Goods-services continuum and servitisation in the context of customer service management

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Abstract: The writers of this article examine two well-known marketing concepts, compare and contrast them with servitisation, and then analyse them in light of customer service management. Servitisation, unlike the goods-services continuum, is new marketing. Servitisation, on the other hand, structured products from 'pure goods' to 'pure services,' questioning the existence of such things. A product that wants to succeed must offer some kind of service, and a service that prioritises customer satisfaction must offer some kind of product. In a world where servitisation is the norm and products are increasingly being created to embed characteristics of service into their essential structure, is it feasible that the notion of 'pure commodities' and 'pure services' no longer bears any significance? After doing research, the authors conclude that pure commodities and services are no longer relevant outside of theoretical study and are obsolete in marketing practise. They conclude this after investigating. Qualitative case studies show the end of continuity, the move from continuum to servitisation, and the effects of different digitalisation methods.

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1   Introduction

Goods are tangible, whereas services are intangible. Goods are transportable, whereas services are not. Goods can be inventoried, whereas services cannot be inventoried. From time immemorial, goods and services have been arranged in a continuum. The tangible nature varies from one end of the continuum to the farther end. Thus, the goods-services continuum and servitisation are competing concepts. Both ideas arose in the sphere of academia, where scholars at the time were striving to distinguish marketing as an independent academic discipline (Vladimirova, 2015). The idea of a goods-services continuum is currently utilised in a wide range of other research areas, including categorising different types of services. Where are the borders of the continuum notion in the real world of sales and customer service lie, and to what extent is it possible to distinguish between solely commercial items and those offered as a public service? What challenges must be overcome when products include services in order to achieve client expectations? The results will be provided to the reader at the conclusion of this work (Kaur, 2022).

Quality standards and services like accounting and taxes are part of the continuum of goods and services (Farooq, 2008). The concept of 'servitisation' stems back to a time when 'providing great service to consumers' was the main focus of a company's operations and 'selling' was called 'marketing'. Both of these ideas are examined by the authors of this article in the context of customer service management in the business environment.

1.1   What are services?

The spectrum of economic products can be considered a continuum, with goods at one end and services at the other; the vast majority of products, however, can be found somewhere in between (Rathmell, 1966). In many cases, products are included with services, and providing services necessitates the presence of things. The point that needs to be emphasised here is that products and services do not have to be defined as rigid ideas. If they were, the intrinsic economic and emotional worth of both things and services would be significantly diminished (Rathmell, 1966). If items were defined precisely and differentiated from services, manufacturing would be constrained by selling. This is because reaching out to customers with things to satisfy their requirements will invariably require services. The continuum notion benefits the economy's transition from a selling orientation to a marketing orientation since, in the absence of services, products will have a limited impact on customer satisfaction (Biswas et al., 2022).

Good-services continuum was a historical necessity when the world reached the stage of industrialisation where goods had to undergo a critical transformation to stay relevant. There are three reasons why the continuum idea is historical: firstly, in the realm of philosophy and mythology, goods and services were always thought to be separate since goods were considered first and foremost to be touched, felt, held, and identified. Since the days of Adam, if one goes by Biblical mythology, the apple, as a fruit, appropriately falls into the category of goods. An apple can be touched and felt and has a definitive form, shape, and volume. Had the first human Adam plucked the forbidden fruit from the tree and consumed it himself, and this would have been interpreted as self-service. In a lighter vein, by offering fruit to Adam, Eve provided a service to both Snake and Adam (Devi and Kumari, 2022).

This apart, in Western philosophy, the debate most often revolved around matter and mind, two distinctly separate analytical categories. What is inside a human being and what cannot be seen but only can find expression is about the spirit, and what exists outside the human body, including the human body itself, is material. The importance of matter formed the basis of materialism, and the importance of ideas gave rise to idealism or the spirit (Grover and Singh, 2022). To say that services belong to the mind or ideas and goods belong to the realm of matter is a simplification. However, the fact that at a particular historical point of social and economic development, the meeting of goods and services to make a continuum (Fundin et al., 2012) became inevitable makes it historical; secondly, the continuum idea was a historical necessity since the backdrop of industrialisation driving mass manufacture of goods and rapid expansion of choice of goods, based on price, quality, and standard, services were required to take advantage of scale. Goods had to be moved and delivered to the doorstep of those likely buyers, which means the value of services had to be in-built into the goods as a first step towards a continuum. Mass manufacturing of goods in factories required services of considerable value, and hence, factoring the value of such services into the cost of manufactured goods became essential (Kumar et al., 2022).

Due to the availability of resources, industrialisation in remote areas gave rise to a new phenomenon: when purchasing products, one may accidentally pay more for the services portion while believing they are purchasing commodities. Since services came to be seen as adding value to the commodities produced in a factory and sold, value addition became a crucial economic notion. Prior to and following manufacture, up until distribution and delivery, value added by services had to be taken into account in order for the items to be traded on the market. Prior to the industrialised market economy, services included in traded goods were concealed, but this changed when they became more visible. Thirdly, the post-industrial era saw the emergence of wholly services-oriented companies, which contributes to the continuity idea's historicity. Few or no items were used in the production of services for the market. A knowledge-driven economy is evolving as a result of this, and companies that rely more on intellectual than manual work employ more people. At this point, blue-collar workers laid the way for the emergence of white-collar workers. The profit of the version associated with the excess value produced by physical labour-dependent industries was rendered obsolete.

1.2 Servitisation

In this section, three important aspects of servitisation will be taken up for analysis and explained: firstly, the meaning of servitisation and how servitisation evolves as an offshoot of the idea of a continuum between products or goods and services; secondly, an illustration will be used to explain this evolution; thirdly, the progressive steps in the evolution of servitisation, will be examined.

In terms of an idea, servitisation (Tauqeer and Ahmad, 2018) developed from the notion of a continuum between products and services; independent of the circumstances, it provides an interesting argument. Servitisation modifies the idea of a continuum between products and services and closes the analytical gap between them.

The findings for servitisation are as follows:

1   The term 'servitisation' refers to the process of shifting the emphasis of any offering along the tangibility-intangibility continuum toward the intangibility end of the spectrum (Kowalkowski et al., 2021; Baines et al., 2017). 'Servitisation' also refers to the conversion of products into services through the application of a utility-driven business strategy. This method acts as a paradigm.

2   For evolution, it is suggested that despite the fact that servitisation has been a phenomenon for more than 50 years and that there is a substantial body of literature on the topic, very little progress has been achieved in determining the underlying paradigm. This is true despite the fact that the body of literature on the issue is constantly expanding. Even the most basic element of the servitisation notion has been subject to a variety of interpretations and meanings offered by numerous academics and scholars.

3   In the progressive case in the evolution of servitisation, the buyers' actual usage will be quite limited, and might be quickly stop for being useful and become irrelevant. It is important to keep in mind that these machines might not be used effectively, even though it is feasible to produce drilling machines in the thousands or even millions to support the expansion of the manufacturing sector, take advantage of technological advancements, and aim to create employment opportunities.

Let this paradigm be explained now by an illustration. To begin with, it is human nature to look for products that come with various additional services and directly satisfy the needs. For instance, why would someone purchase a drilling machine if they already have access to someone who can drill holes for them using the equipment they already possess? In a very general sense, products that come with services have a greater appeal to professionals. Aside from the fact that it is a quotable saying credited to the well-known Marketing Professor Levitt (1960), the fact that any product can convert into a product that comprises the service itself is rather astonishing.

Regarding the quote, one could make an argument similar to this one. To put it another way, consumers are looking for the service, not the product per se, and the service, more so than the product, is more likely to directly satisfy their requirements. These days people aren't searching for the product so much as they are seeking the product where the service comes with it.

If one closely analyses the evolution of servitisation, it would appear that just a small percentage of individuals are aware of the sense in which the Harvard Professor who was instrumental in making the concept of globalisation well-known referred to it. However, the provision of services to clients, which may be incorporated in the product itself, can be localised even though the products can be transported worldwide. For example, suppose products are sold without a demonstration or after-sales service. Therefore, it is in a company's best interest to offer drilling services rather than sell drilling machines. Businesses in each of these distinct industries need to shift their attention away from sales if they want to demonstrate that they care about the satisfaction of their clientele. In his seminal work named 'Marketing Myopia,' Professor Levitt (1960) states that "the concept that an industry is a customer-satisfying process, not a goods-producing one, is vital for all business professionals to understand." (Levitt, 1960). The shortsightedness or myopia lies in the fact that goods and services are perceived from the point of view of organisational needs rather than the need of the customers (Figure 1).

Figure 1 Servitisation model (see online version for colours)

Figure 2 Servitisation (see online version for colours)
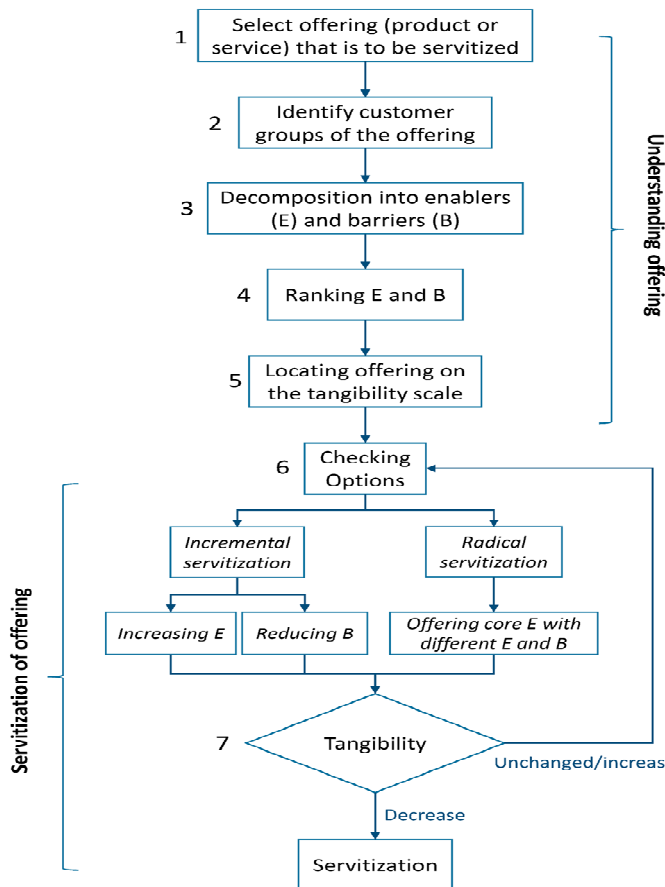
The academic community currently grappling with the issue of servitisation has not even developed a set of conceptual or analytical tools that would make it possible to have a

scholarly discussion about the topic. Even though this problem has been around for a considerable amount of time, this circumstance remains unchanged (Figure 2).

Tauqeer and Ahmad (2018) gave a seven-step utility-driven model for transforming products into services. According to them, the first step will be to decide on what is to be serviced, a product or a service. When a product is serviced, it calls for the integration of services into the product with the goal of value creation. The popular understanding is that people are inclined to buy the services more often than the product per se, which forms the basis of product servitisation. The next step will be identifying the consumer or group to whom the dominant service product will be supplied. The third step will identify the enablers encouraging the customers to buy the product and the hindrances that will block their choice. The next step will be to study and rank the weightage of these enablers and barriers within the groups of customers. Finally, the tangibility of the product will be moderated by integrating services into these enablers and barriers.

Three findings emerge from the analysis of the concept of servitisation:

1   direct satisfaction of human needs provides the trigger for the emergence of servitisation from the continuum

2   in servitisation, the emphasis is more on services than on products

3   products become complete when services are in-built.

1.3   Servitisation strategy

As discussed earlier, the requirement for the direct satisfaction of human needs pushes any organisation to emerge out of the continuum and move towards servitisation to stay relevant in the market. When any organisation moves from a product-centric to a service-oriented or service-integrated product, a strategy is required to transform reality (Pistoni and Songini, 2017). Three factors are important in this strategy for transformation. Firstly, robust data is required to decipher customer expectations; secondly, the data need to be constantly updated and validated to capture the changes in customer preferences and choices; thirdly, the ecosystem changes in which product-service integration takes place needs to be mapped closely as far as possible, so that the service integrated product can be presented to the customers in a manner acceptable to them and to realise the strategised value creation which is the outcome of servitisation.

Thus, the sample data serves as the foundation for the overall transformation plan. A effective servitisation strategy depends on data. Both from the perspective of the business and the consumer, the data meant to be acquired for the strategic change towards servitisation must be thorough in its coverage. The transformative strategy for servitisation functions in an ecosystem is constrained by a number of reasons. The firm must seamlessly integrate its service offering with its existing product-centric data, customer feedback, and downstream supply chain made up of dealers, distributors, and retailers. A shift from a product-centric organisation to a service-centric organisation, or vice versa, necessitates internal and external adjustments and may have an impact on the macro and micro structures of the company. Many factors, including knowledge resources, skill sets, financial resources, and organisational consensus at all levels toward the servitisation approach, affect an organisation's capacity to reformulate its strengths and capabilities toward the value creation sought by servitisation. For continuous quality

monitoring, consistency in quality, the flow of intended value, etc., all these variables must be mapped out and provided as data.

In order to give servitisation effect to a product

1 the organisation's method of collecting, organising, and analysing the data may have to change

2 the overall image of the organisation may have to change, and to this effect, re-focussing or re-positioning of the product and the brand image of the organisation in the market place may be required

3 the layers which make up the organisation's hierarchy, facilitating the flow of resources and decisions may have to be re-worked or re-modelled; therefore, data to be captured for product-service integration and sustainable flow of anticipated value should be broad-based and automated.

The remote, automated collection of data in real-time without human interface, using the technology of the present day, like big data, the IoT, Cloud computing, artificial intelligence, and robotics. Services, per se, are intangible, challenging to standardise, and difficult to set boundaries. Therefore, bias in data collection, especially human bias, can significantly influence the servitisation strategy. Only the automated collection of consumer data in the form of the app-driven digital interface can help integrate services into the product to achieve the intended value creation.

The transformation from a product-centric manufacturing organisation to a service-dominant manufacturing organisation requires an assessment of the extent of service integration required for the product to create the intended value, stay relevant to the customers, and not lose the edge in the market (Ciasulo et al., 2021). The transformative strategy must be calibrated carefully so that the existing edge will not be hampered in the market, but the visibility of the re-designed product incorporating quality services will improve the ecosystem. Digital servitisation refers to how digital technologies enable the innovative delivery of advanced services (Kohtamaki et al., 2019). From another perspective, digital servitisation is understood as using digital technology to sustain the shift from a product-centric to a service-centric logic (Skylar et al., 2019). Digitalisation is transitioning from remote monitoring and control to optimisation and, ultimately, to an autonomous system. The data generation capability of the service-dominant product manufacturing organisation needs to be continuous so that constantly the service-dominant product can be improved using the data emerging from customer feedback.

As a strategy, the digitisation of servitisation (Kohtamaki et al., 2017, 2019) is mainly driven by customer focus. Customers opt for a product that is easy to comprehend, operate, and assimilate as part of everyday life. Customers also expect that the service bundled with the product must be of a defined quality and standard and satisfy their needs. For example, demonstration of the product at the stage of post-manufacture and after-sales is important so that the product serves the customers in its totality. If the consumer does not use a well-researched feature in the product, the very purpose of investment in research to provide that feature to consumers could be affected. Such a demonstration also gives instantaneous feedback as to what the customer expects in exercising his choice in favour of a particular product in a competitive market. As a part of digitisation, if a product is linked to the internet using Wi-Fi and transmits data in real-time, using applications through the product's life cycle, comprehensive usage data

can be captured, which will help reach out to the consumer and also improve the product. Such data will serve the following outcomes:

1   customer can be extended timely help in services vis-à-vis the product

2   through the supply chain, spares can be supplied, or periodical servicing can be suggested for the product so that durability of the product and customer satisfaction will improve

3   interactional relationship can be maintained with the consumer, throughout the life cycle of the product, which means the customer can also be kept within the loyalty fold so that at the end of life of the product, another new product from within the same stable can be sold to the customer; at the end, recycling of the product can also be within the same stable and provide an extended business opportunity.

Business-to-consumer interaction needs to be constantly monitored in a digitalised servitisation since business-to-business interaction is usually captured in a product-centric ecosystem concerning sales targets, supply chain dynamics, etc.

Digitalisation of servitisation, as a strategy, requires that customer perception comprising of aspirations, excitement, and disappointment must be captured directly from the customers through automated applications rather than gathered from the hands of the retailers, dealers, or distributors. Third-party customer feedback captured from the supply chain usually partially talks about product choices and expectations but does not capture the entire gamut of customer satisfaction. What is essential in digitalised servitisation is remotely obtained direct customer feedback and not customer feedback obtained through the prism of the retailers, dealers, or distributors. Direct customer feedback denotes customers' continuous engagement with the product, which helps the organisation upgrade the quality of services and leads to innovation in product and market strategies. Importantly, customer engagement data obtained electronically sustainably using modern digitisation tools also identifies cultural patterns among consumer groups and niche areas and enables the serving the consumers efficiently. The interactional orientation in digital servitisation thus makes a marked shift from the traditional product-centric orientation. In the traditional product-centric orientation, the value lies in the exchange of products, whereas in the digital servitisation ecosystem, the value lies in the interactional relationship between the consumers and the organisation. In a product-centric orientation, customer feedback is impersonal, whereas, in a digital servitisation milieu, customers' involvement with the product is personal, and also value includes the product and also the consumers, who are emotionally present in the value chain. Therefore, the customer's presence in the digitised servitisation model is holistic and, at the same time, multi-dimensional. Thus, consumers are engaged in creating value alongside the organisation, and value is not confined to the products alone.

In the digital servitisation model, technology is an integral part of the service-dominant product, and technology acts as an enabler of consumer participation. Continuous engagement of the consumers with the service-dominant product, feedback obtained by the organisation in real-time, and the sustained quest for innovation in product design and marketing all become possible, owing to technology which is an enabler. Tools of digital servitisation, like, for example, the IoT, Big Data, etc., have made it possible that customers can be engaged remotely by the use of a mobile phone application (app), at their convenience, without exerting any pressure on them, to provide feedback at the point of sale of product or services (Vendrell-Herrero et al., 2017),

(Raddats et al., 2019). Automated systems made possible through Wi-Fi-enabled remote-controlled products with login facility reporting data in real-time have enabled consistent improvement in quality of service and innovation in the product. Traditionally, a product had a finite form, quality, and standard, whereas, in a service-integrated product manufacturing organisation driven by digitised servitisation, the provision of predetermined quality of service requires constant engagement with the consumers. Digitised servitisation requires both customer involvement and technology in addition to the skills and resources of the organisation.

The motivation behind this study is economics and advertising texts have distinguished between services and products based on four traits for many years: variety, separateness, and perishable nature. This difference has subsequently been criticised by a variety of authors as being useless for controlling the manufacture and distribution of goods and services, let alone the creation of items that bundle both into value packages that are sold to consumers. Discussions over goods and services have become more heated as a result of the dynamics driving the new economy. According to Investopedia, the term 'new economy' refers to a group of emerging, fast-growing companies that are at the forefront of technology and the main drivers of global economic expansion. The introduction of high-tech instruments, notably the internet and ever-more-powerful computers, into the commercial and residential markets is generally thought to have delayed the start of the new economy. The new economy was viewed as a transformation from a manufacturing- and commodity-based economy to one that utilised technology to develop new goods and services at a rate that the established manufacturing economy was unable to match.

These influences, which radically transform operational efficiency, include globalisation and technological advances, where the primary inputs and tangible resources are far more conceptual data and expertise than property resources. The digital Economic growth enhanced worldwide financial significance of the communication sector is essential. The distinction of services and things is becoming more hazy, and today's commodities frequently include combined services and goods.

Thus, organisations positioned in a digital servitisation ecosystem are compelled to keep themselves engaged with their consumers and are also required to possess the capability for constant innovation and upgrading of organisational skills as a sequel to customer feedback. The two-way interaction between consumers and the service-dominant product organisations is a win-win for both, and the interaction is based on mutual recognition aided by technology. The intangible nature of services and challenges posed by standardisation and quality control in services calls for such mutual recognition between consumers and their service-dominant product organisations. Services by nature cannot be stored or inventoried. Therefore, the only way customer satisfaction can be monitored viz-a-viz the service-dominant product is to engage with consumers sustainably, using digital servitisation tools. In real-time, the organisation's remote engagement with their customers, using state-of-the-art technology, provides the much-needed objectivity in the captured data, providing continuous innovation and quality gradation.

2   Tools of digital servitisation

As discussed in the preceding paragraphs, servitisation involves transforming products into services. The integration of services into the product requires customer engagement on a real-time basis. Customer engagement in the case of products and services differs, and therefore, any organisation which intends to convert products into services is under a commitment to reach out to their customers and engage them, towards value creation, through the deployment of tools of technology.

Whereas new service production units only offer a service to their particular market, organisations with a centralised service development unit aim to make all value propositions available globally. The most effective technique appears to be to establish a separate device for generating services by utilising diverse organisational capabilities, according to the empirical examination of the current study. A number of businesses host annual congresses for design engineers with service staff as a step toward better integrating products and services creation. The creation of new services and capabilities for the userbase of goods is one goal of these protocols. However, in general, most businesses have trouble locating the appropriate structure as well as the materials, procedures, and equipment they require to create new services.

The internet of things (IoT), sometimes known as IoT or merely IoT, and big data are currently the buzzwords used frequently in the information technology industry. It is practically impossible to discuss one without bringing up the other. They are not related, despite their close relationship. Both represent the data of the future, and by data we mean enormous amounts of data. In the digital age, new things are being linked to the internet in an effort to make people's lives better.

An international network of WiFi objects or devices that can gather and exchange data is known as the 'internet of things,' or IoT. IoT gadgets are just ones that gather data and transmit it to the internet, to put it simply. The IoT is a sizable homogeneous collection of various objects. IoT intends to connect, gather data from, and provide services to a wide range of physical objects utilised in various fields.

The amount of data generated daily by the billions of connected devices to the internet is in the trillions of bytes, and 90% of it has just been produced in the last two years. This enormous amount of data is gathered from many different sources, including posts on social networking platforms, digital photos and videos, transaction history, payment records, sensors that gather climatic data, or Global positioning system (gps, to mention a few. All of these data are referred to as big data. It is nearly hard to analyse and process such a large amount of aggregation and analysis data using conventional software methods.

Five different strands of modern break-through in technology, which serve as tools of digital servitisation, are discussed as follows:

2.1   Internet of things

IoT is crucial for converting manufacturing companies focused on a single product into service-product companies. A strategic shift in digital servitisation has been brought on by this. The term 'IoT' primarily refers to objects or goods that have networking capabilities, sensors, and computing logic. The conversion of products into services is greatly impacted by the networking ability of things. To put it simply, things can communicate with each other remotely thanks to networking capabilities. To give an

example, all of the consumer products in a home can be connected to the internet and monitored from a distance, including a refrigerator, television, microwave, and other appliances. These firms' interconnection enables them to offer services tailored to individual customers. IoT includes many technical concepts and offers remote operability and, thanks to the effectiveness of its machine-to-machine connections, offers usage tracking under a variety of circumstances. The corporations who make the devices can thereafter remotely watch how these networked products are used and functioning.

2.2 Big data

Generally, big data refers to value, variety, volume, verification, and velocity. The main advantage of big data analytics is that it provides comprehensive data in real-time. The historical data generated can be used for modelling customer choice, and challenges and grey areas for focus can be identified. Big data provides for multi-dimensional complex data structures, in real-time, as the datasets flow and interact dynamically. This is essential for organisations engaged in transforming products into services since customer feedback is valuable in ensuring quality standards. Customer satisfaction can be raised in the servitisation ecosystem by constantly monitoring service quality and using big data analytics. Moreover, any shift in customer preferences can be tracked by forecasting. Customer-driven big data is critical to decision-making in design, product innovation, cost reduction, service delivery, and marketing strategies.

2.3 Artificial intelligence

Artificial Intelligence and virtual reality are technologies that help organisations strategically pursue servitisation to design intelligent products and services. Artificial intelligence is the technological capability to mimic human thought processes. Machines learn from their usage and create smart logic to save or optimally use energy. By virtue of their learning ability, machines may adapt to rugged usage, changes in weather, and fluctuations in energy availability. As organisations make a strategic shift from products to services, artificial intelligence provides critical inputs not only at the customer end but also at the level of organisations for monitoring and upgrading the products. For illustration, reasons for the failure of a product at the customer end can be analysed by remotely deciphering the smart logic capability of the machine to learn from customer usage and other ecological factors.

2.4 Cloud computing

Cloud computing implies an on-demand availability of network access to resources in servers, storage, and applications. The strategic advantage of a cloud network is its ability to transcend geographical borders, which means companies operating on scale across the world, taking advantage of the quality resource, including online services and human resources, at a reduced cost. Servitisation across geographical and cultural boundaries worldwide would get a fillip with further advancement in cloud computing technology. In the emerging scenario, cross-cultural comparisons in customer expectations of service quality can be drawn and analytically measured by drawing parallels by using cloud computing technology.

2.5   Robotics

Robots have been deployed for a long time in heavy industries that are hazardous to human health and require a very high level of precision and accuracy. Of late, Robots have been taking over many of what were previously thought to be uniquely human capabilities. With superior sensors, they can assume human thinking abilities in a limited sense. In many service industries like hotels, healthcare, warehouse, and transport, robots have been designed to operate in a customer service orientation. Interaction between human beings and Robots, known as Cobots in the industrial shop floor context, has paved the way for cooperation between machines and human beings in establishing and augmenting service content in the products. Chatbots have become part and parcel of many e-commerce platforms, solving customer grievances. Robotics, as a technology, has been causing disruptions and propelling new industry sectors towards automation and superior customer service capability subject to remote control and monitoring.

3   Customer service

In the real world of marketing, when maximising the amount of happiness, what a product or service brings to its end users is the primary goal; the challenges that are posed by the many kinds of goods and offerings that are on the market today are not the same, as was earlier (Kowalkowski et al., 2017). The marketing methods that pertain to things can be simplified due to their limited availability in quantity, their predetermined lifespan, and their capacity to be inventoried. But, when it comes to marketing services, there are a lot of challenges to overcome since services cannot be transported or inventoried, and it would be nonsensical to try to standardise them like a product. In addition, there is no method for evaluating their level of quality. When it comes to services, it is impossible to accurately evaluate and assess customer satisfaction because customer pleasure is a highly subjective judgment (Sawardekar, 2019). It is critical to note that customer service evaluation cannot occur unless there is first standardisation of the various options. In the end, all of these questions and worries may be condensed down to a single issue: whether or not there is any potential to standardise customer service and the areas in which any attempt to do so would be futile.

In this day and age of servitisation, one of the most important questions to investigate is whether or not it is still possible to differentiate between products and services. As a conceptual example, anytime products are sold or promoted, after-sale service is often included as part of the package deal. This is because after-sale service is considered to be an essential component of customer satisfaction. If the value of the items provided accounts for, say (Bansal, 2020), 50% of the total cost, then the value of the services incorporated into the goods would account for somewhere in the neighbourhood of 20% of the total sum. The margin takes up 30% of each level's total space. You are expected to provide installation, demonstration of the goods, administration of the warranty, and after-sales service when high-end marketing products, such as those that are the outcome of complex technology, such as electronic goods. After-sales services, as well as the management of after-sales services and warranty management, are often subcontracted out to companies that specialise in the installation (including civil, electrical, and mechanical work, among other types of work), as is the case with many businesses in today's modern world (Lay, 2014). After-sale services, often known as warranty

management, are another name for these services. Contracting or subcontracting the service component of goods and the sale of items per se can be a good trigger for the unanticipated growth of customer dissatisfaction. Contracting or subcontracting the service component of goods invites the risk of a drop in quality. The level of commitment shown by the group responsible for marketing the products, as well as the level of commitment shown by teams contracted or subcontracted to provide services, is quite distinct from one another and may not even be standardised at all. Although services may only account for a small percentage of the total value of goods, they are the most important factor in determining whether or not a customer will make a subsequent purchase or whether or not their level of satisfaction will increase, which will, in turn, result in the strengthening of brand loyalty. Even though services may only account for a small percentage of the total value of a good's price tag, they are the most important factor in determining whether or not a customer will make a subsequent purchase (Levitt, 1960).

3.1   E-commerce as a case study

Because of the increasing degree of competition in modern e-commerce, how a client locates products on the market has developed. This is the case because of the increased level of rivalry. Following the completion of the transaction via the digital platform, the subsequent step is to watch for the delivery of the items purchased (Peter and Pierre, 1993). One does not even handle or see the item before making a purchase decision; rather, one simply views an image of the product online, obtains information about the items, considers the benefits and drawbacks of the product, and then decides whether or not to make a purchase. As e-commerce has rapidly spread to smaller towns and villages, the quality and standard of services accompanying the delivery of things to the customer's premises in response to an online order have become increasingly crucial. E-commerce is the way to go when purchasing consumer products, often called 'white goods.' This is due to the numerous advantages that come along with having it. Because of the differences in purchase behaviours, a substantial gap exists between making purchases in an online store and a traditional brick-and-mortar establishment. The customer has the opportunity to visit the showroom and look over the selection of products that are available to him, touches and feel the products, and hear from the salesman about the features (which is a face-to-face personal mode of communication), then payment is made, and finally, the goods are delivered. This is what is referred to as a showroom purchase. Most of the time, it is either from the showroom itself or the warehouse in the showroom's backyard. Both of these locations are accessible from the showroom. In the good old days, single-brand display rooms were able to set themselves apart from their competitors in a way that was clear to customers.

When conducting business through the internet, the customer must make necessary payments before the goods are dispatched from the warehouse to the location the customer has designated. When doing business through electronic commerce, customers must have a tremendously robust level of trust, where the trust itself is multifaceted. This is because it is extremely risky to conduct business without this level of trust. The customer has to have faith in the online platform, which includes the company that is providing the e-commerce service, the vendor selling on the platform, and the item being sold. Once the items have been delivered, both the e-commerce service provider and the seller live up to their responsibilities about the trust relationship between them. However,

confidence in the product can only be bolstered if the services provided in the form of a product demonstration, installation, after-sales care, and warranty management live up to the customers' expectations. When a manufacturer and a service provider enter into franchisee-level agreements for the provision of services, those agreements are successful and increase the level of customer satisfaction with the goods purchased when the service provider is in command of a team that has received adequate training. (Case in point:) When a service provider is in command of a team that has received adequate training. Suppose there is no engagement between the maker of a product and the consumer, in whatever capacity such interaction could take place then null hypothesis works in this condition. In that case, there is a good chance that the consumer will forget about the product entirely. This is true regardless of the nature of the interaction that could take place between the two parties. The consumer associates the product less strongly with the actual product than with the brand image of the online platform from which they obtained the product. This is because the product was acquired through the utilisation of online resources. The manufacturer's efforts to carve out a position in the market by branding the service quality and standard will suffer a significant setback in the long term, which will be a huge blow to those efforts. The manufacturer's efforts to carve out a position in the market by branding the service quality and standard (Figure 3).

Figure 3   customer satisfaction
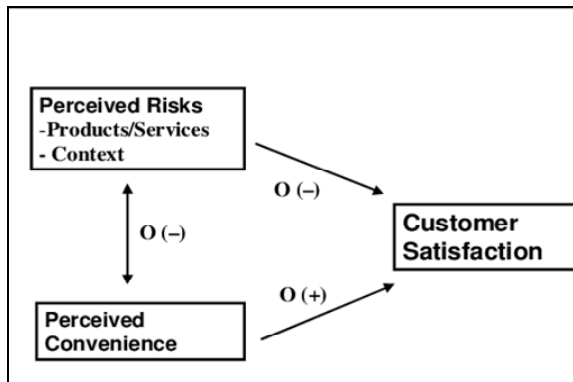
When it comes to satisfying customers, the utilisation of service-level agreements between a manufacturer and an after-sales service provider is only occasionally successful. The quality and standard associated with the brand image of the goods will be sustainable, but only to the extent that the after-sales service, including installation of the goods, demonstration, after-sales service, and warranty management, are carried out effectively. Only then will the quality and standard be sustainable (Kohtamaki and Rabetino, 2021). A client's level of contentment is inversely proportional to the quality of the relationship that the service provider maintains with that customer in order to fulfill the commitment made by the vendor of the goods. There is a good chance that a consumer will be unsatisfied with the goods they acquired from an online shop if they are permitted to leave the device installation up to the chance of a dial-a-number system. The vendor has made a sale, even though the client may not have gotten the product, and the online marketplace has been reimbursed for its services. In many of these transactions, the buyer or consumer is not aware of the terms that apply between the online vendor and the e-commerce platform because there is a lack of transparency in many instances. This

is the case because there is a lack of openness in many of these situations. When one closely examines the sales pitches of the various internet platforms, one will discover that the description of the products takes importance, while the time-bound installation and demonstration are essentially promises that are not delivered. Even though the value of the service that is associated with the goods may be less than one-third of the value of the goods at the time of manufacture, the service that is associated with the goods has the potential to negatively impact the brand image of the goods in a disproportionately negative manner. The information presented earlier illustrates that the satisfaction of consumers cannot be achieved solely via the transaction of purchasing goods. Instead, delivering services is the only way to ensure the satisfaction of one's customers. The after-sales services component of the products could occasionally result in service deficiency-related consumer lawsuits. These lawsuits, in turn, might damage the image of the brand associated with the goods. If, for example, things were sold via an e-commerce platform online, the damage done to the company's brand image would be so serious that it would be hard to repair.

4   Conclusions

In conclusion, the comparative study of the ideas of goods-service continuum and servitisation in the context of customer satisfaction, with e-commerce serving as the background, led to the discovery of three significant discoveries, which are as follows:

1   the concept of the continuum has come to an end because it is difficult to distinguish between pure goods and pure services, in the modern world

2   the challenges in product servitisation are being grappled by the deployment of technology in an attempt to engage the customers in a sustained manner; where the effort to standardise the service quality and delivery, to the satisfaction of the customers, does not reach the desired level, integration of service into the product may tend to fail and reverse process of de-servitisation is the last resort

3   e-commerce has taught businesses that it is rather challenging to satisfy customer expectations of after-sale service standards from manufactured products, though tools of technology may be deployed in a liberal manner

4   In an economy that is still in the process of development (like India's), where the threshold of technology is yet to surpass those of developed countries, it is critically important to generate qualitative case studies which alone can explain the end of continuum and challenges faced by the industry in their transformation, firstly towards servitisation and subsequently, towards digital servitisation.

This qualitative investigation demonstrates that the changes brought about by the Service Operation have diverse effects on the post-sale service sub-regions. Emerging models and methods must take the many fatter sales service sub-areas into account in order to assist businesses in successfully mastering the removal steps. The many paths of transformation along the continuum from products to services also show that they should be avoided and controlled. Longitudinal gradients do not require any additional care. Linear patterns suggest a long-term, gradual change that calls for a strategic, long-lasting change-management strategy. management. Since effects of the change first grows

significantly and reduces relatively slowly with the subsequent advancement of the service operation, exponential curves necessitate a constant and proactive supervision at the onset.

4.1   Future work

In future organisations can make attempts to restructure oneself in the direction of servitisation and examine them further. Also, they demonstrate the economic and competitive benefits of servitisation from the viewpoints including both and customers. However, the connection amongst servitisation and ecology has to be better understood. According to samples of businesses that have adopted the servitisation strategy, there appears to be a worthwhile correlation connecting servitisation and durability because it enables decision-makers to achieve sustainability and financial gains at the same time. The intricate strategic and tactical interactions between procurement profitability and long-term sustainability require more study.

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