Article

Re-Commerce to Ensure Circular Economy from Consumer Perspective

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Abstract: Responsible consumption practice is crucial to minimizing waste as part of sustainable development (SDG 12). This can be achieved by extending product life in a cradle-to-cradle system as part of a circular economy. However, are consumers willing to extend product life by reusing materials? The phenomenon of re-commerce, where consumers sell products to each other (C2C), takes place in physical as well as web-based markets. This project focuses on enabling factors for re-commerce practices on Facebook among consumers in Bangladesh. A review of existing literature provided grounds for an empirical focus group study of Bangladeshi consumers. Using a social practice theory perspective in a thematic analysis shows that enabling factors in terms of technical competence, context-bound conditions influencing meanings such as socially accepted procedures, and practical practices relating to materials such as payment forms and logistics support, all serve as enabling or hindering factors. The study contributes to the understanding of conditions for re-commerce practices as part of a circular economy system where consumers are encouraged to engage in responsible consumption by extending product life cycles.

Keywords: Facebook; regenerative economy; social practice theory; sustainable development; thematic analysis

1. Introduction

People use different kinds of products to satisfy their needs and wants. These products are produced in all corners of the world, using countless types of raw materials. In many cases, these products are produced with virgin materials intended for a single user. Sustainable development practitioners urge producers to limit using virgin materials but changes in production practices are slow. However, focusing on consumer involvement in creating a society of sustainable consumption may provide a partial solution to the problem. A behavioral pattern shift from single ownership to multiple ownership of products is crucial to reducing the use of virgin materials in the long run. Addressing sustainable consumption at the consumer level helps establish a closed loop of products that would facilitate waste reduction and resource utilization.

Humans deliberately engage in exchanging secondhand products without knowing that such activities have a positive impact on the planet. One person’s unloved and unused product could be loveable and useful to another. Now, in the era of rethinking consumption, the secondhand product exchange movement is gaining momentum. People have both physical and online marketplaces to exchange secondhand products and the invasion of social media makes this process more popular and interactive. Like business promotion by entrepreneurs, any individual can use it for the purpose of buying and selling secondhand products. Social media (SM) is now considered a popular place of re-commerce, a customer-to-customer (C2C) social commerce platform for exchanging secondhand products where both parties can interact at their own convenience to exchange their products.
People are using social media for secondhand product exchange (buying and selling, product swapping, donating, sharing, etc.) mainly on Facebook (Marketplace, Groups, and Pages). This exchange is called the reusing phase of circular economy at the consumer level in an alternative model of consumption [1]. According to the Ellen Macarthur Foundation, circular economy is founded on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural resources [2]. Circular economy (CE), or the 3R principle—Reduce, Reuse, and Recycle [3]—offers a circular perspective. It embraces a cradle-to-cradle view [4,5] and many scholars believe that reusing is better than recycling because it extends product life, reduces waste, slows down production processes, reduces the carbon footprint associated with reproduction, and enhances the product utility [6].

Sustainable development is enhanced by well-developed use of SM as an enabling technology that supports the reuse of resources. Efficient usage of social media as an enabling technology in reusing resources is the key to ensuring the circularity of materials, which could reduce all sorts of negative externalities due to producing virgin materials and enhancing a better, greener, and circular economy.

Social media lets individual users share their digital content on different social media platforms with the principles of use of advertising in social media, attitudes about and exposure to advertising, targeting, user generated content (UGC) in advertising, electronic word of mouth in advertising, consumer-generated advertising, and further advertising effects [7]. Research on social media’s role in consumer behavior is considered crucial in order to ensure sustainable development [8] and a significant market development trend [9]. End-consumer involvement in engaging in reusing activities of circular economy is called “re-commerce,” coined by George F. Coloncy in his interview in The New York Times (2005). It means exchanging pre-owned goods [10]. In other words, it can be said that re-commerce is a kind of customer-to-customer (C2C) commerce process where secondhand items are traded by people that are not for the purpose of business. Effective end-consumer involvement assures the proper circular activity of customers, and the environmental concern of customers is the key to making the product offers green.

Social media plays a significant role in developing the green consciousness of customers [11]. The concept of re-commerce and Facebook’s role in this concept is still questioned and scrutinized. Research in this area would be beneficial to pave the way to ensure a better circular society around the world by ensuring a sophisticated, sustainable, and interactive C2C business.

This research contributes to the understanding of a selected model [12] of re-commerce as a part of circular economy. The study considers Facebook because people frequently utilize Facebook for their re-commerce activities [7]. The aim of this research project is to explain how social media can contribute to re-commerce practice in Bangladesh as part of assuring the circular economy philosophy. The research conducted a thematic analysis of interviews conducted as focus groups and developed a model of how re-commerce practice can be influenced by Facebook as part of a circular economy.

The research questions of particular interest for this study are:

**RQ 1:** How are users engaging in re-commerce using Facebook?

**RQ 2:** How are re-commerce processes part of circular economy?

2. Materials and Methods

This study had a qualitative research design due to the needs for flexibility [13]. The research design was motivated by the nature of the empirical research project and the use of practice theory to explain the behavior of social media users in re-commerce activities [14,15]. The approach was further motivated by ambitions to develop a theoretical understanding [16] of social media in re-commerce towards circular economy. According to Trochim [16], social media is a social phenomenon, and each user of social media is a unit of observation. In this project, the users of Facebook were seen as the unit of analysis to determine the re-commerce behavior influenced by social media in achieving
circular economy. The study consisted of two parts: a literature review and an empirical study based on consumer interviews. The literature review served as an orienteering in the empirical field, to provide context. It also met the needs of identifying alternative theoretical perspectives. Theories covering classical business-to-consumer (B2C) and business-to-business (B2B) are well developed and understood, but consumer-to-consumer (C2C) theory is less developed.

2.1. Literature Review

The study conducted a literature review collecting and synthesizing previous research to identify and critically appraise relevant business research in the field of social media, circular economy, and reusing in the circular economy to develop a research theory [17,18]. According to Cobo et al. [19], scholars of different fields of study use literature reviews to uncover emerging trends in article and journal performance, collaboration patterns, and research constituents, and to explore the intellectual structure of a specific domain in the extant literature.

2.2. Interviews

The empirical study followed a naturalistic observation method [20] in seeing user behavior in dealing with secondhand items and their problems by observing different re-commerce places on Facebook (Marketplace, Groups, and Pages) located in Bangladesh. Four focus group interviews were conducted, consisting of six to seven persons with experience [21] using Facebook for re-commerce, and willingness to share their views about factors influencing their re-commerce behavior on Facebook.

These four focus groups consisted of 26 persons who conducted both the buying and selling of products at least five times. Most of them had exchanging experience in more than one product category and we requested them to take any product. We considered a focus group member limit of six to seven, so we also expressed a heartfelt request to a couple of respondents to take a particular product category in order to fill up the focus group team. For the sake of the interview, we requested them to take either a “buyer” or a “seller” role based on their own preference. After choosing their role, a total of 17 participants took the “buyer” role and nine participants took the “seller” role.

Based on the positive responses from our target population to be part of the focus groups, we formed four focus groups based on the categories of products that are given below (Table 1).

| FG | Product Category | Contents of Product Category | No. | Member Codes | Buyer Role | Seller Role |
|----|------------------|------------------------------|-----|--------------|------------|-------------|
| FG 1 | Electronics (E) | Electronic items, e.g., cellphone, television etc. | 6 | E1, E2, E3, E4, E5, E6, E2, E3, E4, E6 | E1, E5 |
| FG 2 | Furniture (F) | Chair, table, bed etc. | 6 | F1, F2, F3, F4, F5, F6 | F1, F3, F4, F5, F6 | F2 |
| FG 3 | Jewelry (J) | Ethnic jewelry items of Bangladesh, e.g., bangles, earring, pendant, etc. | 7 | J1, J2, J3, J4, J5, J6, J7 | J1, J3, J5, J6 | J2, J4, J7 |
| FG 4 | Women’s attire (W) | Ethnic dress, e.g., salwar kameez and saree, and Western outfits. | 7 | W1, W2, W3, W4, W5, W6, W7 | W2, W3, W4, W6, W1, W, W7 |

\[ n = 26 \quad 17 \quad 9 \]
All interviewees in the four focus groups were Bangladeshi and lived in Bangladesh. While participating, they used both Bangla and English in discussion and their full responses was recorded in English in Microsoft Word files. Those Word files were used in further analysis.

We conducted focus group interviews online through Zoom. The duration of each focus group interview lasted nearly two hours. The responses recorded in the Word file were used in NVIVO 12 to carry out thematic analysis of the re-commerce behavior. According to Braun and Clarke [22], thematic analysis is a popular method of analyzing qualitative data and we followed the recommendations for a theoretical thematic analysis to assess the re-commerce behavior on Facebook from a social practice theory perspective (with inspiration from Hess et al. [23]).

A thematic analysis was used, following Braun and Clarke (2006) [22], with procedures in six interconnected phases. Phase 1 was data familiarization, which is the interpretative qualitative methodology [24], and is recognized as an interpretative act, wherein the research question and literature are analyzed, producing a scholarly report of the analysis. Using thematic analysis, this data familiarization provides spoken sounds on paper [25]. According to Braun and Clarke [22] (p. 88), the time spent in transcription is very productive, as it informs the early stages of analysis, and the researchers develop a far more thorough understanding of their data through having transcribed it. Re-commerce, circular economy, and Facebook are integral concepts in the authors’ research work, and these concepts were connected to the respondents’ (n = 26) responses in our four focus groups. While conducting the interviews, we transcribed their verbal responses in Microsoft Word documents. We used a separate Word document for each respondent. As we did not collect their personal information to ensure anonymity, we provided unique codes to all of the respondents. For example, a member of Focus Group 1—Electronics, was identified as E1. Their responses were well connected with the key concepts, and it was important to understand the connectedness of these concepts throughout the respondents’ talks. Phase 2 was generating codes from the focus group interview texts [22] (p. 88). In the primary stage, we generated 80 codes from the texts by NVIVO 12. After that, some codes were merged into one and finally, we considered 18 codes to carry out our thematic analysis (see Table 2 in the Results section). Phase 3 involved searching for themes, phase 4 involved reviewing themes, and phase 5 involved naming themes by considering three blocks of social practice theory (SPT), i.e., meanings, materials, and competences [26]. The last phase was the discussion of the thematic analysis in light of SPT.

3. Literature Review—Circular Economy, Social Media, and Re-Commerce

Circular economy and social media reflect growing research areas. These fields are multidisciplinary in nature, i.e., these fields are gaining attention from scholars of different epistemological backgrounds (e.g., computer science, earth and planetary sciences, business and economics, and so on), which is reflected in the Scopus database. Research on re-commerce, however, is scarce; our search showed only two papers (published in 2009 and 2016). On the Scopus database:

Total number of papers on circular economy up to 31 July 2021: 98221
Total number of papers on social media up to 31 July 2021: 10259
Total number of papers on re-commerce up to 31 July 2021: 2.

All documents mentioned above were written in English and were in the final stage of publication. Based on the data derived from the Scopus database publications, we made the following bar chart, mentioned in Figure 1, showing the 5-year publication statistics on circular economy and social media.
Figure 1. Publications in Scopus on the topic of circular economy and social media (2017–2021).

Although a popular concept in the different fields of study based on the Scopus database, circular economy (CE) has had enormous appeal for a long time due to its multidisciplinary nature. The origin of this concept is unknown; however, early practitioners of different fields contributed in multifaceted ways that were found to be similar to the circular economy concept [27]. In order to define the concept of circular economy, we quoted the definition provided by Kirchherr et al. [3], who analyzed 114 definitions of circular economy. According to them, circular economy is a distinctive economic system that replaces the traditional “end-of-life” concept with extensive applications of reducing, alternatively reusing, recycling, and recovering materials in production/distribution and consumption processes that were connoted “cradle-to-cradle” by Mcdonough and Braungart [28]. They further stated that this economic system can successfully operate at different levels, like the micro level (products, companies, consumers), meso level (eco-industrial parks), and macro level (city, region, nation, and beyond) in order to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity, and social equity to the benefit of current and future generations (ibid.). This economic system transforms the societal production–consumption systems that maximize the service produced from the linear nature–society–nature material and energy throughput flow and creates a win-win situation that emphasizes the positive impact on economic, environmental, and social dimensions [1] (p. 38). CE is considered a dual-loop regenerative system that focuses on the effective and efficient utilization of resources in the system that are valuable to the optimization of environmental and economic performance [29]. Dual CE initiatives allow firms to increase resource eco-efficiency as well as resource effectiveness. Circular economy is closely related to the following concepts: eco-efficiency [30], eco intensity [31], cleaner production [1,32], circular materials flows [33], regenerative systems [29], restorative systems [2], natural capitalism [34], and net-zero emissions [35,36].

The concept of circular economy is well recognized in diverse disciplines that focus on waste minimization, life-cycle extension, and the reduction of materials used in the production process. According to Potting et al. [37] (pp. 14–17), there are 10 Rs, which are called circular economy strategies, that are vital for transitioning towards circular economy. The 10 Rs are as follows, in chronological order: R0: Refuse, R1: Rethink, R2: Reduce, R3: Reuse, R4: Repair, R5: Refurbish, R6: Remanufacture, R7: Repurpose, R8: Recycle,
and R9: Recover. According to them [37] (p. 16), the reuse phase of circular economy in
the production chain is used both in the consumer phase with the distribution chain of
secondhand items and in the form of refill in the manufacturing process. We considered
the reuse phase of circular economy in the consumer phase for our research purposes.

Social media is designed to facilitate engagement between individuals not limited
to any geographical boundaries. In doing so, social media is the latest phenomenon
of interaction among people through virtual connected networks called social networking-
sites [38,39]. Social media is referred to as “computer-supported social networks”
(CSSNs) [40], online social networking services [41], social networking sites (SNS) [42],
social websites [43], social media platforms [44], virtual communities [45], and Web 2.0 [46].
Facebook is the most popular social media platform all over the world (except in restricted
countries and territories) based on user statistics, and as of January 2021, the total number
of users of Facebook was 2.740 billion, followed by YouTube (2.291 billion users) (Statistica,
2021) [47]. According to Maryam [48], there were an estimated 3.78 billion social media
users as of January 2021 and 91% of social media users avail of social media sites using
mobile devices.

Re-commerce practices have been around for a long time in exchanging and reselling
used products (e.g., electronic devices, clothes, furniture, books) in physical (e.g., in street
markets or in a shopping mall) and virtual marketplaces (like Amazon or Olx). A complete
definition of re-commerce was provided by George F. Colony (2005), who said that re-
commerce or reverse commerce is the selling of previously owned, new or used products,
mainly electronic devices or media such as books, through physical or online distribution
channels to buyers who repair, if necessary, then reuse, recycle, or resell them. Scholars
termed re-commerce as reverse logistics [49,50], reverse commerce [51], re-ecommerce [52],
customer-to-customer e-commerce [53], and reverse marketplace [54]. This study focused
on the practice of re-commerce on Facebook. It can be considered a typical form of customer-
to-customer e-commerce for using Facebook as a platform to facilitate and execute sales
transactions [55].

4. A Conceptual Framework

A theoretical framework that offers a conceptual structure for consumer behavior,
focking on conditions for C2C re-commerce practices, was selected. The behavioral
pattern of Facebook users towards exchanging secondhand products at the consumer end
is considered crucial to ensuring the circular economy philosophy from the consumer
end. To develop theories related to re-commerce on social media, the social practice
theory (SPT), developed by Shove et al. [26], proved useful (Figure 2). The social practice
theory (SPT) sees individuals as carriers of a practice, in this case re-commerce practice
through Facebook.

![Figure 2. Social practice theory offers three blocks, meanings, competences, and materials, to explain everyday human behavior. This theory was developed by Shove et al. (2012, p. 14).](image-url)
Shove et al. [26] suggested that various social practices are seen as part of “the routine accomplishment of what people take to be ‘normal’ ways of life.” According to Dunlap [56], social practice theory diverts attention away from moments of individual decision-making, focusing on the “doing” of various social practices and the inconspicuous consumption. This theory connotes that these engagements with practices lead individuals to understand the world around them and to develop a more or less coherent sense of self [57,58].

According to Warde [58], the source of change behavior lies in the development of practices themselves. Writings from Warde [58], Hargreaves [57], and Shove et al. [26] show that the sustainable consumption of fully-functioning secondhand products rather than the purchase of new products does not depend on educating people to make different decisions, but rather on transforming practices.

Previous literature on SPT show that historical narratives and technological developments [59], social relations [60], consumption behavior [23], green practice [61], and individual circumstances [62] influence consumption patterns from the individual, community, and social perspective [63]. We adopted this theory to analyze the re-commerce practice of Facebook users in Bangladesh. A detailed discussion of SPT elements is provided below.

4.1. Meaning Block of SPT

The first block in SPT is “meaning,” which consists of norms, values, and wants [23]. According to Shove et al. [26,58], meaning represents the social and symbolic significance of participation at any one moment. Meaning refers to the concept of habitus, which considers that understanding of significance is shared amongst a group, and thus brings the group together. Meaning is specifically directed towards a behavior or thing [61]. As Shove et al. [26] explained, “theories of practice emphasize tacit and unconscious forms of knowledge and experience through which shared ways of understanding and being in the world are established” [26] (p. 12). This explanatory meaning takes the form of an in-built and unreflective sense of what behaviors are “right” or “fitting” for a particular social practice, i.e., re-commerce practice in Bangladesh [64]. A significantly strong concept related to this sense that a practice can be considered “right” is the significance of the number of practitioners routinely performing the practice. If people do not engage with a practice and do not see others engaging with it, they come to understand the world as a place where the practice does not “fit.”

Social norms influence behaviors of users on social media [10,65]. Users of Facebook engage in re-commerce activities in different Facebook groups and the admin panels of those groups set regulations on how to post a sales post. The social norms of Facebook re-commerce groups relate to product name, product description, reasons for selling, picture of products, information about damage (if any), price, and mode of delivery (cash on delivery). Potential buyers get an idea about the product that a seller intends to sell in a group and approach it accordingly.

Values are guiding principles in a person’s life and influence a range of beliefs, attitudes, and actions [66]. Based on the social norms discussed by Stella et al. [66], users of Facebook believe the authenticity of posts. That means that members of a re-commerce group who give the information in accordance with the rules set by the admins generally gain positive beliefs from potential customers and they attract more customers than those who do not give the proper information in the sales post.

According to Hess et al. [23], wants, desires, and intentions are practice specific, which denotes that the degree of certain materials, outcomes, and processes are important to a person, and thus can explain individual variations in the performance of practices.

4.2. Materials Block of SPT

In social practice theory, “materials” are not just communicators of symbolic meaning [58], status, or identity [67], but are often “directly implicated in the conduct and reproduction of daily life” [67] (p. 44). However, “products alone have no value. They do so only when integrated into practice and allied to requisite forms of competence and meaning” [67] (p. 57). All three elements must exist for the performance of the practice.
Materials are objects, infrastructure, tools, hardware, and the body itself [23]. Social media devices (e.g., PC or mobile), Internet connection, availability of courier service, and convenient payment service are important materials for operating re-commerce activities. Socio-demographic factors also play a role in this aspect. For example, a particular buyer may want to purchase a secondhand product, motivated by financial constraint.

4.3. Views on Competence Blocks of SPT

According to Shove [59], competence means knowledge and skill of a particular issue. “Competences” refers to “embodied knowledge,” like the concepts of re-commerce, circular economy, and Facebook. Shove et al. [26] (p. 23) described competences as “multiple forms of understanding and knowledgeability” and used the shorthand of “skills” to denote that this type of knowledge is required for the carrier to “succeed” at the performance of the practice.

Hess et al. [25] and Tobler et al. [68] explained how knowledge about a particular issue, e.g., circular economy and how it contributes to the betterment of all living beings in the world, can influence users to engage more in conducting the behavior (that is, re-commerce). Correa [69] elaborated on four types of skills required to operate more effectively on social media. The first one is operational skill, which denotes the ability to operate hardware and software; the second is information skill, which refers to the capacity to search, select, and process information on a computer; the third is strategic skill, which is the ability to use the computer and the Internet to attain particular goals; and the fourth is formal skills, which refers to the capacity to navigate in a hypermedia context, e.g., Facebook [69] (p. 1097).

Hargreaves [57] (p. 84) reported that social practice theory raises a series of radically new questions about how to create more sustainable patterns of consumption. In line with this statement, the focus is on how re-commerce practices form; on how re-commerce is reproduced, maintained, stabilized, challenged and ultimately killed-off; on how re-commerce practices recruit practitioners to maintain and strengthen them through continued performance of ensuring circular economy; and on how Facebook plays a vital role in promoting more sustainable re-commerce practices (ibid.).

5. Results

The transcripts from the four focus groups were connected via many methods of re-commerce. Our respondents understood these concepts, as reflected in their responses. The connection is important to find out the exact picture of re-commerce practice to ensure circularity and how Facebook contributes in this aspect. NVIVO 12 facilitated such a connection map based on the scripts. The connectedness of the concept of re-commerce with the respondents’ responses is illustrated in Figure 3.

Figure 3 shows that the connectivity of re-commerce in various responses is derived from many aspects, for example, connectivity between re-commerce and waste reduction.
Re-commerce was also mentioned by respondents considering the emphasis on reselling, which can be perceived by fully functioning products that are used but can satisfied the demand of the next user. Respondents said that re-commerce practice extends the product life in terms of being useful to other users after being considered “unused” to a user. From the transcripts, the following 18 codes were derived based on respondents’ responses (Table 2).

Table 2. Codes in the thematic analysis.

| Codes in the thematic analysis |
|--------------------------------|
| Availability at a cheaper rate |
| Benevolent system             |
| Carrying support              |
| Cash on delivery              |
| Circular economy              |
| Commitment in exchanging      |
| Convenience                   |
| Cyber bullying                |
| Decluttering unused items     |
| Detailed product information  |
| Device                        |
| Facebook                      |
| Fraud reduction               |
| Fully functioning products    |
| Mobile banking service        |
| Re-commerce                   |
| Social media promotion        |
| Social taboo minimization     |

We sorted the abovementioned codes (Table 2) under the three social practice theory themes [22,26], entitled “meanings,” “materials,” and “competences” (Figure 4).

![Figure 4. Incorporation of empirically based codes in the themes of social practice theory.](image-url)
From the thematic analysis, the report part considered a detailed explanation of each code under the three themes. In the “meaning” theme, respondents considered secondhand products for acquiring a particular product for comparatively cheaper than the market price. Re-commerce is a benevolent system that helps people to satisfy demand at a lower price. Keeping a commitment to exchanging secondhand products from both the buyer and seller end is expected to keep the re-commerce process fruitful. All respondents mentioned in their interviews that they set some pre-determined commitment and expected their counterpart to keep that commitment. The commitment depends on branding in the case of electronics. Re-commerce activity on Facebook was perceived as convenient by the respondents because they considered it easy to use and easy to carry out the user interaction. It also allows for active interactions with both parties.

A couple of female respondents had suffered cyberbullying. Seller respondents complained that many buyers set illogical and impractical prices. This sort of deliberate misbehavior often arises from “social taboo,” where many Facebook members criticize those who buy and sell secondhand products.

Decluttering unused but fully functioning items were reasons for selling, as mentioned by the sellers. Respondents also mentioned wanting to upgrade their products, so they often went to purchase a new one. Instead of letting it sit idle, they preferred to sell it. As it was still usable, it should be useful to other persons. Detailed product information is a required feature in re-commerce activity. Our nine respondents who took role of seller mentioned that while posting sales posts, they intended to provide a product description, information about any defect(s), the reason for selling the used item, raw picture(s) of the product, a video of the product, sale price, expected sale price, seller location, payment method, and mode of delivery. With those data, buyers make their buying decision. It also helps to prevent fraudulent activity. Re-commerce on Facebook implies that fully functioning products should be exchanged to ensure the circularity of the society, which respondents on both the buyer and seller side believed in. If the product works satisfactorily, buyers will be more motivated to purchase secondhand products in the future.

All respondents emphasized promoting social media in favor of re-commerce and circular economy. They considered it crucial to make those concepts more popular so that more people will come to exchange their fully functioning unused products. This would ensure not only the usability of unused products but also help to reduce waste and change negative mentalities, i.e., minimize the social taboo of Bangladeshi people towards secondhand item exchange. In addition, all respondents identified that social media (not limited to Facebook but also including LinkedIn, according to the respondents) helps to communicate the benefits of using secondhand items.

Under the “materials” theme, the first component of cash on delivery was the preferable option. The buyer receives the good from the courier service agent and pays them upon receiving the order. The courier service provider then sends the money to the seller’s mobile banking account. In terms of using devices, all respondents used smartphones that support Facebook, mobile banking apps, and courier service apps, which are crucial in carrying out re-commerce activities. In addition, many of them used laptops and desktops. Logistics support considers the product delivery from the seller’s location to the buyer’s location. It can be either face-to-face product delivery at a predetermined place or through a courier service, which is the most popular system of product delivery all over the world, and the re-commerce process is no exception. Mobile banking services are availed of in the re-commerce process, where both sellers and buyers prefer product delivery through a courier service.

Each “competence” term, CE, re-commerce, and Facebook, was expressed and explained by the respondents in different synonymous terms to ensure the competences of the respondents towards those key concepts. CE considers the interrelated process of reducing, reusing, and recycling things. Some users said that it is the philosophy of reducing waste to zero to promote reusing products. CE was also termed by respondents as a cradle-to-cradle system, nurturing regenerative philosophy, a waste-less economy, zero-waste
philosophy, waste reduction, the extension of product life, promotion of upcycling, and an environmental protection system.

The considered conceptual knowledge of re-commerce was synonymous to the respondents with "reusing," "reselling," "consumer-level selling," "user-level selling," and "extending product usability." In re-commerce, the market price of secondhand products should be considerably lower than the purchase price. Re-commerce also ensures purchasing power for those who cannot afford new products. Many respondents considered re-commerce an integral part of circular economy and they discussed re-commerce and CE at the same time. Knowledge about CE and re-commerce motivates them to a great extent to engage in re-commerce activity.

Respondents defined Facebook in different synonymous terms, such as "social media," "social networking site," "social community site," "e-commerce tool," "social network community system," "technological community," "social networking site," and "virtual community." Facebook thus helps to create personal and professional community, which is important for disseminating the concepts of CE and re-commerce.

6. Discussion
6.1. Re-Commerce Practice for Assuring Circularity

The analysis, which pointed to different social practices by Bangladeshi Facebook users related to re-commerce behavior on Facebook in order to ensure circular economy in Bangladesh, was presented in terms of the three elements of social practice theory. This day-to-day behavior represents buying, using, and selling second-hand products. This behavioral practice is financially beneficial to many users. At the same time, unused and unloved products can get the opportunity to be used and appreciated once again.

Consumer involvement in the circular economy process is recognized in the choice to engage in re-commerce practices. According to Kirchherr et al. [3], micro-level engagement, e.g., end consumers, is vital to ensure circularity. Secondhand product exchange practice at the consumer level is, thus, significant in this aspect. This re-commerce practice can lower the dependency on virgin materials, extending product life and reducing waste.

The three blocks of SPT are closely related in terms of assessing a particular practice [26]. Our model also represents the same. For example, the detailed product information shared by the seller of a particular product is important for a buyer to gain trust. This detailed product information enhances the commitment and reduces the chance of any fraudulent activities occurring. As a result, the buyer will not hesitate to pay the price by using a mobile banking service. This trust issue would enhance re-commerce practice in Bangladesh by engaging more people in exchanging used but fully functioning products. These interconnected positive vibes from all SPT blocks ensure sustainable re-commerce practice on Facebook towards circular economy.

Re-commerce practice is seen as an alternative buying and selling practice. According to Spotswood et al. [62], an alternative offering to a particular social practice requires psychological understanding of intention and action, and their antecedent forces. Re-commerce practice helps users purchase fully functioning used products at a considerably lower price than the market price. This helps to satisfy demand through the benevolent system of re-commerce practice on the buyer end. At the same time, it helps to declutter unused items on the seller end that are fully functional and capable of meeting the demand of others. This cradle-to-cradle practice is desired to establish the philosophy of circular economy.

Apart from fraud, social taboo towards secondhand item usage and sale is considered a barrier to re-commerce activities achieving success. This behavior needs to be managed in order to achieve successful re-commerce practice. According to Shove and Pantzer [67] and Spotswood et al. [62], changing a practice requires breaking or challenging the existing links between its many interrelated elements. For this reason, social media promotion in favor of re-commerce practice is needed. From our analysis presented in the last chapter, social media promotion should cover the positive experience of using secondhand items, how re-commerce lowers the dependency of using virgin materials, how re-commerce reduces
waste by extending the product life, and so on. These practices would definitely change the negative mentality of people towards secondhand item exchange. This promotion of social media in changing the social taboo was labelled the “unfreezing” stage of the change process theory by Kurt Lewin in 1947 [70], wherein a person’s behavior can be urged to change from a negative mentality towards secondhand items.

Interdisciplinary aspects are vital in SPT to initiate and implement a change [62]. Competences in circular economy, Facebook, and re-commerce concepts influence the re-commerce practice framework. Each discipline has significant impact on the sustainable implementation of re-commerce practices. Knowledge of those disciplines motivates users to be more involved in the sustainable consumption of products through relying on sustainable re-commerce practices.

6.2. Re-Commerce Practice Model

From the thematic analysis, the study formed the following re-commerce model of expected sustainable behavior on Facebook. Figure 5 presents the model, including the study components under the meaning, material, and competence blocks of social practice theory.

![Image of the re-commerce practice model](image)

Figure 5. Incorporating re-commerce practice to ensure circularity from a social practice theory perspective.

This study diagram was inspired by the work of Hess et al. [23] (p. 186) about expected consumer behavior toward a consumption practice in a selected territory. The expectation...
of sustainable re-commerce practice is entirely dependent on the interconnectedness of meanings, materials, and competences. The positive practices of Facebook users are essential to ensuring better circularity in society.

7. Conclusions

7.1. Limitations

The study had a couple of limitations. Apart from Facebook, there are other social media platforms, e.g., Twitter and LinkedIn, that were not considered. The study considered only one theory, i.e., social practice theory. A combined theoretical approach would give a better picture. The study considered only four product categories, i.e., four focus groups in each category. In each category, a particular product dominated, e.g., cellphones dominated (four out of six) in the “electronics” category. All of our respondents were Bangladeshi and living in Bangladesh. We did not consider other cultural contexts in this project. Due to the ongoing COVID-19 pandemic, we had to conduct all interviews online. No personal interaction and no face-to-face dialogues were possible, as would have been desirable to establish the practicality of the practices. Finding a convenient time to meet via Zoom was challenging, which also made our interview process slower. As most of our respondents were female, family restrictions were made in terms of talking with males. While interviewing, we faced Internet connection disruptions, which often broke the spontaneous flow of the interview.

7.2. Contributions

The contributions of the re-commerce study support what has been found in other empirical contexts in studies that used social practice theory. This study extrapolates the expected sustainable re-commerce behavior with the viewpoint of expected consumption behavior in a social practice framework, supported by the works by Hess et al. [23]. Re-commerce practice is not an occasional practice, but rather day-to-day for users, which relates to the study of Warde [58] regarding the everyday practice of a particular social behavior. Re-commerce practice is entirely an end-customer practice, which influences the overall circular economy practice and supports the research findings of Kirchherr et al. [3]. This study also reflects the interconnectedness of three blocks of SPTs presented by Shove et al. [26]. Re-commerce establishes itself as an alternative commercial system [62] to the traditional profit-based buying and selling system. This system is not for profit and is a benevolent cradle-to-cradle system. This study also contributes to the understandings of the importance of social media promotion for changing negative behavior, i.e., social taboo towards re-commerce, by emphasizing behavioral change [25,62,70]. The study of re-commerce also contributes to the sharing economy philosophy by distributing the entire product or resource rights among multiple owners [71] (p. 7). Re-commerce facilitates an interactive C2C network that is essential to establishing a sharing economy, as suggested by Lim [71] (pp. 7–9). By considering circular economy, Facebook, and re-commerce philosophy under the same research umbrella, this study contributes to the understanding of the interdisciplinary nature of SPT theory.

7.3. Implications

The implications of the study support the understanding that the future is circular [2] and re-commerce practice is a torchbearer of this philosophy to ensure sustainable development. It assumes an appreciation for product life qualities commonly reflected in perceptions of a brand. Re-commerce practice depends on the meanings, materials, and competences that support re-commerce processes and circularity. The societal norms related to re-commerce are reflected in symbolic and cognitive structures that are intimately connected to a cultural context. Consumers have the power to change behavioral patterns. Using secondhand products in everyday life is desirable to satisfy sustainable consumption from individual life to societal life at large from a Bangladeshi perspective.
Facebook, through its new-age technology-mediated marketplace, plays a vital technical enabling role, designing and changing this behavioral pattern by promoting the advantages of using secondhand products in light of circular economy and re-commerce [72] (p. 245). This study has implications for different Sustainable Development Goals that can be envisioned through the lens of the study findings. Re-commerce practice accelerates the responsible consumption pattern of people (SDG 12) by raising awareness of using second-hand products and changing the social taboo toward the usage of secondhand products by actively promoting the positive contributions of re-commerce practice of circular economy philosophy on Facebook [73] (pp. 71–72). The expected and desired effects seen in lowering the dependency on virgin materials and extending the product life would have a positive impact on reducing environmental degradation and would aid in the fight against climate change (SDG 13). Re-commerce practices may directly influence the circular economy in terms of expectations of quality in production as well as in terms of durability of product use, which reduces waste to a great extent. This waste reduction helps to protect the living beings on land (SDG 15) and living beings under water (SDG 14). These implications require research of a more interdisciplinary nature that considers multiple fields of study under the same research umbrella.

7.4. Suggestions for Future Research

Conducting research on re-commerce behavior on Facebook to ensure circularity in society is a new field that this study addressed. Future research direction would focus on sentiment analysis on Facebook and other social media, like Twitter and LinkedIn. We would like to do a cross-country analysis of re-commerce behavior on contextual differences in using social media, which would ensure a better picture of how social media emphasizes the philosophy of circular economy in different countries and cultural contexts. Future studies can also focus on how the positive change behavior of re-commerce practice towards circular economy can be “frozen,” as suggested in Lewin’s [70] behavioral change process. Out of our 26 respondents, 24 were female. We would like to investigate the reasons behind their involvement in re-commerce activities, and learn more about gender aspects of re-commerce. As mentioned in the discussion part, this social practice is interdisciplinary in nature, so in future research, we would like to accommodate enabling technologies like big data analysis, blockchain technology, artificial intelligence, and so on to assess their significance in re-commerce practice to assure circular economy. Continued research may also address the role of corporations in the production of quality products, extended producer responsibilities making use of resources from disposed products, and the role of social media corporations in actively promoting transitions to a circular economy.

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31. Zabelina, I.A. Russia and China: Comparative Analysis of Ecological and Economic Development Trends. *IOP Conf. Ser. Earth Environ. Sci.* 2021, 629, 012018. [CrossRef]
32. Baglan, M.; Mwalupaso, G.E.; Zhou, X.; Geng, X. Towards Cleaner Production: Certified Seed Adoption and Its Effect on Technical Efficiency. *Sustainability* 2020, 12, 1544. [CrossRef]
33. Gonçalves, M.; Freire, F.; García, R. Material Flow Analysis of Forest Biomass in Portugal to Support a Circular Bioeconomy. *Resour. Conserv. Recycl.* 2021, 169, 105507. [CrossRef]
34. Lovins, A.B. How Big Is the Energy Efficiency Resource? *Environ. Res. Lett.* 2018, 13, 090401. [CrossRef]
35. Bühler, D.; Schuetze, T.; Junge, R. Towards Development of a Label for Zero Emission Buildings: A Tool to Evaluate Potential Zero Emission Buildings. *Sustainability* 2015, 7, 5071–5093. [CrossRef]
36. Di Bartolo, A.; Infurna, G.; Dintcheva, N.T. A Review of Bioplastics and Their Adoption in the Circular Economy. *Polymers* 2021, 13, 1229. [CrossRef]
37. Potting, J.; Hekkert, M.P.; Worrell, E.; Hanemaaijer, J. *Circular Economy: Measuring Innovation in the Product Chain*, 1st ed.; PBL Netherlands Environmental Assessment Agency: The Hague, The Netherlands, 2017.
38. Leonard, P.; Huysman, M.; Steinfeld, C. Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations. *J. Comput.-Mediat. Commun.* 2013, 19, 1–19. [CrossRef]
39. Obar, J.; Wildman, S. Media Social Definition and the Governance Challenge: An Introduction to the Special Issue. *SSRN Electron. J.* 2015, 39, 745–750. [CrossRef]
40. Aichner, T. The Economic Argument for Hiring People with Disabilities. *Humantit. Soc. Sci. Commun.* 2021, 8, 1–4. [CrossRef]
41. Kothandan, J.; Murugesan, P. M. Based Social Media Data Emotion Analyzer and Sentiment Classifier with Enriched Preprocessor. *J. Inf. Technol. Manag.* 2021, 13, 6–20. [CrossRef]
42. Wang, H.; Ko, E.; Woodside, A.; Yu, J. SNS Marketing Activities as a Sustainable Competitive Advantage and Traditional Market Equity. *J. Bus. Res.* 2021, 130, 378–383. [CrossRef]
43. Ganesan, T.; Anuradha, S.; Harika, A.; Nikitha, N.; Nanjaja, S. Analyzing Social Media Data for Better Understanding Students’ Learning Experiences. *Lect. Notes Data Eng. Commun. Technol.* 2021, 57, 523–533. [CrossRef]
44. Pasquini, C.; Amerini, I.; Boato, G. Media Forensics on Social Media Platforms: A Survey. *Eurasip J. Inf. Secur.* 2021, 2021, 4. [CrossRef]
45. Xun, H.; He, W.; Chen, J.; Sylvester, S.; Steinfield, C. Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations. *J. Comput.-Mediat. Commun.* 2013, 19, 1–19. [CrossRef]
46. Ballew, M.T.; Omoto, A.M.; Winter, P.L. Using Web 2.0 and Social Media Technologies to Foster Proenvironmental Action. *J. Inf. Technol. Manag.* 2021, 13, 10–29. [CrossRef]
47. Statistica Most Used Social Media. Available online: https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/ (accessed on 30 May 2021).
48. Mohsin, M. 10 Social Media Statistics You Need to Know in 2021 [Infographic]. Available online: https://www.oberlo.com/blog/social-media-marketing-statistics (accessed on 30 May 2021).
49. Fu, R.; Qiang, Q.; Ke, K.; Huang, Z. Closed-Loop Supply Chain Network with Interaction of Forward and Reverse Logistics. *Sustain. Prod. Consum.* 2021, 7, 1342–1357. [CrossRef]
50. Wang, C.-N.; Dang, T.-T.; Nguyen, N.-A.-T. Outsourcing Reverse Logistics for E-Commerce Retailers: A Two-Stage Fuzzy Optimization Approach. *Axioms* 2021, 10, 34. [CrossRef]
51. Wang, H.; Ko, E.; Woodside, A.; Yu, J. SNS Marketing Activities as a Sustainable Competitive Advantage and Traditional Market Equity. *J. Bus. Res.* 2021, 130, 378–383. [CrossRef]
52. Pahwa, A. E-Commerce: Time to Build Muscle through Strategic Purchases orAlliances—The Economic Times. Available online: https://economictimes.indiatimes.com/small-biz/entrepreneurship/e-commerce-time-to-build-muscle-through-strategic-purchases-or-alliances/articleshow/79095042.cms?from=mdr (accessed on 30 May 2021).
53. Huynh, T.K.; Le, H.-D.; Van Nguyen, S.; Tran, H.M. Applying Peer-to-Peer Networks for Decentralized Customer-to-Customer Ecommerce Model. In *International Conference on Future Data and Security Engineering*; Dang, T.K., Küng, J., Takizawa, M., Chung, T.M., Eds.; Springer: Singapore, 2020; pp. 21–34. [CrossRef]
54. Arora, A.; Greenwald, A.; Kannan, K.; Krishnan, R. Effects of Information-Revelation Policies under Market-Structure Uncertainty. *Manag. Sci.* 2007, 53, 1234–1248. [CrossRef]
55. Leung, W.K.S.; Shi, S.; Chow, W.S. Impacts of User Interactions on Trust Development in C2C Social Commerce: The Central Role of Reciprocity. *Internet Res.* 2019, 30, 335–356. [CrossRef]
56. Dunlap, R.E. Environmental Sociology: A Personal Perspective on Its First Quarter Century. *Organ. Environ.* 2002, 15, 10–29. [CrossRef]
57. Hargreaves, T. Practice-Ing Behaviour Change: Applying Social Practice Theory to pro-Environmental Behaviour Change. *J. Consum. Cult.* 2011, 11, 79–99. [CrossRef]
58. Warde, A. Consumption and Theories of Practice. *J. Consum. Cult.* 2005, 5, 131–153. [CrossRef]
59. Shove, E. Converging Conventions of Comfort, Cleanliness and Convenience. *J. Consumer Policy* 2003, 26, 395–418. [CrossRef]
60. Gram-Hanssen, K. Consuming Technologies—Developing Routines. *J. Clean. Prod.* 2008, 16, 1181–1189. [CrossRef]
61. Lamond, J.; Everett, G. Sustainable Blue-Green Infrastructure: A Social Practice Approach to Understanding Community Preferences and Stewardship. *Landsc. Urban. Plan.* 2019, 191, 103639. [CrossRef]

62. Spotswood, F.; Chatterton, T.; Tapp, A.; Williams, D. Analysing Cycling as a Social Practice: An Empirical Grounding for Behaviour Change. *Transp. Res. Part. F Traffic Psychol. Behav.* 2015, 29, 22–33. [CrossRef]

63. Breadell, J.K.; Eon, C.; Morrison, G.M. Understanding Resource Consumption in the Home, Community and Society through Behaviour and Social Practice Theories. *Sustainability* 2019, 11, 6513. [CrossRef]

64. Rettie, R.; Burchell, K.; Riley, D. Normalising Green Behaviours: A New Approach to Sustainability Marketing. *J. Mark. Manag.* 2012, 28, 420–444. [CrossRef]

65. Saracevic, S.; Schlegelmilch, B.B. The Impact of Social Norms on Pro-Environmental Behavior: A Systematic Literature Review of The Role of Culture and Self-Construal. *Sustainability* 2021, 13, 5156. [CrossRef]

66. Stella, S.A.; Stace, R.J.; Knepper, B.C.; Reese, S.M.; Keniston, A.; Burden, M.; Young, H.L. The Effect of Eye Images and a Social Norms Message on Healthcare Provider Hand Hygiene Adherence. *Infect. Control Hosp. Epidemiol.* 2019, 40, 748–754. [CrossRef]

67. Shove, E.; Pantzar, M. Consumers, Producers and Practices: Understanding the Invention and Reinvention of Nordic Walking. *J. Consum. Cult.* 2005, 5, 43–64. [CrossRef]

68. Tobler, C.; Visschers, V.H.M.; Siegrist, M. Addressing Climate Change: Determinants of Consumers’ Willingness to Act and to Support Policy Measures. *J. Environ. Psychol.* 2012, 32, 197–207. [CrossRef]

69. Correa, T. Digital Skills and Social Media Use: How Internet Skills Are Related to Different Types of Facebook Use among ‘Digital Natives’. *Inf. Commun. Soc.* 2016, 19, 1095–1107. [CrossRef]

70. Lewin, K. Frontiers in Group Dynamics: Concept, Method and Reality in Social Science; Social Equilibria and Social Change. *Hum. Relat.* 1947, 1, 5–41. [CrossRef]

71. Lim, W.M. Sharing Economy: A Marketing Perspective. *Australas. Mark. J. (AMJ)* 2020, 28, 4–13. [CrossRef]

72. Lim, W.M. A Blueprint for Sustainability Marketing: Defining Its Conceptual Boundaries for Progress. *Mark. Theory* 2016, 16, 232–249. [CrossRef]

73. Lim, W.M. Inside the Sustainable Consumption Theoretical Toolbox: Critical Concepts for Sustainability, Consumption, and Marketing. *J. Bus. Res.* 2017, 78, 69–80. [CrossRef]