessing these technologies, it would fall under the definition of “sensitive personal data” under the IT Rules, 2011.

Putting under the umbrella of Section 69 and the IT rules, the Indian government can monitor the storage and use of such personal data and can take actions against the businesses if they are misused or not complied in any manner.^{viiiviii} The Information Technology Rules, 2011 also necessitates companies to incorporate a code of compliance consisting of security plans, privacy standards, information security policies and other such measures for safeguarding consumers from potentially hazardous contents.

- **Intellectual Property Rights Infringement:** An interface between Intellectual Property Rights and the Metaverse is again an immensely important concern. As already discussed, the very primary component of the metaverse space is creation of individual avatars by people. Now, issues could occur when it would be difficult to identify the actual owner of an avatar or to determine controversies of fair use and fair dealing in the case of copyright, for example. Another issue could occur while dealing with NFTs. NFTs are assets based on objects like art, music, food or game items, etc. and are considered as unique and irreproducible. However, in India, NFTs are considered under the definition of Virtual Digital Assets, the law on which is still unclear in India. Due to the same reason, NFTs do not have intellectual property rights in India, even though the underlying work or object might have an ownership right but that is considered separate.
- **User interactions:** Considering metaverse to be an exact replica of the real world, situations involving civil and criminal violations which occur in real life can occur there as well. But the question here is, if such an altercation occurs, who would be held liable, what would be the procedure to determine an “offence” or a “civil wrong” and which authority would

determine the same, and whether rights and duties would occur there as well or not. For example, if there is a sexual harassment or identity theft claim on any metaverse space, we do not have any existing law to deal with such an issue and users can make benefit of such a grey area to commit crimes, as they would like. These are some of the issues which should be addressed by all the governments before metaverse takes a hit in general people.

- **Consumer Protection:** With the incorporation of metaverse space on ecommerce websites, consumers are prone to various risks and infringements as the existing legal regime is not competent to deal with such issues. For example, businesses are selling land on metaverse for thousands of dollars which is becoming very popular with time. The question here is whether virtual property/space could be regarded as “real estate” so as to apply existing statutes on them? Are people liable to pay taxes for such lands? As of now, these websites have not gained much popularity in the Indian market, however, convergence of metaverse and jurisdiction do not work together. If so, there would be another issue of extra territorial application of laws with respect to offences/violations over metaverse spaces which is yet to be addressed by the legislature.

To sum up, currently there is no specific legislation dealing with metaverse completely, which provides the legislature the right time to interfere as this technology is still growing in the country. Now since the law upon Virtual Digital Assets are being framed, it would be the right time to work on this subject matter alongside. Otherwise, once this field starts maturing, it would be difficult to govern the same without a strict legal framework in hand.

IV. Consumer Behaviour And The Need For Regulation

- A. *Virtual Commerce*: Virtual commerce is a kind of ecommerce that refers to buying and selling of goods with the help of Virtual Reality and Augmented Reality technology. It basically is a step forward than e-commerce where customers can engage in shopping in a virtual environment. Customers can explore the products displayed by the businesses using real-time interactions, touch and feel, talk to virtual assistants, just exactly a simulation of a physical commercial store. *Virtual commerce includes virtual consumption of virtual objects created in Virtual Worlds with virtual currency, or a mix of virtual-real content and payments.*^{ix} Even though these virtual stores are still rare, there are examples of various foreign businesses who have already tried their hand at this very new experience. *Homeplus*, a South Korean based retailer started back in 2011 with a shop consisting only of pictures of products available at the store, along with a barcode for each. Customers could just stroll across the store, scan the barcode and their job is done. Even more convenient, with the *Homeplus* mobile application, there is no need for the customers to even visit the store, they could just use the barcode to order and the selected products will reach the given address.^x This was the beginning of many new virtual supermarkets now existing in the South Korean market. In the year 2016, Chinese startup - *OnePlus*, created a virtual reality experience as a part of launching the *OnePlus 3* - their third flagship smartphone.^{xi} India's homegrown e-commerce marketplace, *Flipkart*, partnered with eDAO in order to launch its very own metaverse space - *Flipverse*, a virtual environment where customers can have an immersive shopping experience with features like "Try on" and "View in 360",

etc. In India, there may not be engaging experiences as compared to other countries, but the brands are looking forward to creating higher attention spans and increased engagement rates among users. *Comearth*, a Gurugram based developer, launched *NFTically*, an e-commerce marketplace where brands can create their own identity in the metaverse, find their target audience, and allow them to discover goods and services globally.^{xii} Other examples of Indian brands entering the metaverse market include *Eno* and *Bharti Airtel* who plan to soon engage their customer base with new experiences. To benefit from the advantages of an engaging and entertaining purchasing experience, transitions from current e-commerce structure to virtual commerce retail shopping are emerging.

- B. *Consumer behaviour in e-commerce*: With the increasing engagement of customers in metaverse e-com, brands are developing new strategies to explore and retain new customers by working on visual attractiveness and user experience. The metaverse platforms now enable users to experience the upgradation of previous websites with VR/AR, facilitating reality-based dialogues between users. This is made possible by technology advancements in web 3.0. In contrast to the actual world, the metaverse offers a variety of conscious distractions. Among many extended realities including avatars, geometrics, objects, brands, goods, tools, environments, and the visual haptics prevalent in the metaverse, consumer awareness may persist or flicker. The sheer variety of options available in the metaverse may cause consumers to focus on things they shouldn't be subconsciously or unconsciously.^{xiii} The affordances of Virtual Worlds were studied using a meansend analysis, which revealed that the pleasure experience was driven by learning about new items and social engagement, which were made

possible by 3D environments and multi-user settings, respectively.^{xiv} In fact, since Coronavirus happened, the consumer behaviour has changed drastically, shifting from the physical retail store shopping to doing all possible activities online, including shopping. Taking this as an advantage too, metaverse can act as a potential revenue generator for businesses by providing all star solutions to customers at their homes. In India, only a specific population is accustomed to ecommerce shopping since it is still a concern for people living in the rural areas. There are a number of products which consumers still prefer to buy from physical stores which gives them the assurance and satisfaction online shopping could never do. The process of delay in delivery when ordering products online is again an issue for Tier 3 or 4 areas. Accessing the metaverse spaces through VR goggles and haptics suits is again a luxury for a good number of people. Since such barriers still exist, it is tough to say what would be the pace of the overall population to get accustomed to this shift in technology.

- C. *Consumer Protection Practices:* Businesses in the real world are regulated under the Consumer Protection Act, 2019 but the issue is whether the same laws could be applicable here in metaverse space or not. As already discussed, it is tough to know the real user behind an avatar, and since transactions taking place over Web 3.0 are end-to-end encrypted, getting authorization to know personal details isn't an easy thing and overall governing the new technology is going to be a challenge for the existing legislature. However, Consumer Protection laws once updated as per the changing technology is bound to be applicable in the metaverse ecommerce as well. Since over this virtual commerce, buying and selling transactions are taking place, consumer protection laws cannot be overlooked. Section 2(7) of

the Consumer Protection Act defines a consumer as:

(7) "*consumer*" means any person who—

(i) *buys any goods for a consideration which has been paid or promised or partly paid and partly promised,.....[.];*

(ii) *hires or avails of any service for a consideration which has been paid or promised or partly paid and partly promised,.....[.]*

Thus, a consumer as defined in the act will also be applicable to virtual commerce. The explanation to this subsection also mentions that goods and services also include "*offline or online transactions through electronic means*" which clearly defines the application of the statute over transactions taking place in the metaverse. Logically, the Act is applicable over virtual commerce transactions, however, certain amendments in order to match the technological advancements is necessary. Defect and deficiencies in products and services are also defined in the said Act and such deficiencies can also cover the buying and selling of goods and services over virtual commerce.

Another apparent concern in the virtual world is the access to personal data of the individuals accessing these webspaces. While users are personified by these avatars, the data acquired is distinct from data collected in the actual world; it includes a wide range of information about the user. They may be used to gather data about a person's potential facial expressions, gestures, and reaction patterns during Metaverse engagements. The traceability of consumers will be considerably more sophisticated than in the physical world since facial expressions, gestures, or interactions may be recorded. Considering protection of

data in the context of Indian legislature, Section 43A of the Information Technology Act, 2000 enables provision for paying compensation for failure to protect data. The section reads as

*43A. Compensation for failure to protect data.—Where a body corporate, possessing, dealing or handling any sensitive personal data or information in a computer resource which it owns, controls or operates, is **negligent in implementing and maintaining reasonable security practices and procedures and thereby causes wrongful loss or wrongful gain to any person**, such body corporate shall be liable to pay damages by way of compensation to the person so affected.*

Reasonable security procedures must be followed as per the given section which includes protecting one's sensitive information from "unauthorized access, damage, use, modification, disclosure or impairment", however the term "sensitive personal information or data" has not been defined in the Act. Article 4 (1) of the GDPR gives a broad definition of "personal data". According to the article,

personal data is any information related to an identified or identifiable natural person.

Non-Fungible Tokens also are a major contributor to the interface between metaverse and e-commerce. NFTs facilitate transactions between businesses and consumers by assisting brands in launching digital products, while they themselves are based on objects like art, music, games, food, etc. As discussed earlier, neither these objects are protected under the IP law, nor the NFTs are well regulated. The Finance Bill of 2022 is the very first attempt taken by the legislature to govern or regulate virtual digital assets

and their transactions. NFTs are also included within the definition of "Virtual Digital Assets" and thus will be regulated by the same bill. With the advancement of technology, this bill has finally come into place, and it is expected that legislations for metaverse spaces will soon come into force.

V. Legislative Framework in Developed Countries

We have already discussed the possible challenges that come along with integrating e-commerce and the metaverse, however, even though the metaverse has started to enter the markets, countries are yet not enacting stringent laws upon its regulation. It is real that formulating regulations surrounding the metaverse would be a serious challenge because of lack of physical and international boundaries, but that cannot be considered a setback.

- A. United States:** The United States legal system has adequate laws when it comes to independent subjects such as intellectual property, consumer protection, cybersecurity, securities and tax, etc., however, none of these laws are competent enough to deal with matters pertaining to integration of metaverse with these subjects. Even the US government is yet to start actively working on framing laws upon it, despite increase in litigation on the subject matter. For example, a very famous case of sexual assault took place last year, where Nina Jane Patel, co-founder and head of Metaverse research for *Kabuni*, was sexually assaulted by several men, by touching and groping her body.^{xv} However, no suit was filed since the assault didn't occur in the real world; it happened in the metaverse. This was not the only incident that came out. Since there are a good bunch of VR video games available online, various cases of assault were reported which took place on these softwares, but no suits were filed as such,

because of lack of a regulation. The only step taken by these platforms was to limit interactions between the avatars to fist bumps and high fives and nothing more than that.^{xvi}

In 2021, the Safeguarding Against Fraud, Exploitation, Threats, Extremism and Consumer Harms (SAFE TECH) Act was introduced^{xvii}. Section 299 of the said Act enables social media businesses to be held accountable for cyber-stalking, harassment, cyberharassment or intimidation on their platforms. However, this did not mention or proposed to mention activities taking place in the Metaverse.

B. European Regulatory Initiatives: In Europe, the laws which regulate e-commerce are only proposed to be the laws to which metaverse in e-commerce would be subjected to. In order to develop a fair and transparent platform for both users and businesses, the EU Regulation on Promoting Fairness and Transparency for Business Users of Online Intermediation Services was enacted in the year 2018 which dealt with harmful trading practices over online platforms. A new Statute was enacted by the European Parliament in the year 2022 which was proposed by the European Commission, the Digital Services Act, to specifically regulate illegal activities, harmful content and other emerging issues on the internet. From an e-commerce perspective, this legislation provides the consumers with the “*know your business customer*” principle through which they can track down those traders who are engaged in selling unsafe or counterfeit goods, which ensures a safe and transparent environment for the consumers. This legislation was proposed in order to provide a regulatory oversight mechanism over liability and safety rules on the internet and hence, businesses in the metaverse can expect to be governed by the same.

The European Commission has also proposed an AI regulation which is currently being discussed by the parliaments and is likely to get finalized soon proposes various regulatory practices which would put a stop on malafide activities taking place over the internet.^{xviii} The said regulation also consists provisions which are formulated in a futuristic manner and can also govern e-commerce in metaverse, such as, putting into service an AI system which could deploy techniques to prevent any person's behavior that causes harm (physical or psychological) to the other person, or is vulnerable to a specific group or persons and includes biometric recognitions for law enforcement purposes.^{xix}

VI. Way Forward

Metaverse and the law is still in its infancy and this is the right time for the legislature to enact laws to govern and regulate such transactions before it becomes a part of everyone's daily lives. No doubt, India is moving forward when it comes to matching laws with the advancing technology, taking the Finance Bill as an example. Specifically talking about India's Digital revolution, it could be demonstrated by evaluating the current regulatory framework using new rules such as the Intermediary Guidelines and Digital Media Ethics Code, Reasonable Security Practices and SDPI Rules, and authorities such as Indian Computer Emergency Response Team (CERT) and the Cyber Appellate Tribunal. With the Hon'ble Prime Minister's Digital India vision, Digital India Goals 2026 aims for accelerating the growth of innovation and technology ecosystem, creating a framework for digitalization of government while protecting rights of its citizens. The Information Technology Act, 2000 being 23 years old is now proposed to be replaced by the Digital India Act of 2023 which focuses on the need of Global Standard Cyber Laws. The draft proposal of the Act defines fair trade practices over digital platforms with the need to update provisions in the Competition Act, ensures provisions for a secure cyberspace and envisions an “Accountable Internet” for all the

actions and transactions taking place. Ecommerce websites are identified as “intermediaries” and the need for separate rules and safe harbor provisions has been demonstrated. The limitations of the current Information Technology Act has been recognised in the said proposal, however, there has been no specific mention of the metaverse or the virtual commerce regulation.

In fact, from the viewpoint of a consumer, there is still a lack of various regulations in order to facilitate secure transactions over cyberspace. An update in consumer protection laws, tort law, antitrust laws, intellectual property laws is immensely felt.

VII. Conclusion

The metaverse is currently in its early stages of development. In India, metaverse in e-commerce is nearly non-existent, however, it is slowly taking shape. Unlimited opportunities are available to both customers and the business at large in the metaverse. It also poses issues, particularly with regard to data protection, consumer protection,

privacy laws and intellectual property theft. Additionally, users of the Metaverse have the option of making sales of goods, just like in the real world. As a result, there must be application of consumer protection laws to the metaverse. To put it another way, the laws that apply in the actual world must be followed in the virtual one, however they must be modified in order to offer the best protection for users and goods.

In order to use the metaverse for growth in the economy and governance, a number of governments, including those in Europe, the United States, South Korea, and Japan, have introduced policies, projects, and strategies. India might be a crucial player in a citizen-centric metaverse that ushers in a new age in governmental services considering its technological ability. Governments, regulators, and tech corporations must all work together to address the complicated and varied issue of consumer protection in the metaverse. These difficulties can be addressed in order to provide a safe and secure virtual environment that safeguards the privacy and security of users.

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