

## Consumer attitude towards Informal E-commerce: A case of Emerging Economy



Prof. Dr. Sudhair Abbas Bangash	Faculty of Management Sciences, Department of Business Administration, Sarhad University of Science and Information Technology, Peshawar, Pakistan. <a href="mailto:Sudhair.fl@suit.edu.pk">Sudhair.fl@suit.edu.pk</a>
Nooreen Zaki	MS Scholar Management Science and Engineering, School of Management, Northwestern Polytechnical University, Xian, China <a href="mailto:nooreen05@outlook.com">nooreen05@outlook.com</a>
Muhammad Khizar Hayat Naeem (Corresponding Author)	Ph.D Scholar, School of Management, Harbin Institute of Technology, China. <a href="mailto:khizar@stu.hit.edu.cn">khizar@stu.hit.edu.cn</a>
Dr. Iftikhar Ahmad	Associate Professor, Riphah School of Leadership, Faculty of Management Sciences, Riphah International University Malakand Campus <a href="mailto:Iftikhar.ahmad@riphah.edu.pk">Iftikhar.ahmad@riphah.edu.pk</a>

**Abstract:** *Due to the Coronavirus, several enterprises that had little or no internet sales previously have launched their online storefronts, making up the majority of their sales through the internet channel. The same is true for the consumer who has never made an internet purchase before and has been compelled to modify their shopping habits. This study looks at how online informal e-commerce is accepted and used in Pakistan. This study looked into how consumers are using online and informal e-commerce to protect themselves from COVID-19. The influence of the pandemic on customer replies to informal e-commerce intention was validated by the results of a statewide online poll. This research adds to informal e-commerce and protection motivation theory literature. The findings suggest that retailers should invest in internet commerce. The conclusions of this study emphasize the importance of online commerce system management for marketers and merchants.*

**Keywords:** Online-commerce, protection motivation theory, precautionary behavior, self-efficacy, response efficacy.

### Introduction

During the COVID-19 pandemic, the retail industry took a beating, and it's become evident that the majority of shops are suffering as a result of customer panic (Kannappan, 2020; Luna, 2020; Tran, 2020). The pandemic breakout situation has been a problem for businesses, and brands are no exception (Meyer, Prescott, & Sheng, 2021). As a result, it is critical to gain a deeper understanding of consumers' proactive responses to online commerce (Fakhr E Alam Afridi, Jan, Ayaz, & Irfan, 2021). Many experts stressed the

importance of adapting to extend online purchasing possibilities while also adhering to safety rules. Previous study on online buying, on the other hand, is insufficient to explain customer behavior and intentions to use online commerce during the epidemic.

According to a recent study of (F.E.A. Afridi, Ayaz, & Irfan, 2021), in Pakistan many people have switched to online purchasing as a protection against Covid-19. During the outbreak of Covid-19 pandemic internet channels executed 17 million transactions worth a total of 978 billion rupees (Shafi, Liu, & Ren,

2020), and this promising online purchasing trend is predicted to continue (Farooq, Laato, & Islam, 2020). However, supply and demand uncertainties can have an impact on the e-commerce industry and the country's export and import channels were hampered by the unclear circumstances and lockdown (Hasanat et al., 2020). Due to supply shortages, online businesses may be unable to meet and satisfy customer demand, resulting in price increases (Fakhr E Alam Afridi et al., 2021).

Informal e-commerce, on the other hand, has been able to resume operations in Pakistan earlier than legal e-commerce. According to (Autio & Fu, 2015), the informal e-commerce business model allows entrepreneurs to reduce their operational costs while changing their daily schedules. Furthermore, easing up on rent or wage payments aids in absorbing company interruptions (Gorla, Chiravuri, & Chinta, 2017). With so many new initiatives on the horizon, anecdotal evidence shows that the internet trend in the region has only accelerated the Covid-19 outbreak years (Meyer et al., 2021; Zheng & Zhang, 2020). Given the current state of affairs, online buying is the only viable and secure option (Hasanat et al., 2020). It is necessary to theorize and comprehend informal online trade, with a focus on social relations as a benefit rather than a restriction (Shafi et al., 2020). Customers' careful behavior in the face of the Covid-19 danger led to the assumption of online informal trade in this study. Precautionary behavior encompasses both behavioral and technical internet usage precautions, as well as awareness of conscious care conduct. However, research in online informal e-commerce is still restricted (Omri, 2020). Therefore, this study goal is to investigate why consumers want to boost informal e-commerce as a strategy to safeguard themselves and others in the event of a pandemic.

### **Theoretical support and hypothesis development**

Given the current state of affairs, the only practical and secure choice is to buy online (Saqlain et al., 2020). It is necessary to theorize and comprehend informal online trade, emphasizing the lack of social ties as a benefit

rather than a limitation. The premise of online informal commerce in this investigation was based on customers' cautious conduct in the face of the Covid-19 threat. Precautionary behavior includes both behavioral and technological safeguards when using the internet, as well as awareness of conscious care behavior. However, study into informal e-commerce on the internet is still ongoing (Meyer et al., 2021).

Informal e-commerce is a type of e-commerce in which things are purchased and sold using online social platforms like Facebook and WhatsApp, or other apps (Couclelis, 2004; Wei, Marthandan, Chong, Ooi, & Arumugam, 2009). Throughout the business activity, an electronic commerce platform mediates the experiences of the supplier and customer in informal e-commerce (Gorla et al., 2017; Sila, 2013). The link between official and informal e-commerce is, however, unclear (Buettner, 2020). According to (Pankomera & van Greunen, 2019), the informal private sector employs more than 60% of the entire workforce in developing nations. Buyers and sellers use social media platforms in informal e-commerce. The platforms connect supply and demand, but they don't always get involved in other elements of internet commerce (Kannappan, 2020; Tran, 2020). However, most social media platforms still have some hurdles such as do not accept payments (Yan, Tan, Loh, Hew, & Ooi, 2020).

In a recent study of (Tran, 2020) found that 55% of buyers are still concerned about products' online money-back guarantees. While free delivery influences their purchasing preferences in 49 percent of cases. Similarly, the survey of (Shafi et al., 2020) indicated that cash on delivery remains the most popular e-commerce payment option. These increased liquidity terms result in a higher operational cost for the firms. However, e-commerce in Pakistan has not yet reached its full potential (Saqlain et al., 2020), but with the growing number of internet users and changing trends, online commerce has a bright future.

### **Precautionary behavior**

The perceived risk connected with the transmission of Covid-19 leads to less non-

essential movements, social gatherings, and other factors, all of which have a negative influence on outdoor commercial operations (Olapegba et al., 2020; Yasami, 2020). As a result, during the pandemic, there was an upsurge in internet traffic and social media platform usage (Kannappan, 2020; Tran, 2020). Many researchers argued that, the Covid-19 pandemic caused remarkable changes for both consumers and businesses (Hasanat et al., 2020; Kapasia et al., 2020; Kaspar, 2020). As a result, Covid-19 was used as an independent variable in this study due to the fact that the pandemic's impact on the entire population and economy was bigger (Hasanat et al., 2020). Recent research, such as, suggest that traditional commerce is rapidly transitioning to online e-commerce.

A recent study of (Hasanat et al., 2020) employed online commerce as the dependent variable in their study and discovered that as Covid-19 spreads over the world make consumer behavior changes in online commerce. This study hypothesized that the rise in online informal e-commerce is due to customers' precautionary behavior in response to the Covid-19 threat. Thus, depending on how people discover it, inside the uniform scenario created by the COVID-19 pandemic As a result, we propose the study's major hypothesis.

H1: The perception of the COVID-19 situation positively affects customer's precautionary behavior.

### **Protection Motivation Theory**

The protection motive theory (PMT) was proposed by (Rogers, 1975) to characterize an individual's protective measures in avoiding risks. As people become more concerned about COVID-19, they are more inclined to adopt physical distance to avoid social encounters (Mann, Krueger, & Vohs, 2020), which could exacerbate their attitude toward online e-commerce (Laato, Islam, Farooq, & Dhir, 2020). Precautionary measures, according to (Bamberg, Masson, Brewitt, & Nemetschek, 2017), are one approach to avert threat scenarios.

PMT was first introduced for fear appeals and is

now largely utilized in health research to predict preventative behavior (Lee, Larose, & Rifon, 2008; Lwin & Saw, 2007; Sadique et al., 2007). However, to investigate risk decisions, a general model was used (De Zwart et al., 2009). PMT has become one of the finest theories for predicting the intention of protection behavior after several changes (Plotnikoff & Trinh, 2010). PMT has lately attracted interest in research connected to security information (Van Der Pligt, 1998), and it is judged useful for study in the online industry due to its solid foundation (Pechmann, Zhao, Goldberg, & Reibling, 2003). In prior pandemic outbreaks, however, both coping and threat assessment have been found to influence individual protectionary measures like as hygiene and vaccination uptake intentions (Al-Rasheed, 2020; De Zwart et al., 2009; Johnston & Warkentin, 2010; Lwin & Saw, 2007; Plotnikoff & Trinh, 2010).

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According to PMT, (Bandura, 2010; Rogers, 1975) perceived vulnerability is the probability that a potentially dangerous event may occur, as determined by the user (Sadique et al., 2007). Susceptibility, or the perception of risk, is, however, a crucial predictor of precautionary action (Herath & Rao, 2009). Perceived severity is a perception that defines the negative effects of an event or outcome to individual associates as a result of a specific activity (De Zwart et al., 2009; Sharifirad, Yarmohammadi, Sharifabad,

& Rahaei, 2014).

Response efficacy and self-efficacy are both connected with response costs in the coping-appraisal process in PMT (Bandura, 2010). The belief that one can successfully carry out the prescribed conduct is referred to as self-efficacy. While response efficacy highlights the effectiveness of the advised behavior in avoiding or reducing the potential damage (Bamberg et al., 2017; Bandura, 2010; Sadique et al., 2007). A person's threat evaluation is based on two factors: perceived severity and perceived vulnerability. The coping appraisal is the individual's estimate of his or her ability to cope with the situation. It's made up of two components: self-efficacy and response efficacy. Threat and coping appraisals work independently of one another, according to studies, and coping appraisals have more power than threat appraisals.

Perceived severity is a perception that defines the negative effects of an event or outcome to individual associates as a result of a specific activity. In PMT, perceived severity is also a predictor of motivation to protect. Hence. The coping-appraisal process in PMT consists of

response efficacy and self-efficacy. Response efficacy highlights the effectiveness of the behavior in avoiding or reducing the potential damage, while self-efficacy shows the belief. While (Rogers, 1975; Ruiters, Verplanken, Kok, & Verrij, 2003). The sum of self-efficacy and response efficacy minus response costs is the amount of coping abilities that an individual has. In the coping evaluation process, a user analyzes a provided coping technique in order to avoid unfavorable event. We use the definition of (Bandura, 2010) coping appraisal in information security, which is a user's view that they are unable to be too certain about information security in comparison to those who have less confidence. We postulate the following hypothesis on the ground of PMT:

H2. Perceived vulnerability will positively affect precautionary behavior.

H3: Perceived severity will positively affect precautionary behavior.

H4. Perceived self-efficacy will positively affect precautionary behavior

H5: Perceived response efficacy will positively affect precautionary behavior.

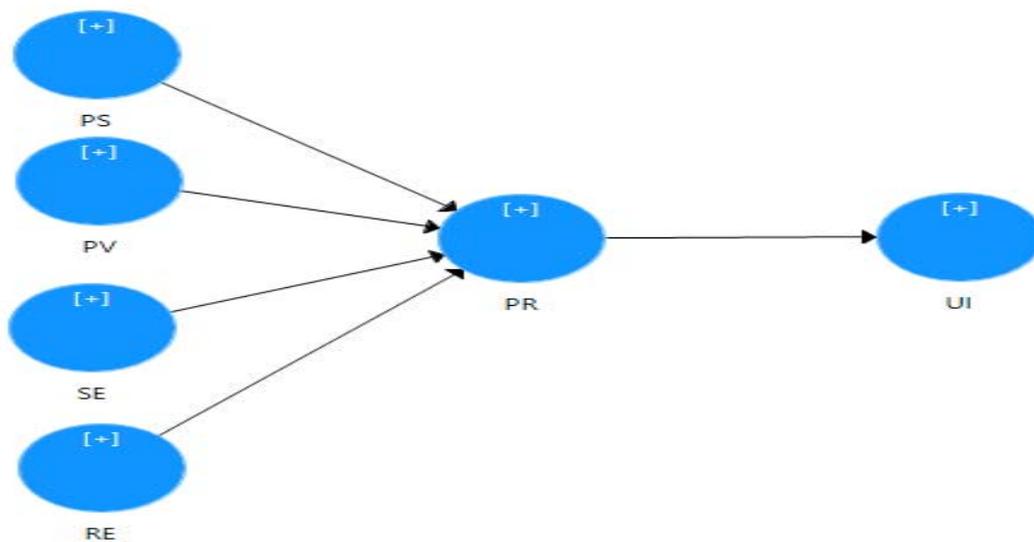


Figure 1: Conceptual model of the study

## Research Method

### *Participants and data collection*

This study employed a survey method and a random sample methodology to collect data

from respondents using online questionnaires. A total of 311 people took part in the study, with 67.5 percent (n=210) of men and 32.4 percent (n=101) of women. The sample's average age was 36, with a standard deviation of 13.4. Majority of the survey respondents (49.9%) were employed, followed by self-employed

(25.6%), part-time (17.9%) and jobless (6.6 %).

Table 1 shows the demographic information of the survey respondents.

Table 1: Demographics information

Variable		N	%
Gender	Male	210	67.5
	Female	101	32.4
Age	18 – 25	38	12.2
	26 – 31	57	18.3
	32 – 40	64	20.6
	41 – 55	40	12.9
	56 – 65	32	19.0
	> 66	3	17.0
Education	12 years of school education	10	21.6
	14 years of school education	188	60.4
	16 years of school education	96	30.8
	18 years of school education	17	0.05
Individual Income	< Rs 30,000	84	27.0
	Rs30,001-Rs49,999	73	23.5
	Rs50,000-Rs85,000	51	16.4
	Rs85,001-Rs99,999	40	12.9
	>Rs100,001	63	20.3

### Instrument and Measures

An online self-administrative survey was employed in this study to examine the hypothesized parameters using a quantitative technique. The survey is divided into three sections: The first section contains an introduction, the second section contains demographic information, such as respondent's age, occupation, and education, as well as one filter question to define their daily online commerce behavior. The survey items are presented in the third section, and they measure six primary variables: "perceived vulnerability" (five items) (Miyazaki & Fernandez, 2001), "perceived severity" (four items) (Wolfenbarger & Gilly, 2001), "self-efficacy" (six items) (Ghobakhloo, Arias-Aranda, & Benitez-Amado, 2011), and "response efficacy" (measured with five items), "precautionary behavior" (measured with four items) (Hasanat et al., 2020). Finally, intentions to use online commerce (measured with five items) (Fakhr E Alam Afridi et al., 2021). To assure the survey's validity, all of the items were derived from literature. A five-point Likert scale was used to measure independent

and dependent variables (with 1 indicating never true and 5 indicating very true) (Joshi, Kale, Chandel, & Pal, 2015).

### Empirical techniques

The popularity of variance-based structural equation modeling (SEM) is expanding improvements (Cheung, 2015). PLS was employed because it allows researchers to tie a set of multiple dependent variables (response) to a set of numerous independent factors (Ramayah, Cheah, Chuah, Ting, & Memon, 2018; Wong, 2013). Furthermore, (Fuller, Simmering, Atinc, Atinc, & Babin, 2016) described it as the most appropriate technique in research aiming at specific predictions, and it is particularly preferred by researchers when confirmatory modeling is the goal (Henseler, Ringle, & Sarstedt, 2015).

### Results

#### The Measurement Model

Composite reliability (CR) values were used to examine the measurement model constructs' reliability (Ab Hamid, Sami, & Sidek, 2017). These values demonstrate how well each item

measures their assigned construct. Most prior research agree that the minimal CR value is 0.7 (Alarcón, Sánchez, & De Olavide, 2015; Dijkstra & Henseler, 2015; Henseler et al., 2015). Table 2 illustrates the CR values achieved for each construct in this study measurement methodology. Because all of the CR values in

Table 2 are greater than the recommended minimum value of 0.7, the model's reliability was effectively achieved (Henseler, 2017). We also looked into the possibility of multicollinearity (Alin, 2010), but all of the VIF values were below the five threshold number (Mansfield & Helms, 1982).

Table 2: Descriptive statistics

	Cronbach's Alpha	rho_A	C R	AVE
PI	0.925	0.930	0.943	0.769
PR	0.900	0.907	0.924	0.670
PS	0.887	0.887	0.917	0.689
PV	0.843	0.845	0.895	0.681
RE	0.925	0.930	0.941	0.728
SE	0.894	0.914	0.923	0.709

Convergent validity was assessed using the average variance extracted (AVE), which should be higher than the recommended value of 0.5 in the literature. The AVE values for all of the research constructs were more than the required 0.5 value, according to Table 2. Discriminant validity of the study measurement model was assessed using The Fornell–Larcker criterion matrix. Table 3 demonstrates that the construct's

values for each column or row were less than the diagonal value (Hair et al., 2016). Furthermore, the heterotrait–monotrait correlations (HTMT) ratio value reported in Table 4 was lower than the 0.85 crucial threshold proposed by Henseler et al (2015). As a result, the discriminant validity of the measurement model has been successfully realized.

Table 3: Fornell-Larcker criterion

	PI	PR	PS	PV	RE	SE
PI	0.877					
PR	0.650	0.818				
PS	0.501	0.591	0.830			
PV	0.692	0.667	0.677	0.825		
RE	0.808	0.743	0.578	0.703	0.841	
SE	0.612	0.728	0.436	0.541	0.657	0.852

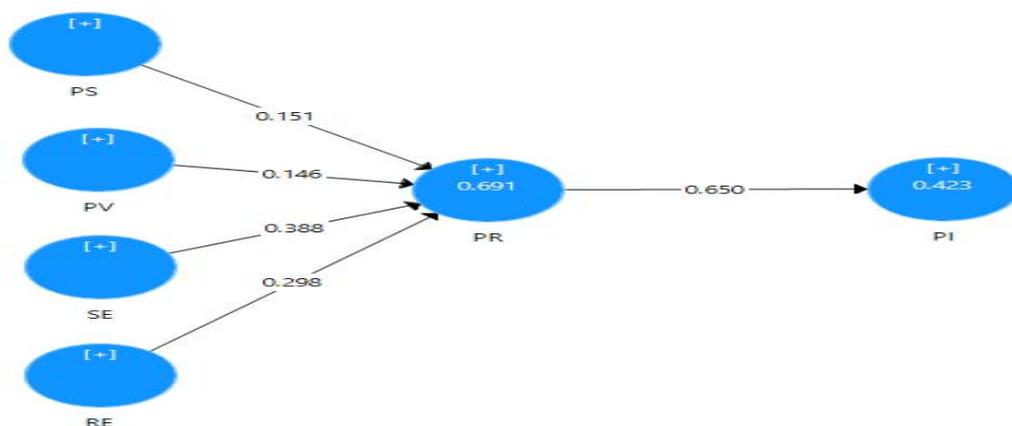


Figure 1: Measurement model

Table 4: Heterotrait–Monotrait ratio

	PI	PR	PS	PV	RE	SE
PI						
PR	0.704					
PS	0.551	0.660				
PV	0.782	0.760	0.779			
RE	0.866	0.813	0.638	0.796		
SE	0.674	0.803	0.471	0.617	0.718	

**Structural Model**

Before hypothesis testing, multicollinearity tests were performed. Because the obtained variance inflation factor (VIF) values were lower than the required criteria (5), no multicollinearity concerns were discovered (Alin, 2010). The structural model assessment is investigated using 2000 samples of bootstrapping (Henseler & Sarstedt, 2013). The study model’s predictive relevance was assessed by looking at the coefficient of determination (R2) (Dijkstra & Henseler, 2015). These findings suggest that the model is accurate in predicting all endogenous variables. Small, medium, and large effects are represented by the f2, while effect sizes less than 0.02 imply no influence (Cohen, 1988). As a result, the findings show that precautionary

behavior has a considerable effect on user intention to engage in online commerce (f2 =.733), and that severity, vulnerability, response efficacy, and self-efficacy, all play a role (2.135, 1.055, 0.675 and 1.457, respectively). This implies that the latent variable cautious conduct was most affected by perceived vulnerability. The hypothesis testing results are shown in Table 5. The inner model results shows that perceived vulnerability (PV -> PR; = 0.146; t = 2.897; p =.001), perceived severity (PS -> PR; = 0.151; t = 3.233; p =.001), self-efficacy (SE -> PR; = 0.388; t = 7.582; p =.000), and response efficacy (RE -> PR; = 0.298; t = 7.136; While precautionary conduct (PR -> PI; = 0.650; t = 17.279; p =.000), has a significant and favorable impact on user intention for online commerce supporting the study's primary hypotheses 1.

Table 5: Hypothesis result

Hypothesis	Original Sample	Sample Mean	STDEV	T Statistics	P Values
PR -> PI	0.650	0.654	0.037	17.577	0.000
PS -> PR	0.151	0.151	0.046	3.255	0.001
PV -> PR	0.146	0.147	0.058	2.897	0.001
RE -> PR	0.298	0.298	0.044	6.793	0.000
SE -> PR	0.388	0.388	0.051	7.582	0.000

**Results and discussion**

The goal of this study was to figure out what factors influence customer disparities in protective online intent during COVID-19. To begin, the results show that preventive conduct has a considerable impact on perceived severity (H2) and vulnerability (H3). The considerable impact of cautious online activity on threat evaluations (e.g., severity and vulnerability) is consistent with previous research, which found that s This is most likely owing to the divided

reaction to COVID-19 (Ranney, Griffeth, & Jha, 2020; Shafi et al., 2020; Waris, Khan, Ali, Ali, & Baset, 2020), which included partisan media coverage.

The substantial association between precautionary behavior and perceived severity was unexpected, as it contradicted recent findings on COVID-19 (Omri, 2020), which found that perceived severity increased intention to buy online but not perceived vulnerability. It may be claimed that, as with SARS, the general

population underestimates the seriousness of the sickness, and that, unless they are individually vulnerable to getting the virus, there is no reason to conduct preventive behavior.

PMT self-efficacy (H4) and response efficacy (H5) coping appraisal indicators favorably influenced cautious behavior. These findings back with prior research (Sila, 2013), which found that coping assessments were linked to other preventive behaviors such as masking, handwashing, and social distancing. Response efficacy was shown to be the key relationship between political orientation and intention to stay at home. This illustrates the importance of public communication of preventive activities and their success in producing a coordinated response to the epidemic.

Finally, precautionary behavior had a beneficial impact on the main hypothesis (H1) intentions to engage in online commerce. As people acclimate to this new normal of retaining distance in all facets of social relationships, this result reflects a recent survey indicating customers want to continue using contactless buying services, including e-commerce. Our findings imply that a clear and nonpartisan reaction from political leaders, as well as balanced media coverage, are required to induce social distancing practices and slow the spread of the virus.

### **Study Theoretical contributions**

Our research findings contribute to the literature in the following ways. To the best of the authors' knowledge, this is one of the first studies to look at online informal e-commerce as a protective mechanism, as most other studies have done. Due to the unexpected shift in consumer behavior induced by the COVID-19 pandemic, which necessitated of social distancing techniques in all parts of life, there is a need to examine internet retailing as a critical means of minimizing social contact.

The use of PMT in consumer research is unusual in the literature. The important findings from our PMT model serve to confirm the theory in the context of consumer research and offer a new window of research where PMT can be applied to various consumer behavior scenarios. As a

result, we expand our understanding of the literature and provide new insights into the elements that influence public perceptions of pandemics. This study's conclusions have practical consequences as well. Our findings suggest that consumers are wary of engaging in online informal e-commerce and have a greater desire to socially isolate themselves from others.

The practical impact of this study is that consumers are increasingly preferring online buying and select shopping choices that reduce interactions with other people. The findings emphasize the importance of merchants' participation. As online retailers struggle to re-engage customers in their financial transactions, they must consider the consumer's demand for comfort that online commerce is a secure and reliable platform. Furthermore, depending on the self-control orientations of individuals, we advocate adopting different tactics around online purchasing behavior. Our findings demonstrate that customers with high self-control perceive COVID-19 to be more severe and vulnerable than those with low self-control, which influences their decision to use online retailing techniques. This study further suggest that online retailers should promote the protective effects of online shopping (e.g., safety and hygiene).

### **Limitations and Future Research**

This study, like any other, has several shortcomings that present potential for further research. The first constraint is the study sample and Pakistani environment. As a result, the results of this study may not be applicable in other countries. Future research should use an experimental design to study the linkages and confirm the causal relationships between the research variables.

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