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**Article**

## The Digital Disruption in Over-The-Counter Drug Retailing

Marketing Review St.Gallen

**Provided in Cooperation with:**

Universität St. Gallen, Institut für Marketing und Customer Insight

*Suggested Citation:* Kleinlercher, Kristina (2017) : The Digital Disruption in Over-The-Counter Drug Retailing, Marketing Review St.Gallen, ISSN 1865-7516, Thexis Verlag, St.Gallen, Vol. 34, Iss. 5, pp. 40-47

This Version is available at:

<https://hdl.handle.net/10419/275938>

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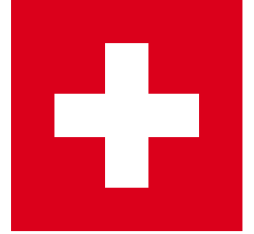
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## Disruptives Handelsmarketing



Universität St.Gallen

# The Digital Disruption in Over-The-Counter Drug Retailing

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While technology has disrupted retail industries such as electronics or apparel, it has just started to transform the healthcare market. This paper sheds light on the digital disruption in retailing with over-the-counter drugs in Switzerland, different customer segments purchasing non-prescription drugs, and technology-enabled health services.

**Mag. Kristina Kleinlercher**

**B**ased on manufacturers' delivery prices, sales of over-the-counter (hereinafter OTC) drugs amounted to 769 million Swiss Francs, or 13.7 percent of total sales for drugs, in Switzerland in 2016. The fact that 84 percent of these OTC drug sales were generated in pharmacies and drugstores (Interpharma 2017), highlights the substantial market power of these retail formats. While technologies have already disrupted retail industries such as consumer electronics or apparel (Lemon/Vehoef 2017), the digital transformation in retailing with OTC drugs is still in its infancy. Nevertheless, there are several developments that point to an approaching disruption in OTC drug retailing in Switzerland. In 2016, every fifth traditional pharmacy in Switzerland has only gained a pre-tax profit of less than 50 000 CHF. At the same time, the Swiss retail giant Migros teams up with the online pharmacy Zur Rose in order to offer OTC drugs at cheaper prices via shop-in-shop formats (Alich 2017). While experts argue that the digitalization in the healthcare market may disrupt the entire value chain, there are hardly any insights on how quickly this development may proceed (e.g., Atluri et al. 2016). Furthermore, the question arises how traditional pharmacies can harness the potential of digital technologies (Roland Berger 2016). This paper aims to find out to what extent digital technologies have disrupted retailing with OTC drugs in Switzerland in the last three years. It focuses on customers' trust in online and offline healthcare information sources, the most prevalent customer segments that purchase OTC drugs and the biggest opportunities and threats of technology-enabled healthcare services.

### **Customers' trust in healthcare information sources**

Despite recent developments toward a digitalized world, healthcare executives

are still in doubt whether the internet can take over an industry that relies so heavily on the customer's trust in the product/service provider (Li et al. 2014). While there are many definitions of customer trust across disciplines, this paper defines trust as a customer's expectation that the significant other will behave promotively toward him/her, despite the fact that the significant other could choose among additional alternatives (Koller 1988). As online and offline trust have the same denominator, namely the exchange between two parties, and rely on the same aspects, such as risks, costs and fear (Shankar 2002), the abovementioned definition of trust, which was formulated long before the rise of digital technologies, still holds true in today's digital environment. However, the building of online trust is much more complex than that of offline trust. Whereas customers' trust in an offline setting is typically focused on a specific person or company, online customers have to trust not only the company per se but also its online activities (e.g., its website) and the technology around it (the Internet per se) (Shankar 2002). Trusting the intangible and faceless online shop is much harder than trusting the sales staff one has just met in person (Ozdemir 2007). Nevertheless, there are some indications, that trusting healthcare information online is possible. Maloney-Krichmar and Preesce (2005) did an ethnographic research in an online health support community. They found that there is a high level of trust among community members and that the virtual community has the power to give members social support and improve their quality of life.

In today's digitalized world there are more and more contributors to online health information, such as manufacturers, pharmacies, drugstores, doctors, government agencies, and insurances (Agarwal et al. 2010). Mobile applications

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that monitor customers health status, online doctors that comment on specific products and communities where customers share their experience empower the customer to critically reflect on information. The proliferation of new distribution and communication channels and the empowerment of healthcare customers, raise the questions which of all these channels and information sources customers trust most when purchasing OTC drugs. Hardly any healthcare studies investigate online trust in this business-to-customer-relationship (Agarwal et al. 2010).

**RQ1:** Which sources of information do customers trust most when searching for an purchasing OTC drugs in the new digital age? How did customers' trust in different information sources change over the last three years?

### **Customer segments purchasing OTC drugs in Switzerland**

Companies that extensively study and know their customers will be the most successful ones in OTC drug retailing of the future (Meng/Layton/Huang 2016). Today's demanding customers and the increasing amount of customer data available call for personalized marketing strategies that serve customer segments of the size of one (Google 2016). Therefore, standardized segmentation studies based on customer demographics will no longer help to cater individual customer needs (Atluuri et al. 2016). In order to provide targeted healthcare solutions, pharmacies and drugstores need to gain more insights into the type of customers that trust information online and offline.

Despite its relevance, this area of research is widely underexplored (Agarwal et al. 2010).

Previous studies categorize products by how easy their claimed quality can be researched among customers. They differentiate between products with search, experience, and credence qualities (Nelson 1970). Depending on what category the products refer to, one can determine what factors customers of these products value most when shopping. OTC drugs are what experts refer to as credence goods. This means that the average consumer will never have sufficient expertise to evaluate whether the product quality claimed by the brand is accurate or not (Beck et al. 2014). While existing studies deliver valuable insights into customers' preferences when purchasing credence goods, there is still a need to find out whether information related to price, product and service is equally important for the different types of today's customer segments purchasing OTC drugs. Furthermore, in today's digitalized and transparent world, one wonders whether some factors, such as price, have gained importance among specific segments. As a consequence, the author poses the following research question:

**RQ2:** What customer segments exist in today's retailing with OTC drugs and what do these different segments value most when shopping?

### **Opportunities and threats of technology-enabled health services**

Digital services benefit customers on a wide array that ranges from increased convenience and control, to potentially cheaper prices and more accurate treatments (e.g., Ozdemir 2007, Agarwal et al. 2010). Given this „glorification“ of digitalized retailing with OTC drugs, the question arises whether there are some downsides for the customer. Especially debates about customers' privacy dilemma in the Internet give rise to this question. With the help of digital technologies companies may now collect customer data and personalize health services to the individual needs of their customers. Paradoxically, customers favor these customized products/services, but are still reluctant to share personal data (Awad/Krishnan 2006). Still, this concern is comprehensible, as personal health informati-

### **Management Summary**

Cross-border shopping, the rising e-commerce and new market entrants are challenging traditional pharmacies and drugstores in Switzerland to defend their market shares.

Little knowledge exists on how they can harness the potential of digital technologies to differentiate themselves from others.

Insights into the trustworthiness of different information sources, today's prevalent customer segments, and the most popular digital health services help to assess the extent of the digital disruption in OTC drug retailing.

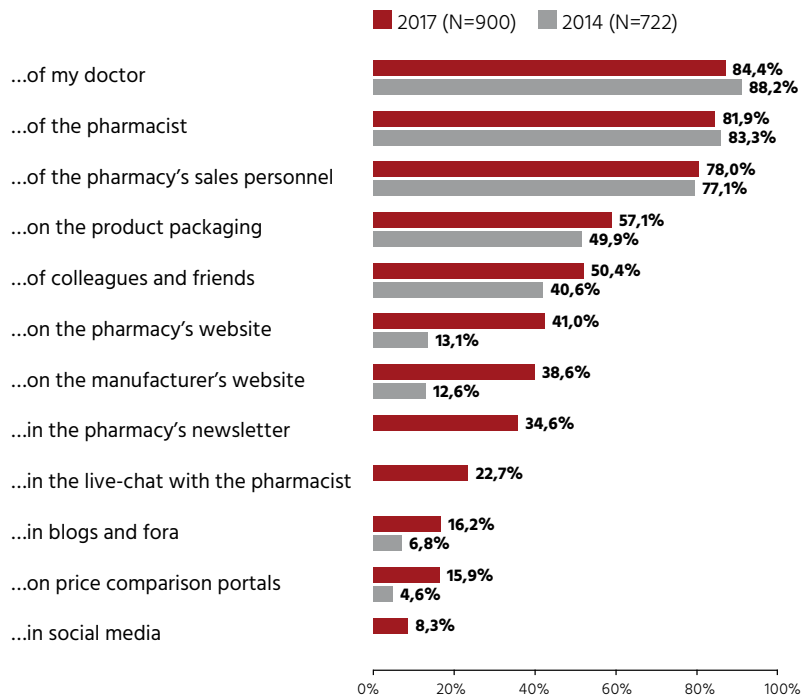
on is very sensitive and often requires higher levels of protection in order to avoid social discreditation (Beckerman et al. 2008; Malhotra/Kim/Agarwal 2004). Furthermore, health information was found to be closely linked to customers' emotions and may, therefore, only be shared with those that one utterly trusts (Anderson/Argawal 2011). Apart from potential privacy concerns, there might be other factors that hinder customers of OTC drugs to use digital services. Unfortunately, literature on that topic is scarce. Only those pharmacies and drugstores that can identify the key challenges of digital health from a customer's point of view will be able to exploit opportunities to differentiate themselves from others (Roland Berger 2016). Above-mentioned gaps in literature give rise to the third research question:

**RQ3:** What are the most prevalent opportunities and threats of technology-enabled services in today's OTC drug retailing?

## Methodology

The author collected survey data of customers purchasing OTC drugs in Switzerland in spring 2017 with the help of an online service provider. In order to be able to replicate results, the author collected survey data among customers purchasing OTC drugs in Switzerland in autumn 2014. Within both questionnaires, participants were asked about their purchasing habits and preferences for OTC drugs. In sum, the author collected data from 900 individual customers in 2017 and from 722 individual customers in 2014. The quotes within these samples for age, gender and residential area represent the po-

**Fig. 1: When purchasing OTC drugs, I trust the information...**



Source: Kleinlercher 2017.

pulation distribution offered by the Swiss Federal Statistical Office (SFSO) in 2014 and 2017. This provides external validity of the results and allows a comparison between the two data sets. The author used the statistical software SPSS to analyze the data sets.

## Findings

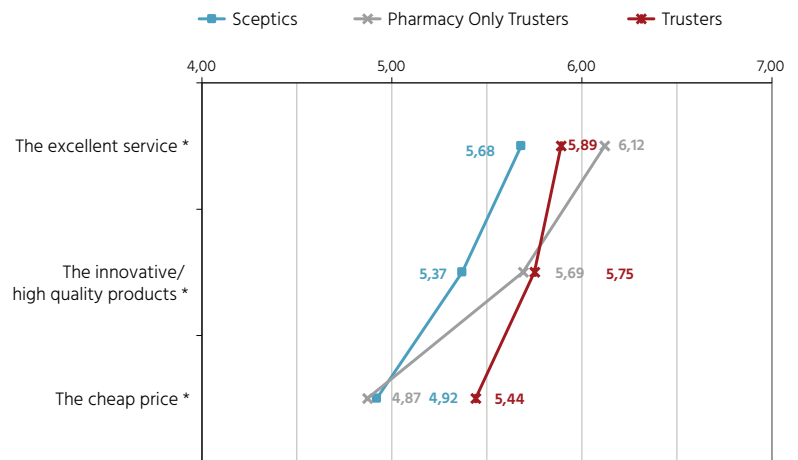
To answer the first research question, customers were asked to rate how much they trust specific online and offline health information sources when searching for and purchasing OTC drugs on a scale from 1 (= do not trust at all) to 7 (= trust entirely). The most trustworthy information source is the doctor, followed by the pharmacist<sup>1</sup> and the pharmacy's personnel (see Figure 1). While customers' trust in these sources

did not change significantly within the last years, online information sources are becoming more important. In 2017, online information sources such as the manufacturer's website, the pharmacy's website and the pharmacy's newsletter are trustworthy information sources for more than one third of all customers. The results suggest that digital technologies are rapidly disrupting OTC drug retailing in Switzerland. Furthermore, results from the year 2017 show, that customers Online-trust not only refers to the pharmacy but also to the manufacturer and to other customers. As the survey was conducted offline, on main railway stations, in 2014 and online in 2017, results concerning the differences between 2014 and 2017 might be biased to some extent and have to be interpreted carefully.

**Fig. 2: Customer segments regarding trust in online information (2017)**

Trust in online touchpoints run by the pharmacy	High (4.01–7)	<b>Pharmacy Only Trusters</b>  19.8% (N=151)	<b>Trusters</b>  17.5% (N=133)
	Low (1–3.99)	<b>Sceptics</b>  60.6% (N=461)	<b>Independent Only Trusters</b>  2.1% (N=16)
		Low (1–3.99)	High (4.01–7)
		Trust in independent online touchpoints	

Source: Kleinlercher 2017.

**Fig. 3: Important decision criteria across customer segments (2017)**

Mean values on a scale from 1 (=not at all important) to 7 (=very important)

\* = significant at  $p < 0.05$ . Source: Kleinlercher 2017.

Since standardized segmentation studies based on customer demographics will no longer help to cater individual customer needs, the author segmented customers purchasing OTC drugs according to their trust in online information sources (RQ2). First, customers were segmented depending on their level of trust (high vs. low) in online information given by the pharma-

cy (website, newsletter, live-chat). Then, customers were segmented depending on their level of trust (high vs. low) in online information given by someone other than the pharmacy (manufacturer's website, price comparison portals, blogs and fora, social media), so-called „independent information sources“. The grouping of customers along these two dimension-

reveals four customer segments: (1) Sceptics, (2) Pharmacy Only Trusters, (3) Independent Only Trusters, and (4) Trusters (see Figure 2).

The segment *Sceptics* is the biggest of the four (60%). Sceptics do not trust any online information source. The average age of the Sceptics is the highest of the four segments. Almost two thirds of the Sceptics can name a specific pharmacy they usually go to. Sceptics visit a physical pharmacy on average once a month. The segment *Pharmacy Only Trusters* makes up one fifth of the customers investigated. These customers trust online only the information that is sent out by pharmacies. 56 percent of Pharmacy Only Trusters are 45 years or older. More than two thirds of Pharmacy Only Trusters have a preferred pharmacy. The average customer in this segment visits the pharmacy every three weeks. *Independent Only Trusters* is the smallest segment. Customers in this seg-

### Lessons Learned

1. Customers' trust in online information sources such as websites or blogs when purchasing OTC drugs has risen.
2. Customers who trust in online information are more demanding when it comes to price, product and service.
3. Cross-channel services, such as Click & Collect or loyalty cards, are the most appreciated digital services.
4. 50% of customers purchasing OTC drugs are/would be bothered by digital sales advice in the pharmacy/drugstore.





ment trust online only independent information sources. Independent Only Trusters is the youngest customer segment<sup>2</sup>. Customers in this segment are less loyal than the others, only 30 percent of them have a preferred pharmacy. They cover 40 percent of their demand for OTC drugs abroad or online. 17.5 percent of the customers belong to the segment *Trusters*. These customers trust online information disseminated by pharmacies and other stakeholders. Trusters are on average younger than Sceptics and Pharmacy Only Trusters. They purchase pharmaceutical products every two weeks.

The relative importance customers weight on product, price and service when choosing a pharmacy to purchase

OTC drugs differs significantly across the four segments. The pharmacy's service is the most important decision criterion for customers in all three segments (see Figure 3). Trusters and Pharmacy Only Truster are more demanding of excellent service and product quality than Sceptics. Trusters value the cheap price of a pharmacy's products the most. The excellent service weights exceptionally strong for Pharmacy Only Trusters.

By asking customers about their opinion on technology-enabled services on a scale 1 (= that would bother me a lot) to 7 (= that would please me a lot), the study reveals the most prevalent opportunities and threats of the digital disruption in Swiss OTC drug retailing

(RQ3). Services which are integrating online and offline channels (hereinafter „cross-channel services“) please a large proportion of customers (see Figure 4). Click & Collect, pharmacy websites with product/service information, and online and offline deployable loyalty cards are the most promising health services. The appreciation of these services has risen in the last three years. In contrast to that, services that reduce personal contact with the sales personnel and store customer data bother a relatively large proportion of customers. For instance, 50 percent of all customers indicate that digital sales advice in the pharmacy via tablets bothers them.

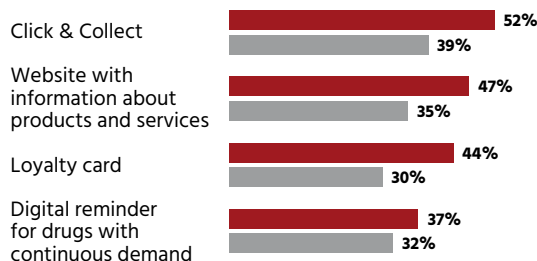
## Discussion

Today's digitalized world provides more and more players, such as manufacturers or other customers, with the opportunity to influence customers' purchase decision. Whether or not pharmacies will be able to keep their crucial role in the customer journey will depend on their ability to (1) identify and serve prevalent customer segments (Agarwal

**Figure 4: Digital services appreciated by and bothering customers (2014 and 2017)**

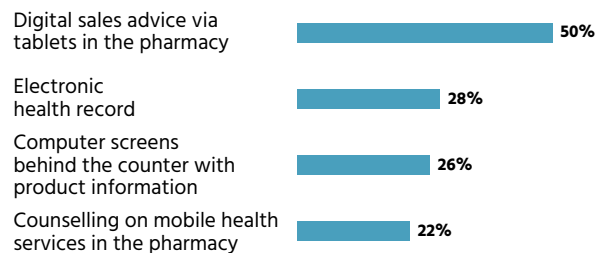
### Digital services appreciated by customers

■ That would please me (2017, N=900)  
■ That would please me (2014, N=722)



### Digital services bothering customers

■ That would bother me (2017)



Share of customers in percent. Source: Kleinlercher 2017.



et al. 2010) and to (2) offer an increased customer experience by integrating channels (Roland Berger 2016).

Results from this study extend these statements in three ways. First, they reveal that customers who trust online information sources are more demanding when it comes to price-, service- and product-related issues. Therefore, pharmacies should identify their traditional and online-prone customers and adapt their channels to the preferences of their most valuable segment(s). Second, cross-channel services, such as Click & Collect, or online and offline deployable loyalty cards, are the most appreciated digital services among customers purchasing OTC drugs. Nevertheless, although technology-enabled services offered by the pharmacy (live-chat, website, newsletter) were proven to gain trust among customers, they shall not replace personal interactions but complement them. In this sense, companies such as Galenica Santé plan to offer services such as Click & Collect in all of its pharmacies by the second half of the year 2017 (Alich 2017). Third, while mobile health applications are estimated to grow by 41 percent in market value until 2020 (Roland Berger 2016), this study reveals that several

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customers are still sceptical toward mobile health. One reason for this may be that customers do not trust the information given via mobile applications (Kumar et al. 2014). Companies developing health applications are well-advised to invest in the quality of their application and include detailed information about their privacy policy.

The pharmacy and drugstore market in Switzerland is subject to predatory competition for several years. In

July 2017 the Swiss online pharmacy Zur Rose, which achieves almost half of its sales with OTC drugs, had a successful initial public offering with a market capitalization of approximately 900 million Swiss Francs (as of August 2017). Furthermore, technology companies such as IBM, Google or Qualcomm Technologies are entering the healthcare market and thus challenge traditional pharmacies. On top of that, cross-border shopping has become more popular over the last years. In 2017, almost 50 percent of Swiss customers go abroad from time to time to purchase OTC drugs (Rudolph/Kleinerlercher/Nitsch 2017). Traditional pharmacies and drugstores in Switzerland need to find ways to defend their shares against new market invaders. With detailed insights into the characteristics and preferences of the most prevalent customer segments purchasing OTC drugs and the most appreciated cross-channel services, this study shall help pharmacies and drugstores to embrace technology in order to differentiate themselves. 

## Main Propositions

1. Whether or not traditional pharmacies and drugstores will be able to keep their crucial role in the customer journey will depend on their ability to offer an increased customer experience by integrating online and offline channels.
2. Pharmacies and drugstores should identify their traditional and online-prone customers and adapt their services and channel offerings to the individual preferences of these segments.
3. Technology-enabled services, such as live-chats, should complement personal interactions between the customer and the pharmacist/druggist instead of replacing them.

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