

# Informal Workforce And Online Shopping: A Segment Perspective Using Content Analysis

Sanchayita Banerjee<sup>1,2</sup>, Dr. Hirak Dasgupta<sup>3</sup>

<sup>1</sup>PhD Research Scholar (Management), Symbiosis Institute of Management Studies, Symbiosis International (Deemed University), Lavale, Maharashtra, India.

<sup>2</sup>Assistant Professor, Marketing, St. Francis Institute of Management and Research, Mumbai.

<https://orcid.org/0000-0001-9008-716X>, E-mail: [sanchayita.banerjee@sfimar.org](mailto:sanchayita.banerjee@sfimar.org)

<sup>3</sup>Associate Professor, Symbiosis Institute of Management Studies, Kirkee, Pune, Maharashtra, India  
Khadki, Range Hill Rd, Pune, Maharashtra 411020., E-mail: [Hirak.dasgupta@sims.edu](mailto:Hirak.dasgupta@sims.edu)

## Abstract:

Ecommerce in India is growing at a very fast pace and has transformed the way business is done in India. Availability of internet and penetration of smart phone to the last mile customer are the triggers behind this growth. During and post pandemic a huge share of customers started shopping online, but still the share is below 20% of overall retail sales in India. According to ILO India informal economy accounts for more than 80% of non-agricultural employment. This includes varieties of jobs ranging from domestic workers, vegetable vendors, to sub-contracted outworkers etc. who form a large share of retail consumer base in the country and marketers need to understand their adoption behavior for better market capturing. As they are a less studied segment in terms of buying behavior analysis, interviews were taken from 22 respondents and Conceptual Content Analysis method was adopted to analyze the data. The study found that like previous studies, constructs like trust/distrust, convenience, subjective norms, uncertainty, perceived risk or perceived usefulness etc. are factors which behaves like enablers or barriers to online shopping. But less education, peer influence and non-access to infrastructure are the major elements behind online shopping adoption behavior.

**Keywords:** Online Shopping, Unorganized Sector, Informal Sector, Content Analysis, Segmentation, Barriers and Enablers.

## Introduction

At the young age of only 27 years (Turban et al., 2018) e-commerce is gradually becoming a part and parcel of many people's life. Although literally it started around a half century before, it picked up the momentum in last three decades. More and more people are now buying online. After developed economies it is noticed that consumers of emerging economies made a big shift from traditional shopping to online shopping. COVID 19 pandemic triggered the strong uptake of online shopping across regions. It has accelerated the shift to e-commerce, with an increasing number of consumers shopping online at a higher frequency. UNCTAD study confirmed this fact as it found that the biggest gainers are in the field of electronics, education, household products, pharmaceuticals and personal care items. Another observation of the

study is that in terms of average spending per shopper the expenditure has declined during and after the pandemic. Interestingly one remarkable finding of the study is, people with tertiary education increased their online shopping as compared to others. Brazil being an emerging economy, showed that the most vulnerable population and women did more amount of online shopping during and after pandemic period. With traditional shopping being difficult due to many restrictions people are increasingly getting inclined to shop online. The study further expected that possibly online activities would outlast the COVID 19 pandemic. Modern marketing is inundated with increasing choice of interactive devices and platforms. The rapid growth of mobile device that makes it easier to browse and shop online would have a positive impact on economic growth.

Informal workforce plays a dominant role in most of the developing economy. In Indian economy it contributes more than half of India's GDP. According to ILO (International Labour Organization) it is a global phenomenon where over 60% of world's adult labour-force are employed in informal sector, either full time or part time, but there is variation across countries. Countries like Latin America and Sub-saharan Africa experience higher level of informality as compared to Europe or East Asia. Contrary to old forecasts, ILO finds that there is a continuous increase in the informal economy in developing countries. ILO estimates that in India informal economy accounts for more than 80% of non-agricultural employment. Mobile phones and internet connection making their pathway to semi-urban and rural areas, population from these areas are gradually becoming the target audience for online shopping. Given the rapid growth rate of internet usage among almost all sections of the society, and with most of the households having at least one mobile phone with internet connection, mobile commerce is growing at a very fast pace.

The concept of 'informal' or 'unorganized' sector is a typical characteristic of Indian economy and they are synonymized as a term here. Niti Ayog's report- 'Strategy for New India at 75' published in 2018 states 85% of all workers are employed in informal sector, while Economic Survey report of 2018-19 said that 93% of total workforce is 'informal'. Majority of the informal labor force in urban India, including the metropolitan cities, people from the tier II and tier III cities and rural areas, has also started using android phones with internet connection. Providing high contribution of this sector to country's GDP, it requires focused attention. Many of these people were badly affected by the nation-wide lockdown due to COVID 19 Pandemic and the impact is uneven as most of them are in contract-intensive sector such as domestic workers, vegetable and street food vendors, rickshawalas, barbers, sub-contracted outworkers etc (ilo.org, n.d.). As the size of this labor force is huge, The Ministry of Labor, Government of India categorized them under various groups, one of which is 'in terms of Service Category' (vikaspedia.in, n.d.). This study takes this group into consideration, which includes domestic workers, street vendors, auto rickshaw drivers, sub-contracted outworkers like security guards in buildings and offices,

carpenters working with contractors, etc. to study their regular buying pattern, and the antecedents of their behavior that facilitates/hinders the adoption of online shopping. Patton (1987) opined that when participants are chosen from different background with various experiences, it increases the possibilities of getting better crystallization of the research question from a variety of aspects. With a myriad set of diversity among Unorganised Sector Workforce (USW), many market segments are created. Understanding attitude of consumer towards a market offering is vital for a marketer and consumer attitude can act as a driver or a barrier which cannot be ignored.

### **Literature Review (Conceptual Background and related work)**

Many studies were conducted in the area of online shopping (OS) in different contexts. Various studies found numerous constructs which are either facilitators or inhibitors for OS adoption. But this USW consumer group is different in nature as compared to other groups due to many factors like availability of a device for shopping (many of them told that they have only one android phone in the family) or knowledge level related to OS. As the segment is quite big in size, the purpose of this study was to explore the USW buying behavior involving their cognitive, affective, behavioral and social responses and thereby focus on its reflection on their OS tendencies. Here the customer experience is a multidimensional construct which is highly holistic in nature (Verhoef et al., 2009). In a metropolitan city like Mumbai, with easy access to most of the things, the purpose of this study is to understand whether USW here tend to do online shopping. This will help ecommerce marketers to reach to this audience with better segment-specific focus, and in turn will help the USW to adopt OS. The research question here is therefore—

1. What are the buying characteristics of the USW?
2. What contextual and personal factors shape the willingness towards the adoption of online shopping among USW?
3. Has the COVID 19 lockdown influenced their buying mode (offline to online)?

To achieve this purpose of the study we reviewed the recent existing literature on USW and OS adoption that aided to develop a theoretical framework for the study which led to the making of the discussion guide for our respondents.

#### **Unorganized/Informal Sector Workforce:**

The informal sector in India saw a significant growth post liberalization period (Agarwala, 2009). The term 'Informal Sector' was first coined in 1971 by the Keith Hart, when he described it as the part of urban labor workforce outside the organized labor market (George, 2014). Definition of 'Informal Sector' is always a subject of debate. Many studies consider Informal Sector as a subset of Unorganized Sector. The terms 'Informal Sector' and

'Unorganized Sector' are used interchangeably in Indian context. In spite of being featured by low productivity, the ample opportunity of employment distinguishes informal sector as a catalyst for poverty and allied economic imbalance reduction (George, 2014). It is noticed in India that in urban areas high amount of poverty forces individuals to opt for employment in informal sector. Measurement of informal sector employment is a challenge. Charmes (2000) tried to provide an estimation at international level with respect to informal sector share in non-agricultural employment, total employment and GDP in various developing nations. But later on Charmes (2009) opined that such measurement is a challenge as the data could be a proxy indicator.

Table 1: Formal-Informal Employment across Organized and Unorganized Sector (in Crores)

Type of employment	Organised	Unorganised	Total
<b>2017-18</b>			
<b>Formal</b>	4.43	0.28	4.7
<b>Informal</b>	4.62	37.79	42.43
<b>Total</b>	9.05	38.07	47.13
<b>2018-19</b>			
<b>Formal</b>	4.91	0.45	5.35
<b>Informal</b>	4.55	38.37	43.43
<b>Total</b>	9.46	39.32	48.78
<b>2019-20</b>			
<b>Formal</b>	5.09	0.8	5.89
<b>Informal</b>	4.46	43.19	47.64
<b>Total</b>	9.55	43.99	53.53

Source: Economic Survey 2021-22 by Department of Economic Affairs, Ministry of Finance, Govt of India

#### **Online Shopping Adoption concept:**

Internet has created a paradigm shift in businesses in various forms. Buying and selling through internet has broken the barriers of geographical reach. With high penetration level of internet in India over the last decade, OS has

received a large acceptance among Indian consumers (Jain & Kulhar, (2019). Safety, Competitive pricing and easy return mechanism are the top reasons for shoppers to accept e-commerce services. Al-Hattami, (2021) claimed in his study that consumer demand has shifted to online mode. Many surveys found that there is a major shift of consumers from offline to online in many developed and developing countries. Pandemic has changed our life from normal to new normal, maintaining all prescribed protocols. The Pandemic year has brought a massive digital adoption which changed the approach towards shopping. Many shoppers have adopted OS across age-groups. It has created faster adoption of digital channels in both metro and non-metro cities in India. But there is also an expectation that usage of online shopping will gradually normalize. The higher the perceived benefits consumers notice, the greater is the chance of OS adoption. Therefore the key to understand OS behavior is the identification of pre-purchase determinants that lead to 'do' or 'do not' shop from the web market. These determinants may have positive or negative impact on consumers' propensity to shop in online environment. Though there is a list of determinants influencing consumers' pre-purchase intentions, segment-wise the group of determinants are different.

Adoption and resistance are two ends of a spectrum of reactions to any new experience (Lapointe, et al., 2002). Resistance highly depends on the perception of a consumer towards a new concept or experience or phenomenon (Cornescu & Adam, 2013). If consumers interpret it as beneficial, the perception is in favour of the change. There is a complex relationship between change and consumption, and resistance works as a defense mechanism against all apprehended possible consequences of failure. From many studies it is noticed that antecedents of OS adoption is peculiarly dependent on the type of the product. Prabowo et al. (2020) observed while doing their SLR that when it comes to grocery, logistics requirements are additionally considered, where last mile distribution is a major factor. They also grounded in some components like lifestyle shift or temporal view point influencing online grocery shopping appropriation. Another study done on online grocery shopping by Eriksson & Stenius (2022) focused on the effect of COVID 19, whose results indicated that a typical adopter

was less than 45 years old with higher family income and majority were from capital region of Finland, showing an indication towards a particular population segment behavior (Eriksson & Stenius, 2022). Adoption literature suggests that demographic factors like age, gender, income etc. and aspects like trust and security, perceived risk, convenience, uncertainty, technology readiness and social influence are universal factors for any type of product category with respect to OS (Prabowo & Hindarwati, 2020).

Again, there is a need to understand the causes of resistance behavior which should be addressed properly for the diffusion of the concept. Salancik & Pfeffer (1978) defined 'uncertainty' as a situation when an individual or an organization cannot anticipate the external environment, and information asymmetry is a source of uncertainty (Pavlou, (2005). Rudolph et al. (2004) studied Switzerland market, Riley et al. (2005) studied UK market and Libermann & Stashevsky (2002) covered Israel market to analyze the barriers of OS. Pinto (2013) did a similar study in Indian market to explore the barriers among Indian consumers. A study by Pease & Rowe (2003) revealed that lack of awareness and understanding of ecommerce, lack of skill and resistance to technological changes are some of the major problems associated with OS adoption. Studies also found that barriers could be related to consumer demographics, personality type, shopping channels, product category, or service provided by online retailers etc (Pease & Rowe (2003).

### **OS Segmentation Literature**

Wedel & Kamakura (2000) stated that segmentation is the central topic of marketing theory, though many scholars highlighted several problems in conceptualizing the term (Dibb & Simkin, 2009; Quinn, 2009). Segmentation helps in bringing a large heterogeneous group into small homogeneous groups (Aljukhadar & Senecal, 2011). The rapid growth of ecommerce has risen the competition in the market and so marketers need to segment their customers to serve them in the best way possible (Akar, 2021). Many studies are done considering few factors at a general level but very few studies tried to segment OS consumers on specific characteristics. Considerable amount of literature has blended many factors as antecedent for OS but no specific segmentation

basis is identified properly. Akar, (2021) studied that pandemic-influenced behavioral aspects determined various customer segments. Aljukhadar & Senecal (2011) studied customer usage patterns as a basis for segmentation, while many studies investigated many other factors for customer segment profile. Furthermore, studies also profiled customers based on geographical, demographic and behavioral variables to determine customer segments and develop suitable targeting strategies (Akar, 2021). Generation Z are the digital natives whose social media connections have made them market mavens. Studies in this line help marketers in predicting potential adoption behavior and accordingly designing favourable shopping environment for them (Kahawandala, et al., 2020). Parashar, et al. (2016) used cluster analysis to segment online customers and found four groups: Traditional Shoppers, Benefit Seekers, Convenience and Assurance Seekers, and Information and Price Seekers. The basis of the study was website selection criteria which included easy return policy, web atmospherics, information availability, transaction convenience or brand image, to name a few (Gehrt, et al., 2012). On the other hand, Gehrt, et al. (2012) identified three segments: value Singularity, quality at any price and reputation/recreation, again keeping website characteristics under consideration. The basic premise of shopping orientation is the approach taken by shopper group to do the shopping. Previous studies characterized shopping orientation mainly in terms of demographics, indicating its importance for segmentation (Gehrt, et al., 2012).

## Methodology

The Broadcast Audience Research Council (BARC) India has adopted the New Consumer Classification System (NCCS) which was developed by Market Research Society of India (MRSI) and Media Research User Council (MRUC) in 2008. The old SEC system had the limitation of not being effective in rural area and separate system had to be developed for them. The new system is a better discriminator of the purchasing power of households as compared to the old SEC. the new system considers two variables: education of the CWE (chief wage earner) and the number of consumer durables owned by the family. Out of many durables that were studied while developing the framework,

11 durable items were shortlisted to be the best discriminators of the household's purchasing power. The new SEC, ie., NCCS captures consumption and thereby understands the propensity of a household to spend. The strong positive factors of this classification is that it is relevant for both urban and rural market, giving an edge to marketers to develop same marketing campaigns for both the markets, and secondly it is linked to the entire household which helps to capture their affordability quotient, helping the marketers to target their customers precisely.

The present study adopts qualitative analysis to answer the research questions. The reason behind choosing the qualitative approach is: one, the dearth of empirical research for this specific segment on exploring their attitude and mindset about online shopping; and two, the flexibility that qualitative approach extends to investigate complex criterion in a buyers black box (Kaur, et. al., 2021). Although many quantitative studies are done on Online Shopping adoption and continuation, interview method was adopted for initial exploration of the specific consumer groups' perception regarding Online Shopping (Maitiniyazi & Canavari, 2021), since their buying behavior is almost unexplored. The purpose of collecting data through interview method was to empirically investigate the perception of the informal workers towards online shopping and their inclination towards it. For this, Qualitative Content Analysis was chosen as it can determine the psychological and emotional state of a person or a group which is the basis of attitude development. Qualitative content analysis are of two types: Conceptual and Relational. This study used Conceptual Content analysis to look for occurrence of selected terms within texts which could be explicit or implicit. The analysis is done following Erlingsson & Brysiewicz, (2017) technique, which is inspired by "Qualitative Content Analysis of an Interview Text" by Graneheim and Lundman (2004).

Interview questions or the Discussion Guide was prepared on the basis of studied literature, most of which are quantitative papers and with the intent to inspect additional issues emerging from the discussion through interview. But since exploratory study should not be affected by existing studies, precaution was taken so that respondents can open up their minds while responding. One typical observation while

taking the interviews was experienced that though in existing literature many constructs were studied several times as factors responsible for OS adoption, majority of the target group members were not comfortable with many of them. Therefore before finalizing the guide for interview some informal discussions were done with some of them to decide upon the questions. The discussion guide was split into three sections: first section was about participants' demographics, second section was about their regular shopping behavior and the third section was about online shopping (OS). To study the section's behavior it was necessary to understand the socio-economic background of the respondents. Based on 'Indian Socio-economic Classification 2018' Report by Market Research Society of India (MRSI), few questions were added in the demographic section of the discussion guide. Each interview lasted between 30 minutes to 45 minutes. Since respondents were majorly from somewhat lower section of the society, most of them were quite skeptical and uncomfortable at the beginning. So before starting the interview they were made comfortable by discussing something of their interest and then interview started. To take into account if there is a possible difference in the behavior, respondents were taken from various profession, like house maids, street vendors, security guards, workers in service sectors, and auto rickshaw walas. As in most of the qualitative studies, purposive sampling technique was adopted, where total 35 people were approached but only 22 agreed to give the interview, which is also suggested by Creswell (1998) as requirement for qualitative interview analysis should be between 20 to 30 responses. All participants were anonymised based on their consent. All interviews were recorded using mobile phone device. Three MBA students of Mumbai University were assigned to prepare the transcripts verbatim as a part of their project and was checked by authors to ensure consistency. Interviews were recorded using mobile phone. MS Excel was used as a tool to do the data analysis for effective data management following the method developed by Ose, (2016). After repeated reading open coding was done and then text clips were categorized depending on the research questions. Keeping in mind the context of the study, the meaning units were condensed first into descriptions without changing the meaning, then coded, and finally categorized into an interpretation of the

underlying meaning- the latent context (Graneheim and Lundman, 2004).

## Discussion and Findings

The first research question of the study aims to understand the buying characteristics of the USW. For this there was a need to understand the background of the respondents on situational backdrop. Table 2 and 3 outlines the respondent profile of the study. Certain distinctive characteristics were observed—majority of them started earning at an early age, leaving education, to support family needs. Many of them own basic phone which does not have internet connection, restricting the access to OS. Some of them mentioned that even though they do not use UPI as a payment mechanism by themselves, sometimes they use it through others, eg. Children, cousins and siblings, or friends.

On the context of the buying characteristics, questions were asked like- Do you like to do shopping? How do you do shopping? What kind of products you prefer to shop generally? From where do you shop essentials and non-essentials? How do you get them and how frequently you purchase them? Is there any specific reason behind shopping in a certain way? What are the important factors that you consider while taking a purchase decision? What all purchase decision you take on your own? What about your purchase pattern during festive season or marriage season? Do you check the product offers while purchasing?

The two main semantic category headers that were identified focusing on the first research question are (1) USW's Shopping Pattern, and (2) USW's Shopping Orientation.

### USW's Shopping Pattern

Shopping Pattern reflects the 'why' and 'how' factors at the back of consumer purchase decision. According to the participants everybody likes shopping but budget is a constraint. When asked about buying style during festive season and wedding in the family, participants expressed their concern about limited income vis-à-vis maintaining the status in their community, especially when there is a wedding in close relatives circle. If money is there in hand then festive buying is there, otherwise all purchases are need driven and only bought at the time of necessity. The results from

the discussion show that the earning is limited and responsibilities are high, forcing them to prioritize the purchase decisions. As expected, only few of them are using Google pay or Paytm, others use only cash as a mode of transaction. The main reason for that could be low level of education plus less access to android phone. Participants who do not use it confessed that they don't understand it. This also make them more conservative in nature and there is a resistance to change. This could be due to Direct cost of Change (Rumelt, 1995) like not having an android phone, or Past Failure which leaves pessimistic image for Future Change (Rumelt, 1995), for example loss of money because of some technical mistake, or Communication Barrier that lead to information Distortion (Hutt, et al., 1995) due to low level of understanding, the three very important sources of resistance (Del & Fuentes, 2003).

#### USW's Shopping Orientation

USW prefer to shop from road-side stalls, though some of them visited Dmart, a popular

departmental chain store in Mumbai, and a share of this group prefer to do their monthly shopping from Dmart. Few also opined that they have fixed shops in local area as they feel those shopkeepers give good quality items because of the relationship and provides credit facility at the time of requirement. They believe in buying in lesser quantity and like to do bargaining. The study revealed that the important factors they consider for a purchase decision are value for money, quality, durability, price, fashion and most importantly need for the product and money available in hand. Participants were very clear about not doing impulse buying, though few of them confessed that sometimes to do it but at a very low level. The notion of 'offer' was not very clear to many of the participants as they do not shop from bigger stores, but those who were aware were quite kin about it. For most of the personal use items they take their own purchase decision, irrespective of gender, but for high value items they prefer to discuss before buying. Our data show that shopping is a task for them when the purchase frequency of all kinds of products are highly need based.

Table 2: Respondents' demographics

Age Range	<30=6, 30 to 40=7, >40=9
Gender	Male-17, Female-5
Occupation	Maid/Caretaker-8, Watchman/Security Guard-2, Street Vendor-6, Auto Rickshaw Driver-3, Service Worker-3
Monthly income (Personal)	<25000=15 (*all 5 ladies come under this category) , >25000=7
Monthly income (Family)	Ranges from Rs.20000 to Rs.40000, depending on the number of working members in the family
Education level	No education-5, school level education (7 <sup>th</sup> standard to 10 <sup>th</sup> standard)-8, intermediate level-5, graduation and post-graduation level-4
Spouse's education level	Most of them have school level education, and very few of them have gone to college

Table 3: Respondents' background

Ownership of house	Majority of them stay in rented house and rent varies from Rs.4500 to Rs.6000 per month
Ownership of durables	All of them have electricity connection, ceiling fan and LPG gas connection, most of them have color television, majority of them have refrigerator, few of them have

	two wheeler/van or washing machine, only two of them have AC and two have computer. Many of them have agricultural land at village but barring few, most of them do not receive any monetary share for various reason
Banking Activity	All of them have bank account but most of them do not use debit/ATM card. Many of them have UPI in their phone but they are not very much comfortable to use it. Some of them are dependent on their ward, who are present generation school/college going youngsters, for using UPI. None of them has credit card.
Daily routine	All of them have full day busy schedule, get very less personal time and no fixed holidays
Loan	Most of them took loan for something and many are paying EMI, while others completed their payment
Number of members in the family	Number of family members varied from 4 to 7, one person has 10 members at home and five people are staying in shared room whose family are in village where they have many members
Personal Background	Majority of them left studies at early age due to family pressure. Some of them stay in rented house and some in small own house. Almost everyone has at least one android phone with one family member.
Favorite Entertainment	Surfing net/You Tube in mobile phone, watching series/movies/news/cricket in TV, 4 of them said they listen to radio FM in phone, one person said he loves to sing devotional songs in free time. All these people have a very tight schedule and practically very less personal time for themselves

The second research question caters to contextual and personal factors that shape the willingness towards the adoption of OS among the target group. For the analysis purpose of this research question, participants were asked concerning their ideas about OS, OS app present in their mobile, knowledge of various payment mode to do OS, reasons behind doing or not doing OS, risk perception and peer influence. As suggested by Graneheim and Lundman (2004) the steps to do Qualitative Content Analysis of an Interview text is Condensation → Codes → Categories → Theme (if required). While doing condensation we shorten the text without changing the core meaning. Then we codify them using one or two words. Codes are then organized into categories that are developed using constant comparative method. One of the critical aspect of content analysis is the choice of the meaning unit to achieve credibility. Too broad meaning unit will likely to have too many meanings, whereas too narrow meaning unit may result in fragmentation (Graneheim and Lundman, 2004). Qualitative content analysis has the characteristic of focusing on the subject and context, and further emphasizing on the similarities and differences

among codes and categories. In certain cases a theme is further developed to communicate with the reader on intellectual and emotional level emerging from the content of the text. Following these steps the interview responses were analysed to obtain the major factors behind acceptance or non-acceptance of OS among the target group. Numerous studies done in various countries concentrated on the determinants of the adoption of OS. Many theories and models were used to understand the factors leading to OS by varied market segments. The highly used theories and models in OS literature are Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM, TAM2), Expectation Confirmation Model (ECM) and Unified Theory of Acceptance and Use of Technology (UTAUT). The analysis is guided by certain variables of these models/theories and proposed by other researchers in the context of adopting OS. The present study contributes to the literature by studying typical factors pointed out by the respondents in their interview behind their attitude towards OS. Most of these factors are found in OS literature but the item definitions are different. The study also



contributes to identify the challenges which hinder the USW customers' adoption of OS. Previous studies, both new and old, have already reported that 'Trust' is the biggest element behind OS adoption (Raman, 2019; Mosunmola, et al., 2019; Tarhini, et al., 2019, Dwairi, & Azzam, 2021; Athapaththu & Kulathunga, 2018) Table 4 is developed referring Mayring (2000) and Erlingsson and Brysiewicz (2017)

which provides the coding process and category identification of the study. Certain sub-categories are repeated and categorized differently as their contexts are different. The categorizations are done with reference to OS adoption literature related to the theories and models used, keeping in mind the USW response perspective.

Table 4: Coding idea and Category Identification from the interview data

Interview Text Condensation	Code	Sub-Category	Category
Knows that products are available at lesser rate, but do not prefer to buy as she feels things are not fresh, rather they are old stock.	poor quality product	Perception challenge, safety challenge	<b>Trust and Distrust</b>  (Raman, 2019; Mosunmola, et al., 2019; Tarhini, et al., 2019, Dwairi, & Azzam, 2021; Athapaththu & Kulathunga, 2018)
bad experience of non-receipt of the product, Had it been physical store he could have gone there, but in online shopping he doesn't know anybody.	fear of uncertainty	Bad experience, Return Challenge	
online the product looked it is of good quality, but when received the experience was bad	fear of getting cheated	Bad experience	
Heard from friend that ordered for watch and got only belt. So not willing to do	fear of uncertainty	Negative/Partial Information Challenge	
Heard but never tried	no interest	lack of willingness	<b>Attitude</b> (casual/neutral)
Knows about many online stores and did purchases. Experience is good	Good experience	happy shopper	<b>Attitude</b> (positive)
Not at all interested about it and already decided that never she will do it.	no interest	lack of willingness	<b>Attitude</b> (negative)
It is good but no knowledge about how to create account	lack of information	knowledge challenge (information gap)	<b>Self-efficacy</b>  (Dar & Bhat, 2017; Sudhakar and Habeeb, 2019; Lindh, et al., 2020)
Finds it tough as he can't understand much, so fears to do	fear of uncertainty	knowledge challenge	
Language is a bar as I can't read English and Hindi	fear of uncertainty		
less or no knowledge about payment modes available	fear of uncertainty		

Never did on her own. Knows nothing about it and not willing to learn also	low confidence in doing OS	knowledge challenge, lack of willingness	<b>Perceived Control</b> (Wu, et al., 2020; Akram, 2018; Nguyen & Khoa, 2019)
Feels she is old fashioned and not willing to accept these new things/concept	old fashioned	Perception challenge	
no touch and feel, has to depend on visuals only	risk of making wrong choices	touch and feel challenge/intangibility	
Good to check in online first, and if available in cheap rate then buy	Easy to compare	Environment, Economic	
knows about it but tried through others	low in confidence	dependency challenge	
Prefer trial before buying	experience oriented	infrastructural Challenge	
delivery may come when I am not at home and it will go back	risk of missing	logistics challenge	
Seeing others to do, felt like doing OS sometime	motivated by seeing others	Peer influence	<b>Subjective Norm</b> (Hijrah, 2017; Mainardes et al., 2020)
no one from known group does OS	peer influence	Cultural/Environmental Challenge	
Heard from friend that ordered for watch and got only belt. So not willing to do	fear of uncertainty	Negative/Partial Information Challenge	
received all negative feedback from acquaintances	peer influence	Negative/Partial Information Challenge/ Environmental Challenge	
Return of a product is very time consuming	long process of return	Return Challenge	<b>Perceived Ease of Use</b> (Lindh, et al., 2020; Changchit et al., 2019; Dwairi & Azzam, 2021; Amirtha & Sivakumar, 2018)
returning a product is quite cumbersome, and due to lack of education it is difficult to manage	fear of inability to manage	Return challenge, Knowledge Challenge	
gets delivery at home, budget friendly	Time saving, less expense	convenience, economic	
gets delivery at home, budget friendly	Time saving, less expense	convenience, economic	<b>Perceived Usefulness</b> (Wu et al., 2020; Changchit et al., 2019; Dwairi & Azzam, 2021; Amirtha & Sivakumar, 2018; Saprikis et al., 2018)
if something is available at low rate then prefers to buy. Feels that it saves money	Easy to compare, saves money	Economic	
OS saves time. You get everything if you have knowledge of using it, very convenient, no petrol expense, no pollution	Time saving, less expense	Convenience, economic	

OS saves time. You get everything if you have knowledge of using it, very convenient, no petrol expense, no pollution	Time saving, less expense	Convenience, economic	<b>Convenience</b> (Hijrah, (2017; Sudhakar and Habeeb, 2019; Akram, (2018; Chakraborty & Soodan, 2019)
it is good for emergency purpose, when I am unable to go and buy.	Time saving and Immediacy	Convenience	
more choices available	product choices	availability	
No need to go shop after shop and comparison is at finger tip	Easy to compare	convenience	
Basic level phone	non-availability of infrastructure	infrastructural Challenge	<b>Non-access</b> (Chakraborty & Soodan, 2019; Phan Q. et al., 2020)-accessibility
only daughter has an android phone	limited-availability of infrastructure	infrastructural Challenge	
she finds online payment to be done for OS and she is not comfortable with that. Her kids also do not do OS. Not at all convinced about COD option	fear of uncertainty	knowledge challenge, risk of payment mode	<b>Perceived Risk</b> (Libermann & Stashevsky, 2002; Changchit et al., 2019; Dwairi & Azzam, 2021; Hijrah, 2017; Akram, (2018; Chakraborty & Soodan, 2019)
Can't understand due to lack of education	lack of information	knowledge challenge	
Some of her relatives and friends did online shopping but got wrong products or product of inferior quality	fear of uncertainty	Negative/Partial Information Challenge	
Income is very less, so no courage to try OS	fear of uncertainty	Environmental challenge	
scared about losing money because of lack of knowledge	fear of uncertainty	Safety challenge	
Feels risk is everywhere, in some or the other way	ready to take risk	Behavioral intention	
Good for buying few products but not for all	fear of uncertainty	Perception challenge	<b>Uncertainty</b> (Changchit et al., 2019; Mosunmola, A. et al., 2019)
Only if some strong reason is there then do online shopping	urgency and immediacy	Perception challenge	<b>Behavioral intention</b> (Amirtha & Sivakumar, 2018; Saprikis et al., 2018; Tarhini, A. et al., 2019)
if someone teaches then ready to try	ready to take chance	Willingness	
Heard but never tried	no interest	lack of willingness	

Not at all interested about it and already decided that never she will do it.	no interest	lack of willingness	
---	-------------	---------------------	--

We observed here that the output of the content analysis in table 4 explains many well established constructs which are also verified in other studies with different study objectives, but the items attached to those components are different in this case, which is an addition to existing literature. Attitude is a construct which is widely used in OS studies but here it shows three different connotations—positive, negative and neutral. This leaves the impression that attitude is highly situation specific and takes meaning accordingly. It is noticed that USW have certain ideas about OS but are very skeptical to use it as they lack confidence. Education level may be the major cause, followed by peer opinion. Some interesting school of thoughts came out of the interview, like one participant stated that when he buys something from shop and if it has a problem, he knows the shopkeeper to whom he can go and speak, which is not possible in case of OS as he doesn't know there anyone. Another lady participant expressed that if she can't bargain on her own, she feels that she has not got it at the right price. One of them was concerned that during day time it is difficult to give a location for delivery as nobody is available at home to receive the product. And since he (auto rickshaw driver) is always on the go, so he can't give any office address. Also, when purchased from a brick-n-mortar store the product is received immediately, whereas in case of OS for most of the thing there is a waiting period. Participants with low level or no education consistently expressed their unwillingness towards trying OS as they feel they have high chances of making mistakes which may lead to loss of their hard-earned money. During interviews it was observed that there are certain myths in their minds. While one participant was doubtful about the freshness of product, other spoke about the difficulty in payment method. Many of them feel that most of the time wrong product is delivered. There could be many reason for this as the negative remark that they receive from their peer confirms their belief.

Our third research question is to check the influence of COVID 19 lockdown on USW's buying mode- online or offline. For this, questions were asked like—Have you tried online shopping before pandemic lockdown? Have you tried it during or after lockdown? What kind of difficulty you faced during lockdown? Our study found participants speaking in similar line with the data from WIEGO's study. WEIGO (Women in Informal Employment: Globalizing and Organizing) conducted a 12-city longitudinal study to assess the impact of COVID-19 crisis on informal workers from our study group of domestic workers, street vendors etc. The study found that the impact varied considerably between cities and type of occupation. Our study found participants speaking in similar line with the WIEGO (2021) study. The home based workers, domestic workers and street vendors experienced a sharp drop in earnings when the lockdown started. In the mid-year of 2020 also they couldn't return to work because of the drop in demand for their service. To certain extent food vendors faced lesser hit as compared to other street vendors. However, the domestic workers and rickshawwallas were worst hit and many of them were out of work for a long time period since people were not commuting much due to the continuation of closure of workplace and most of the households were managing without house help in the fear of getting affected by COVID. The resulting exodus of many migrant workers to their hometown during that period was remarkable. A previous study indicated that workers who were not eligible for paid leaves had not received their wages and salaries during lockdown 1.0 and 2.0 (Estupinan & Sharma, 2020). Participants expressed that with very less or no income there was the tension of asset depletion and many of them had gone hungry sometime. During that phase all of them admitted that there was no purchase at all, they only tried somehow to survive. Lady members of the families played the role of caregiver to children and elderly relatives, so it was difficult for them to go back to work even after the lockdown was eased. A recent study done on Delhi-based women informal labor force found

that more than one third of them faced the increased burden of child and elderly care during the lockdown period (Chakraborty, 2020). One of the key findings of the WIEGO study is- though government relief efforts were vital source of support that time, the reach was quite limited and uneven, which is aligned with our study findings as many of the participants expressed their concern about non-receipt of government support. On asking about trying OS before, during or after lockdown, the following excerpt highlighted the attitude of a participant who works as a security guard:

“Before lockdown I never felt the necessity of doing OS, but after the second lockdown I realized its importance and started doing at a lesser scale. Gradually I understood its benefits and also gained confidence. Comparison of rates and looking for discount is now at my finger tip.

Jiomart and Dealshare give wonderful rates. Once on a purchase of grocery items for Rs.800, I got 1 kg of sugar for Re.1 from Flipkart. I feel now online shopping is quite good.”

Another participant argued that only twice he did OS taking help from one of his friends post second phase of lockdown but no more interested in depending on someone else. It is noticed that barring one, none of the participants tried OS before lockdown. The targeted USW members perceived OS as technical and cumbersome which they felt is beyond their capabilities. But one interesting finding of the study is some of them felt that after lockdown it has become trending and their next generation is more into it, so there is a need to learn how to do OS. The broad finding is depicted in pictorial form below in figure 1--

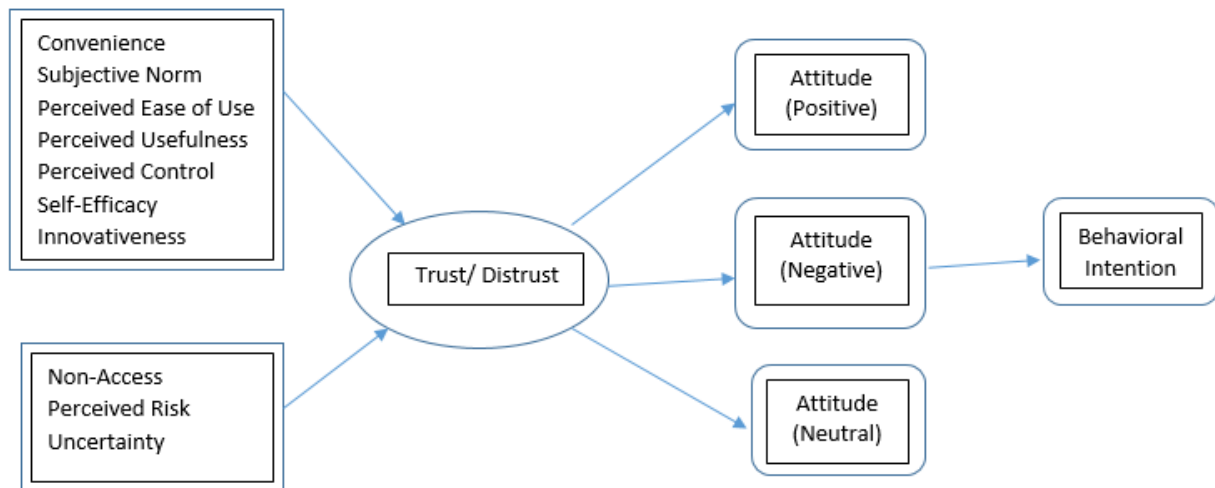


Figure 1: Proposed Model of the Study (where each of the constructs are defined in Table 4)

## Conclusion and Future Scope

The study found that various factors work as antecedent for OS adoption among USW where some of them facilitates while some other inhibits to adopt it. The major inhibitors are low level of education among USW, less access to android phone, low income level and understanding level about OS, various risk perception and myths about OS, whereas facilitators were noticed, such as finding it to be time saving and convenient. Since it is in trend now, many are gradually developing the willingness to learn. Our study finds that there is a gap in the awareness level about the benefits associated with OS. If the knowledge is properly

imparted with them, they will develop the eagerness to try it. Past research shows that subjective norm is a very important component for OS. Those who are currently using, have the opinion that it is easy to compare, budget friendly, provides good amount of discounts, no travelling cost involved and delivery at door step, and convenient as everything is in fingertip. It would be interesting for future researchers to investigate how to tackle the barriers observed in the study and utilize the enablers to increase the level of OS adoption at a faster pace.

## References

- [1] Agarwala, R. (2009). An economic sociology of informal work: The case of India. In *Economic sociology of work*. Emerald Group Publishing Limited.
- [2] Akar, E. (2021). "Customers' Online Purchase Intentions and Customer Segmentation During the Period of COVID-19 Pandemic". *Journal of Internet Commerce*, 20 (3), 371-401. <https://doi:10.1080/15332861.2021.1927435>.
- [3] Akram, M. S. (2018). Drivers and barriers to online shopping in a newly digitalized society. *TEM Journal*, 7(1), 118-127
- [4] Al-Hattami, H. M. (2021). Determinants of intention to continue usage of online shopping under a pandemic: COVID-19. *Cogent Business & Management*, 8(1), 1936368.
- [5] Aljukhadar, M., & Senecal, S. (2011). Segmenting the online consumer market. *Marketing intelligence & planning*.
- [6] Amirtha, R., & Sivakumar, V. J. (2018). Does family life cycle stage influence e-shopping acceptance by Indian women? An examination using the technology acceptance model. *Behaviour & Information Technology*, 37(3), 267-294.
- [7] Athapaththu, J. C., & Kulathunga, K. M. S. D. (2018). Factors affecting online purchase intention: A study of Sri Lankan online customers.
- [8] Chakraborty, S. (2020). COVID-19 and women informal sector workers in India. *Economic & Political Weekly*, 55(35), 17.
- [9] Chakraborty, S., & Soodan, V. (2019). Examining utilitarian and hedonic motivations in online shopping in India: Moderating effect of product browsing behavior. *International Journal of Recent Technology and Engineering (IJRTE)*, 8(1C2), 117-125.
- [10] Changchit, C., Cutshall, R., Lonkani, R., Pholwan, K., & Pongwirithon, R. (2019). Determinants of online shopping influencing Thai consumer's buying choices. *Journal of internet Commerce*, 18(1), 1-23
- [11] Charmes, J. (2000). The contribution of informal sector to GDP in developing countries: assessment, estimates, methods, orientations for the future.
- [12] Charmes, J. (2009). Concepts, measurement and trends, 27-62
- [13] Chuleeporn Changchit, Robert Cutshall, Ravi Lonkani, Kamolnut Pholwan & Rathanan Pongwirithon (2018): Determinants of Online Shopping Influencing Thai Consumer's Buying Choices, *Journal of Internet Commerce*, DOI: 10.1080/15332861.2018.1496391
- [14] Cornescu, V., & Adam, C. R. (2013). The consumer resistance behavior towards innovation. *Procedia Economics and Finance*, 6, 457-465.
- [15] Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage
- [16] Dar, A. A., & Bhat, S. A. (2017). Consumers attitude affecting the e-purchase in retail sector: a study on factors of technological acceptance model (TAM). *Al-Barkaat Journal of Finance & Management*, 9(1), 22-34
- [17] Del Val, M. P., & Fuentes, C. M. (2003). Resistance to change: a literature review and empirical study. *Management decision*. Vol. 41 Issue: 2, pp.148-155
- [18] Dibb, S., & Simkin, L. (2009). Implementation rules to bridge the theory/practice divide in market segmentation. *Journal of marketing management*, 25(3-4), 375-396.
- [19] Eriksson, N., & Stenius, M. (2022). Online grocery shoppers due to the Covid-19 pandemic-An analysis of demographic and household characteristics. *Procedia Computer Science*, 196, 93-100.
- [20] Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African journal of emergency medicine*, 7(3), 93-99.
- [21] Estupinan, X., & Sharma, M. (2020). Job and wage losses in informal sector due to the COVID-19 lockdown measures in India. Available at SSRN 3680379.
- [22] George, J. (2014). *Informal Sector in India: A Review*. 567-577
- [23] Government of India, Ministry of Finance, Department of Economic Affairs. (2022, January). *Economic Survey 2021-22*. [https://www.indiabudget.gov.in/economicsurvey/ebook\\_es2022/index.html](https://www.indiabudget.gov.in/economicsurvey/ebook_es2022/index.html)
- [24] Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse education today*, 24(2), 105-112.
- [25] Hijrah, L. (2017). Identify the important decision factors of online shopping adoption in Indonesia. *Management and Economics Review*, 2(2), 266-283
- [26] Hutt, M. D., Walker, B. A., & Frankwick, G. L. (1995). Hurdle the cross-functional barriers to strategic change. *MIT Sloan Management Review*, 36(3), 22.
- [27] ilo.org, n.d. retrieved on June 11, 2021
- [28] Jain, R., & Kulhar, M. (2019). Barriers to online shopping. *International Journal of Business Information Systems*, 30(1), 31-50.
- [29] K Francis Sudhakar, Habeeb Syed. (2019). Online Shopping and its Impact on Customer satisfaction considering the Role of Respondents Trust and Gender Influence. *International Journal of Recent Technology and Engineering (IJRTE)*. 8(2S4), 1-6



- [30] Kahawandala, N., Peter, S., & Niwunhella, H. (2020). Profiling purchasing behavior of Generation Z. In 2020 International Research Conference on Smart Computing and Systems Engineering (SCSE) (pp. 155-160). IEEE.
- [31] Kantar IMRB (Ashutosh Sinha and Kushdesh Prasad) and Magic9 Media & Consumer Knowledge (Praveen Tripathi). (2018, December). Indian Socio Economic Classification 2018. Market Research Society of India (MRSI). <https://www.mrsi.co.in/pdf/Launch-of-ISEC-by-MRSI.pdf>
- [32] Kaur, S. J., Ali, L., Hassan, M. K., & Al-Emran, M. (2021). Adoption of digital banking channels in an emerging economy: exploring the role of in-branch efforts. *Journal of Financial Services Marketing*, 26(2), 107-121.
- [33] Kenneth C. Gehrt, Mahesh N. Rajan, G. Shainesh, David Czerwinski, Matthew O'Brien, (2012) "Emergence of online shopping in India: shopping orientation segments", *International Journal of Retail & Distribution Management*, Vol. 40 Issue: 10, pp.742-758, <https://doi.org/10.1108/09590551211263164>
- [34] Kouser, R., Niazi, G. S. K., & Bakari, H. (2018). How does website quality and trust towards website influence online purchase intention?. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 12(3), 909-934.
- [35] Lapointe, L., Lamothe, L. & Fortin, J. (2002) The dynamics of IT adoption in a major change process in healthcare delivery, *System Sciences, HICSS. Proceedings of the 35th Annual Hawaii International Conference on*, p. 918-926
- [36] Liebermann, Y., & Stashevsky, S. (2002). Perceived risks as barriers to Internet and e-commerce usage. *Qualitative Market Research: An International Journal*.
- [37] Lindh, C., Rovira Nordman, E., Melén Hånell, S., Safari, A., & Hadjikhani, A. (2020). Digitalization and International Online Sales: Antecedents of Purchase Intent. *Journal of International Consumer Marketing*, 1-12.
- [38] Mainardes, E. W., de Souza, I. M., & Correia, R. D. (2020). Antecedents and consequents of consumers not adopting e-commerce. *Journal of Retailing and Consumer Services*, 55, 102138
- [39] Maitiniyazi, S., & Canavari, M. (2021). Understanding Chinese consumers' safety perceptions of dairy products: a qualitative study. *British food journal*.
- [40] Mayring, Philipp (2000). Qualitative Content Analysis. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 1(2), Art. 20. pp. 1-10.
- [41] Moh'd Al-Dwairi, R., & Al Azzam, M. (2021). Influences and Intention of Consumer's Online Shopping Decision: Jordan as a Case. In *Research Anthology on E-Commerce Adoption, Models, and Applications for Modern Business* (pp. 143-158). IGI Global.
- [42] Mosunmola, A., Adegbuyi, O., Kehinde, O., Agboola, M., & Olokundun, M. (2019). Perceived value dimensions on online shopping intention: The role of trust and culture. *Academy of Strategic Management Journal*, 18(1), 1-20.
- [43] Nguyen, M. H., & Khoa, B. T. (2019). Perceived mental benefit in electronic commerce: Development and validation. *Sustainability*, 11(23), 6587.
- [44] Niti Aayog. (2018, December). Strategy for New India at 75. Press Information Bureau, Government of India. <http://niti.gov.in/the-strategy-for-new-india>
- [45] Odusanya, K., Aluko, O., & Lal, B. (2020). Building consumers' trust in electronic retail platforms in the sub-Saharan context: an exploratory study on drivers and impact on continuance intention. *Information Systems Frontiers*, 1-15.
- [46] Ose, S. O. (2016). Using Excel and Word to structure qualitative data. *Journal of Applied Social Science*, 10(2), 147-162.
- [47] Patton, M. Q. (1987). *How to use qualitative methods in evaluation* (No. 4). Sage.
- [48] Pavlou, P. (2005, August). Understanding and Mitigating Uncertainty in Online Environments: A Longitudinal Analysis Of The Role Of Trust And Social Presence. In *Academy of Management Proceedings* (Vol. 2005, No. 1, pp. H1-H6). Briarcliff Manor, NY 10510: Academy of Management.
- [49] Pease, W., & Rowe, M. (2003, November). Issues faced by small and medium enterprises (SMEs) and their take-up of e-commerce in Australian regional communities. In *Proceedings of the 4th International We-B Conference (We-B 2003): e-Business and Information Systems*. Edith Cowan University, School of Management Information Systems, We-B Centre.
- [50] Phan, Q. P. T., Ngo, V. M., & Phuoc, N. C. L. (2020). How Social Commerce Characteristics Influence Consumers' Online Impulsive Buying Behavior in Emerging Markets. *International Journal of E-Business Research (IJEBR)*, 16(3), 74-88.
- [51] Pinto, N. L. (2013). Understanding the barriers to online shopping among Indian consumers. *International Journal of Research in Humanities, Arts and Literature*, 1(3), 35-44.
- [52] Prabowo, H., & Hindarwati, E. N. (2020). Online grocery shopping adoption: a systematic literature review. In 2020 International Conference on Information Management and Technology (ICIMTech) (pp. 40-45). IEEE.

- [53] Prashar, S., Sai Vijay, T., & Parsad, C. (2016). Segmenting Online Shoppers: A Study of Consumers' web Portal Selection Motivations for E-Shopping. *Asian Academy of Management Journal*, 21(1).
- [54] Quinn, L. (2009). Market segmentation in managerial practice: a qualitative examination. *Journal of Marketing Management*, 25(3-4), 253-272.
- [55] Raman, P. (2019). Understanding female consumers' intention to shop online: The role of trust, convenience and customer service. *Asia Pacific Journal of Marketing and Logistics*.
- [56] Riley, F. D., Scarpi, D., & Manaresi, A. (2005). Drivers and barriers to online shopping: the interaction of product, consumer, and retailer factors. In *Advances in Electronic Marketing* (pp. 45-66). IGI Global.
- [57] Rudolph, T., Rosenbloom, B., & Wagner, T. (2004). Barriers to online shopping in Switzerland. *Journal of International Consumer Marketing*, 16(3), 55-74.
- [58] Rumelt, R. P. (1995). Inertia and transformation. In *Resource-based and evolutionary theories of the firm: Towards a synthesis* (pp. 101-132). Springer, Boston, MA.
- [59] Salancik, G. R., & Pfeffer, J. (1978). Uncertainty, secrecy, and the choice of similar others. *Social Psychology*, 246-255.
- [60] Saprikis, V., Markos, A., Zarpou, T., & Vlachopoulou, M. (2018). Mobile shopping consumers' behavior: an exploratory study and review. *Journal of theoretical and applied electronic commerce research*, 13(1), 71-90
- [61] Tarhini, A., Alalwan, A. A., & Algharabat, R. S. (2019). Factors influencing the adoption of online shopping in Lebanon: an empirical integration of unified theory of acceptance and use of technology<sup>2</sup> and DeLone-McLean model of IS success. *International Journal of Electronic Marketing and Retailing*, 10(4), 368-388.
- [62] Turban, E., Outland, J., King, D., Lee, J. K., Liang, T. P., & Turban, D. C. (2018). Intelligent (smart) E-commerce. In *Electronic commerce 2018* (pp. 249-283). Springer, Cham.
- [63] Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of retailing*, 85(1), 31-41.
- [64] vikaspedia.in, n.d. retrieved on June 11, 2021
- [65] Wedel, M., & Kamakura, W. A. (2000). *Market segmentation: Conceptual and methodological foundations*. Springer Science & Business Media.
- [66] Women in Informal Employment: Globalizing and Organizing (WIEGO). (2021, July). COVID-19 Crisis and the Informal Economy: Round 1 Global Summary. International Development Research Centre, Ottawa, Canada. <https://www.wiego.org/covid-19-crisis-and-informal-economy-study-city-fact-sheets>
- [67] Wu, L., Chiu, M. L., & Chen, K. W. (2020). Defining the determinants of online impulse buying through a shopping process of integrating perceived risk, expectation-confirmation model, and flow theory issues. *International Journal of Information Management*, 102099