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Reliability of the Survey "Use of Digital Purchasing Tools in Neighborhood Stores - TAT Channel"

[1]Wilson Enrique Martínez Amado, [2]Jairo Jamith Palacios Rozo, [3]Lugo Manuel Barbosa Guerrero

[1]PhD Candidate in Administration and Development - MDM

Occasional Professor at Universidad Colegio Mayor de Cundinamarca, Bogotá, Colombia.

[2]PhD Candidate in Socioformation and Knowledge Society – CIFE.

Full-time Faculty Member at Universidad Colegio Mayor de Cundinamarca. Bogotá, Colombia.

[3]PhD Candidate in Administration – Universidad La Salle.

Full-time Faculty Member at Universidad Colegio Mayor de Cundinamarca. Bogotá, Colombia.

Abstract

Although there are advances regarding the use of digital tools in purchasing, there is a need to know the sectors of the capital that apply these technologies and/or the lack of knowledge regarding their experiences. The purpose of the study was to try to know the aspects of the TAT channel, a neighborhood store for university academic topics. 209 neighborhood shopkeepers from various sectors of the capital participated. Which completed the online survey instrument on digital tools and shopping experience in neighborhood stores. The results show the acceptable degree of Cronbach reliability. Where the estimated point of Cronbach's alpha (α) was (0.761), the estimated point was determined with a lower limit of the 95% CI of (0.709); and an upper limit of the 95% CI, (0.806). It is concluded that the reliability analysis is acceptable where the reliability statistics of the general scale are prepared.

***Keywords*:** TAT Channel, neighborhood stores, digital tools.

Introduction

For decades, neighborhood stores have been playing a main role in the countries' economy, and despite the challenges they continue to show continuous growth that is proven by the increase in their sales. The relevance of neighborhood stores in the national economy is significant, since many people depend on this activity for their livelihood. In the commercial field, the Store to Store sales channel (TAT) is the oldest and least technological; However, it remains a crucial means of distribution for large industries. The inclusion of digital tools in this sector is essential for the optimization of processes in the value chain, which involves from the consumer to the supplier (Silva-Plata et al., 2021). Neighborhood stores and shelves are an important actor in the Colombian economy and have a privileged place in consumer purchasing habits (Arteaga Flórez & De La Rosa Salazar, 2019).

The importance that neighborhood stores have in the structure of the country's economy is very relevant and many people make a living from this activity (Bolaños López & Valencia Peñuela, 2020). In Colombia, neighborhood stores are a tradition, the main characteristic is that the inhabitants of the neighborhoods come to these places to purchase mass consumption products or products that become very popular. The retail goods sector contributes to the development of society by establishing a link between the industry and the market (Jiménez & González

Morales, 2022). Neighborhood stores in Colombia as distribution channels still represent growth opportunities in some categories, since they became a tool for raising capital and a job opportunity (Saavedra Moreno et al., 2022).

In the world, the technological advances that have been developed in recent years in great strides, leaving all commerce digitalized, have forced processes in both purchases and sales to be transformed. Furthermore, the use of mobile devices has transformed the purchasing process and consumer behavior, going from a multichannel consumer to an omnichannel one (Hermenegildo-Chávez et al., 2023). This is why digital tools have become a fundamental aspect for the survival and growth of companies, especially for neighborhood stores that want to maintain their relevance in an increasingly competitive market. For this reason, the development of digital purchasing tools that facilitate the interaction between local businesses and their customers can be used in the use of the store-to-store channel (TAT channel) as a communication and transaction platform. In neighborhood stores, commercial practices based on trust are developed (...) people buy by proximity, the miniaturization of the products sold and trust is based solely on words, haggling and ñapa" (Ramírez & Pachón, 2004).

Neighborhood stores have become a notable cultural reference point, since their dynamics condense a variety of collective representations that the participants of said micro community make explicit through feelings of belonging (Andrade Navia et al., 2023). Developing innovative solutions such as digital tools for neighborhood stores allows these types of stores to easily adapt to new technological trends, without losing the closeness and personalized service that characterizes them. Instead of focusing on desktop, smartphone, tablet, and Apple Watch experiences, we should look for a single overall strategy: an omnichannel experience that customers can enjoy at any time (Papashvili & Kovács, 2023). Through the implementation of accessible and easy-to-use digital tools, you can improve the customer shopping experience while increasing operational efficiency. Through digital tools, retail managers can promote their store, including both physical and virtual channels, and thus interact with their customers (Banerjee et al., 2023). And despite the pandemic, neighborhood stores continue to make up the traditional distribution channel, strengthening the retail sector at the same time that they are becoming an engine in the economic development of countries. Neighborhood stores are today the predominant business of the emerging classes, given that they continue to play an important role in the marketing of food and basic products (Benavides Amado et al., 2018). This is how the neighborhood store has become the subject of technological updates and adaptations that have improved its supply and service capacity (Contreras-Cuentas et al., 2021).

Neighborhood stores can develop and implement strategies and activities, such as the use of applications so that consumers can pay for their purchases in a way other than cash, so that they can make their purchases. It is important to keep in mind that the consumer, client or user has changed their purchasing habits (Arévalo Acosta, 2020). The changes in the way stores interact with their consumers have been dramatic due to the advent of digitalization (Khoa & Huynh, 2023). New digital channels and touchpoints such as smartphones, applications and social networks have emerged, multiplying the possible interactions between customers and retailers, this because companies are open to adopting new technologies. It specifically focuses on the importance of digital devices, especially smart mobile devices, in the company's daily operations. This implies that companies recognize the value and usefulness that these devices bring to their commercial activities and are willing to integrate them into their operational processes (Bacik et al., 2020).

Although despite advances in digital tools, neighborhood stores have maintained their relevance in the local economy, because they are rooted in local communities, offering a personalized shopping experience. Despite the emergence of mass consumption chains and the expansion of traditional supermarket chains, neighborhood stores have managed to remain in the market (Rico-Pencue, 2020). In contrast to what has been observed in other countries, in this country, the development of the retail sector has followed a different path, and neighborhood stores have managed to maintain their importance and presence in the market, despite the supposed advantages offered by supermarkets. and hypermarkets. It can be stated that historically in Colombia there has been a retail distribution channel such as the neighborhood store, whose format corresponds to that of a low-income segment of the population (Silva Guerra, 2012). The concept of innovation, in the context of retail commerce, has been achieving greater relevance in recent years, thanks in part to the evolution and development of new technologies (Marín García & Gil-Saura, 2017). Finally, online retail has a relative advantage in selling less popular products (Nakano, 2023).

Methodology

209 neighborhood shopkeepers from various sectors of the capital participated. Who completed the online instrument survey on digital tools and shopping experience in neighborhood stores, these shopkeepers in their premises manage digital cash register, as a strategic opportunity for internal processes and for good customer service. Never (37%), sometimes (4.78%); Often (7.65%); Often (4.78%); always a (44.9%) of the shopkeepers.

The sample was obtained by non-probabilistic sampling, convenience sampling. Given that we have access to this specific population of shopkeepers in the capital and who wanted to participate in the study. The instrument is made up of (15) items, which are evaluated using a Cronbach scale which has validity and reliability studies.

This study applied Cronbach's alpha, this reliability coefficient was created by Lee Cronbach in (1951) as a measure of internal consistency or reliability of the survey instrument using Likert scales which quantifies a set of variables in this case (15) items that measure one-dimensional appearance of individuals. The Cronbach's Alpha formula, which was calculated using the JASP Team (2022) statistical software Version 0.16.3. Below is the coefficient formula.

Figure 1.

Cronbach's Alpha Coefficient Formula

$$\alpha = \frac{N * \bar{c}}{\bar{v} + (N-1) * \bar{c}}$$

Source: Bonett & Wright (2014).

Where: N = the number of elements; $\bar{c}$ = average covariance between pairs of items; $\bar{v}$ = average variance. Where Cronbach's alpha calculations involve taking the average covariance and dividing it by the total variance of the average. With a Cronbach's alpha that ranges from 0 to 1. Where the greater the reliability when it approaches 1, the less reliability or consistency when it approaches zero. Where 0.7 is frequently used as the reference value for Cronbach's alpha.

Results

This data set to understand aspects of the TAT channel, neighborhood store, provides responses from 209 Shopkeepers to the TAT channel questionnaire in the JASP Team Version 0.16.3 Statistical Software. The items are on a Likert scale (1 = Never, 5 = Always). Using the variables: Q01. In your premises - store, do you manage a digital cash register, as a strategic opportunity for internal processes and for good customer service? Q02. In your store, do you use Information and Communications Technologies (ICT), such as technological platforms, software, among others, to increase your productivity by controlling your inventories, accounts, expenses and credits?; Q05. Do you use WhatsApp as a digital tool that allows you to market and/or communicate your products more efficiently? Q06. Do your clients place orders from WhatsApp?; Q07.

Do you have support staff in your store?; Q08. If you hire support staff in your store, do you train and train them? Q10. Do you have an action plan to carry out your monthly, weekly and daily activities in your store? Q11. Do you organize the attention of your suppliers to receive their products in your store clearly and at specific times?; Q12. Do you define roles and responsibilities in your store for your support staff?; Q13. Do you use any technological tools to locate products in your furniture? Q14.

Do you use advertising in your store - point of sale to communicate your products?; Q15. Do you use digital advertising to promote your store - point of sale?; from the survey on digital tools and shopping experience in neighborhood stores. This given the significance, scope and destination of this project from the point of view of contributing to new knowledge. The purpose of this survey is to provide information of interest such as knowing aspects of the TAT channel, a neighborhood store for university academic topics. This study analyzes with the JASP statistical software with which it demonstrates the use of reliability analysis. In the first instance, for the analysis, the reliability statistics of the general scale as a whole of Cronbach's alpha (α) are prepared.

Table No. 1

Estimated	Cronbach's α	Average correlation between items
Estimated point	0.761	0.214
95% CI Lower limit	0.709	0.170
95% CI upper limit	0.806	0.258

Reliability statistics of the Cronbach and Guttman frequentist scale

Using the reliability statistics of the Cronbach frequentist scale, the estimated point was determined with a lower limit of the 95% CI and an upper limit of the 95% CI, its average correlation between items, their mean and standard deviation, finding values of the mean (38,904) and standard deviation (8,704) of the estimated point; the average (37.724) and standard deviation (7.942) of the lower limit; and the mean (40.084) and standard deviation (9.629) of the upper limit. Next, the internal consistency is evaluated, that is, the Cronbach's alpha (α) subscale of each item, where statistics for each item are included to evaluate each of the items individually within the scale. Below reliability of each item.

Table No. 2

Frequentist reliability statistics on individual ítems

Item	Cronbach (α)	Item-rest correlation	Average	Standard deviation
Q01	0.752	0.363	3.154	1.843
Q02	0.731	0.500	2.603	1.653
Q05	0.748	0.363	3.632	1.367
Q06	0.741	0.432	3.244	1.190
Q07	0.743	0.407	3.856	1.315
Q08	0.733	0.509	4.120	1.209
Q10	0.739	0.445	3.301	1.290
Q11	0.747	0.373	3.770	1.310
Q12	0.742	0.415	3.914	1.345
Q13	0.754	0.303	1.732	1.250
Q14	0.753	0.323	3.373	1.371
Q15	0.748	0.361	2.220	1.297

Below is the statistical analysis of Cronbach's alpha (α) in each of the items individually, as the possible reverse coding in this case does not contain it. The articles not selected were Q03, Q04, Q09; taking the reliability values as a guide (lower confidence limit of alpha=.731>.70). Failure to eliminate these elements can lead to lower reliability values.

Conclusions

The use of digital tools and shopping experience in neighborhood stores has great significance, scope and destination from the point of view of contributing to new knowledge such as knowing aspects of the TAT channel, a neighborhood store for university academic topics.

This study was analyzed with JASP statistical software which demonstrates the use of acceptable reliability analysis. Where the reliability statistics of the general scale as a whole of Cronbach's alpha (α) are prepared. Using the reliability statistics of the Cronbach frequentist scale, which determined the estimated point with a lower limit of the acceptable CI and an upper limit of the acceptable CI, its average correlation between items, the mean and standard deviation of the same, evaluating the internal consistency, that is, the Cronbach's alpha (α) subscale of each item, which includes statistics for each item to evaluate each of the items individually within the acceptable scale.

When an acceptable Cronbach's alpha value is obtained, then the items have a multidimensional structure and it is advisable to perform a factor analysis of the items to observe how the items are grouped into different latent dimensions. Concluding that the reliability analysis is acceptable where the reliability statistics of the general scale were developed.

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