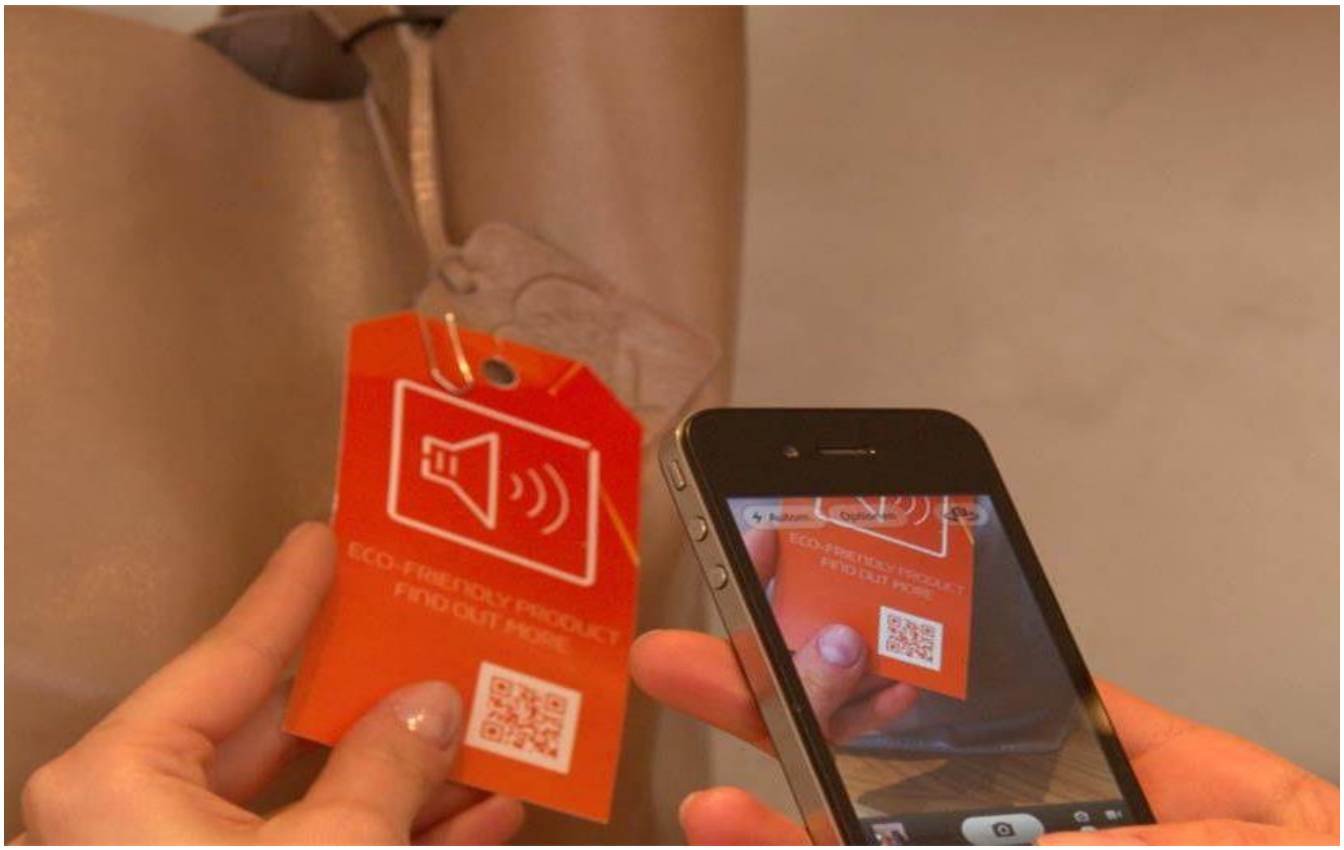

ECOMMERCE: GROWTH WITHOUT END?

Online share of product lines, today and tomorrow

White paper by Dr. Gerold Doplbauer

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Werner-von-Siemens-Str. 9 | Gebäude 6508 | 76646 Bruchsal | Germany
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Contents

1 Who's afraid of eCommerce?

eCommerce has been a key point of focus at retail conventions in recent years. How much will online trade continue to grow and what will be the impact on conventional store retail? That's the question on everyone's mind. Some are already declaring the end of brick and mortar stores, while others are aggressively expanding branch networks.

One thing is clear: There's not yet a clear understanding of the eCommerce phenomenon. Meanwhile, new sales approaches are adopted year by year, from multi-channeling to cross-channeling to omni-channeling.

This blurring of boundaries between sales channels is one of the few constants. Another is the high level of interest among retailers, developers and investors in estimating what percentage of consumers' available retail purchasing power is being spent online and what percentage can still be tapped by conventional store retail.

GfK sought to answer this question by carrying out a comprehensive quantitative and qualitative analysis of the GfK consumer panels, which encompass the yearly online and offline purchases of more than 20,000 households in Germany. Based on this analysis, we've developed a prognosis for online retail trends in Germany extending to 2025. These predictions serve as a valuable basis for more informed business decisions by retailers, developers and investors, all of whom face high stakes with respect to preparing for future trends.

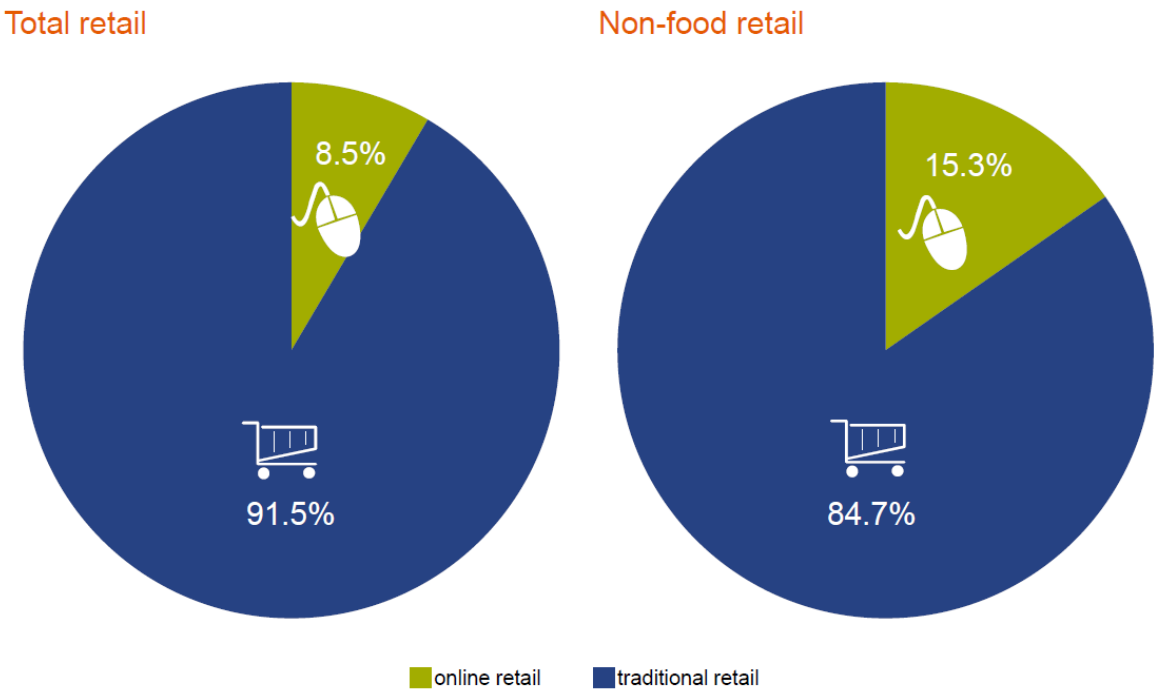
We demonstrate that the online boom does not mean the end of stationary retail. We also show that there's a natural tendency toward saturation already discernible in online retail, with flattening growth curves now present in some segments. Our analysis and prognosis thus provide greater transparency regarding this fiercely debated issue. This transparency significantly reduces the uncertainty that currently reigns in retail while simultaneously highlighting new market opportunities among certain product lines and target groups.

2 Situation in 2015

In recent years, the key drivers of online growth have been the increasing reach, professionalization and technological innovation of online retailers. Online retail grew by an average of 21% each year from 2009 to 2014.

In the past year, 8.5% of Germany's entire retail turnover was transacted over the Internet. This figure would be higher were it not for the particularly low online share of 1.2% for grocery retail (including drugstore items) in Germany. If only non-food turnover is taken into account, Germany's online retail in 2014 comprised 15.3% of all retail turnover.

Online share of retail turnover in 2014



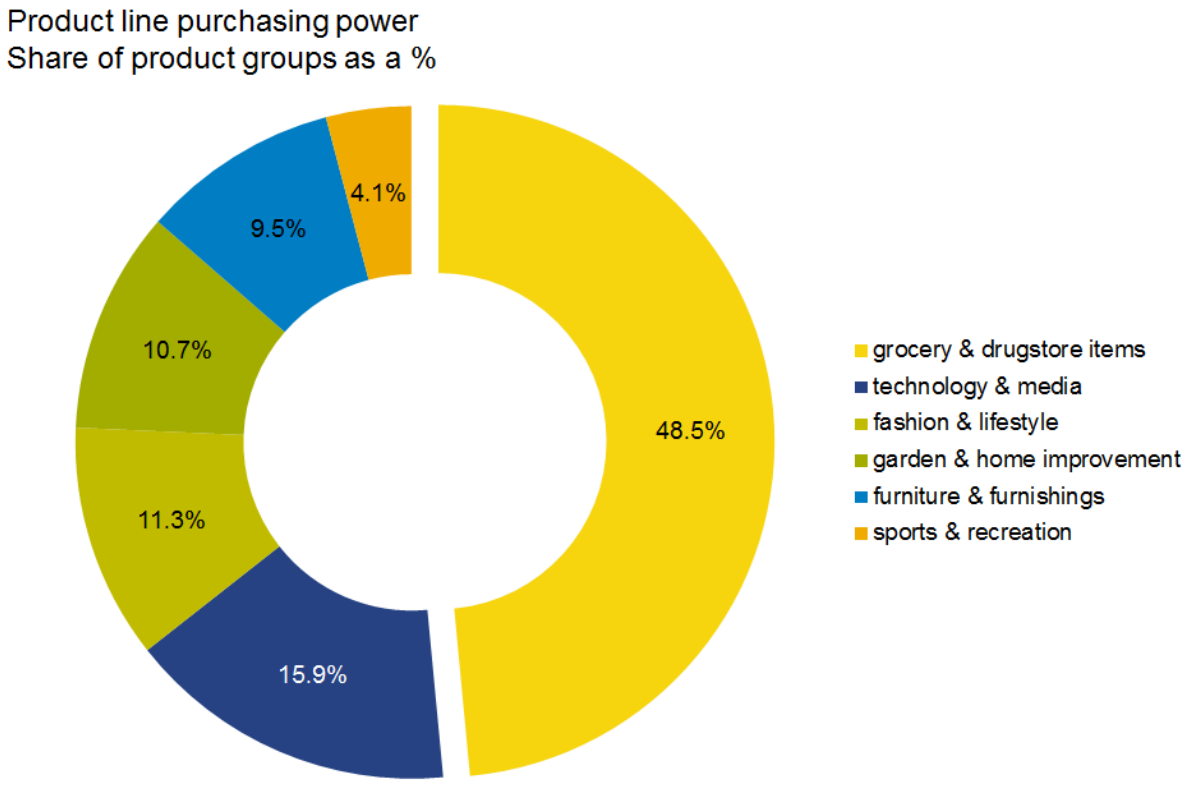
source: GfK
Online retail encompasses the retail-relevant portion of eCommerce, meaning that services are excluded.
It is part of distance retail, which includes both online retail and traditional mail-order retail (catalogs, TV).

2.1 Apples and oranges: Differences among product lines

Successfully devising a prognosis of online retail development and its impact on conventional retail requires that online retail not be regarded as an homogeneous whole. The online shares and weightings of individual product lines are far too diverse to be lumped together.

Retail purchasing power share of product groups

As a first step, we considered the weighting of individual product lines in order to assess their relative significance to retail as a whole. In 2014, approximately 15.9% of Germany's retail purchasing power went to technology & media, followed by fashion & lifestyle at 11.3% and garden & home improvement at 10.7% The furniture & furnishings segment was responsible for 9.5% of the total retail purchasing power, while the figure for sports & recreation was 4.1%. But at 48.5%, the lion's share of retail trade went to grocery retail.

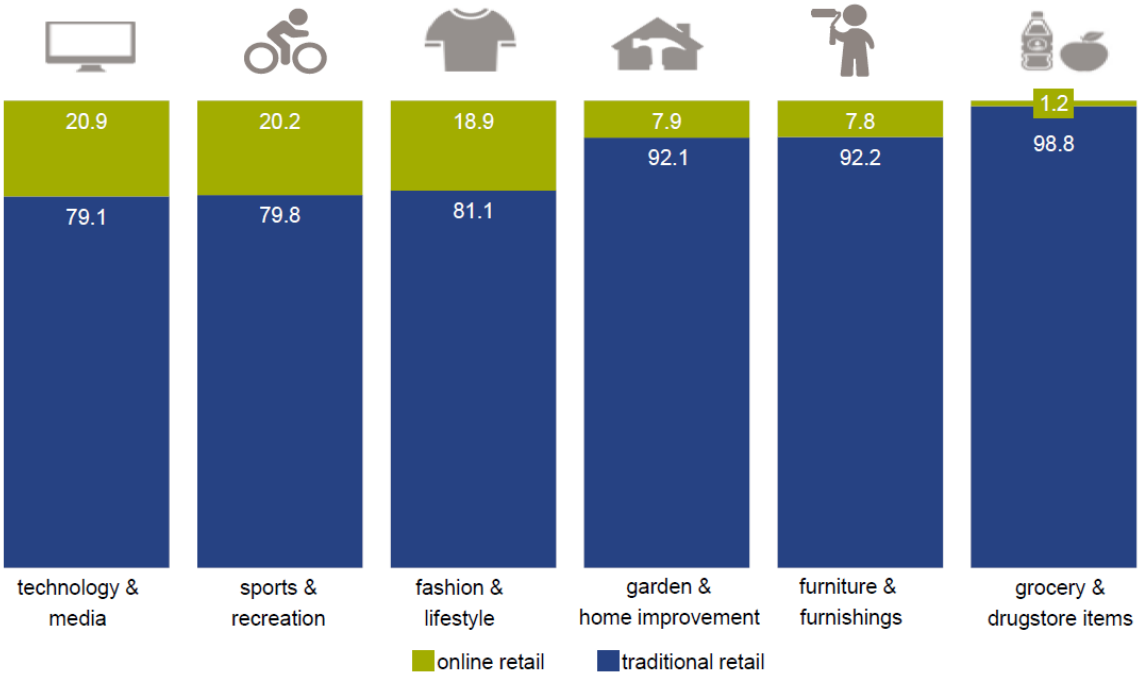


source: GfK Purchasing Power for Retail Product Lines 2014
GfK Purchasing Power for Retail Product Lines refers to the nominal online and offline expenditure per inhabitant, as measured at the place of residence.

Current online share of product groups

The next step was to take into account the online share of the various product lines. Online retail currently has the greatest relevance to the technology & media, sports & recreation and fashion & lifestyle product lines. At present around one-fifth of consumer purchases in these segments is made online.

Online share of turnover as a %
per product group in 2014



Online trade encompasses the retail-relevant portion of eCommerce, meaning that services are excluded.
It is part of distance retail, which includes both online retail and traditional mail-order retail (catalogs, TV).
source: GfK

The following three product groups are the forerunners when both absolute product line size and relative online significance are taken into account:

Technology & media is the highest grossing product group in German online retail, with an online share of 20.9% and an online retail volume of €15.1 bil. But increasing signs of maturation in this segment are already apparent: After robust annual growth rates of 20-30% from 2011 to 2013, this segment achieved just under 8% online growth in 2014. This trend is particularly apparent in the **books & stationery** sub-segment, whose online share barely grew at all last year.

The product group **fashion & lifestyle** also has a very high significance for online retail. This segment is currently the second most important to eCommerce with around €52 bil. in total turnover, of which 18.9% is transacted over the Internet (€9.7 bil. in online retail volume).

Although the total volume in the **sports & recreation** segment is comparatively smaller, it has a high significance for online retail. As a result of its substantial online penetration quota of 20.2%, €3.8 bil. from this segment was transacted on the Internet.

The importance of taking into account both the retail share of a product group and the online share within the product group can be seen in the case of **grocery retail**: At 1.2%, the online share of this segment is very low, but even so it generated €2.6 bil. in online turnover in 2014. The resulting pressure this places on stationary retail is still low, but the segment is already relevant to online retail and associated branches such as logistics service providers.

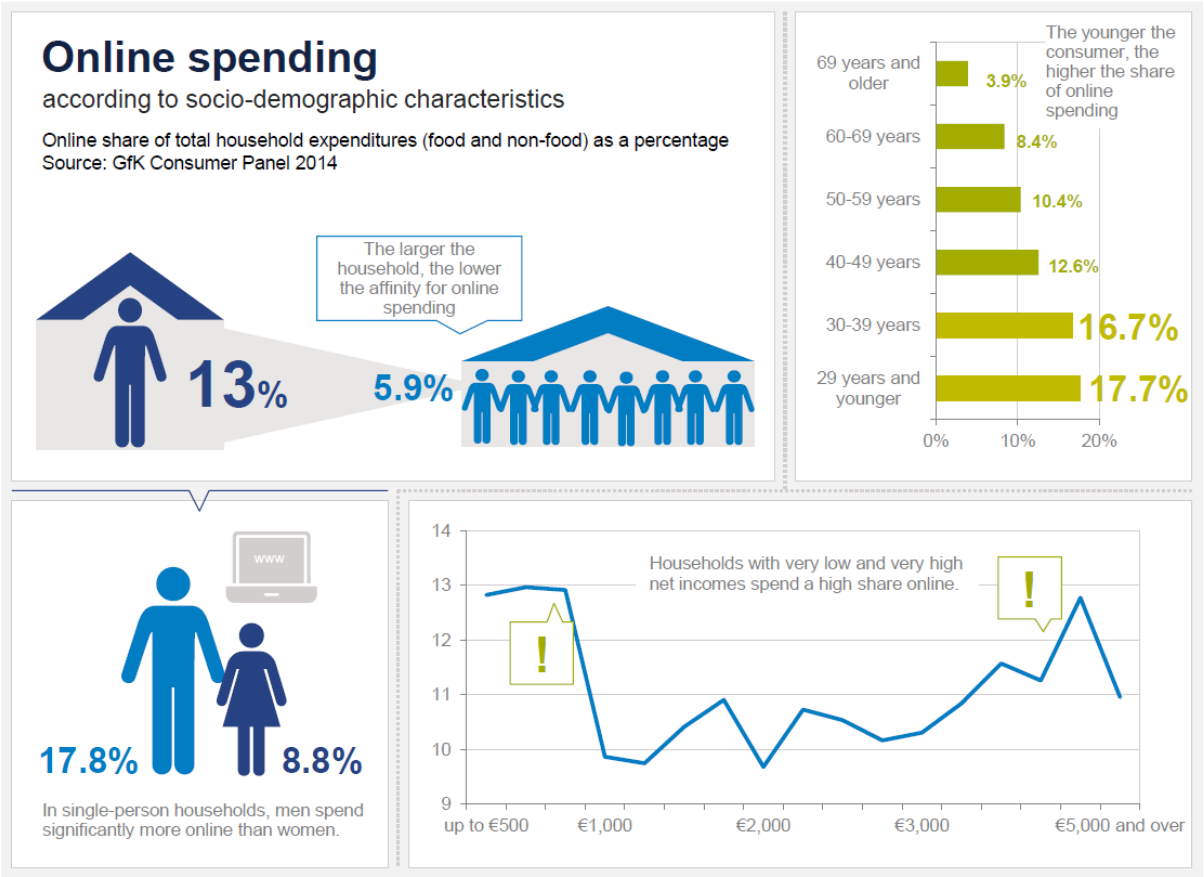
2.2 Socio-economics: Surfing seniors remain an exception

Although much has been written about the importance of so-called senior surfers, our analysis of online spending according to socio-economic group reveals a somewhat different picture. Seniors are in fact the exception to the rule when it comes to making purchases over the Internet.

Dividing all German households into six groups based on the age of the main wage earner, those under 30 spend the most online at 17.7%, followed by 30-39 year-olds at 16.7% (source: GfK Consumer Panel 2014). While this is perhaps to be expected, the extent of the discrepancy between the younger and older age ranges is nonetheless surprising. The 60-69 year-olds spend 8.4% online, while the over-70s spend just 3.9%.

The tendency of younger employees to have lower incomes goes hand in hand with the tendency of lower-income households to spend a higher share of their money online. But households with very high purchasing power also spend a very above-average share of their income online. This U-shaped curve reflects the different types of consumers: Those with very low income take advantage of the better prices available online, while those with higher incomes embrace online shopping thanks to the time saved.

Online spending habits also vary according to family type: The greater the size of the household, the lower the share of online spending. And gender also plays a large role: For example, in single-person households, men spend twice as much online (17.8%) as women (8.8%).



These insights drawn from representative sample data shed light on trends already foreseeable in the broader retail landscape. A striking case in point are the discounted young fashion retailers, who are strongly affected by their young target group’s preference for online spending. Competitive online pressures are especially increasing for young fashion retailers who don't have a fully-fledged omni-channel strategy of their own and whose brick-and-mortar shops are also vulnerable to competition. Dominant players in the segment such as Primark additionally constrict the available options. This indicates a greater risk of vacancies in retail venues with a high share of young fashion items compared to venues with higher-end products.

3 Prognosis for eCommerce up to 2025

3.1 Model basis: Diffusion model, growth drivers, growth limits

Our prognosis is based on two pillars:

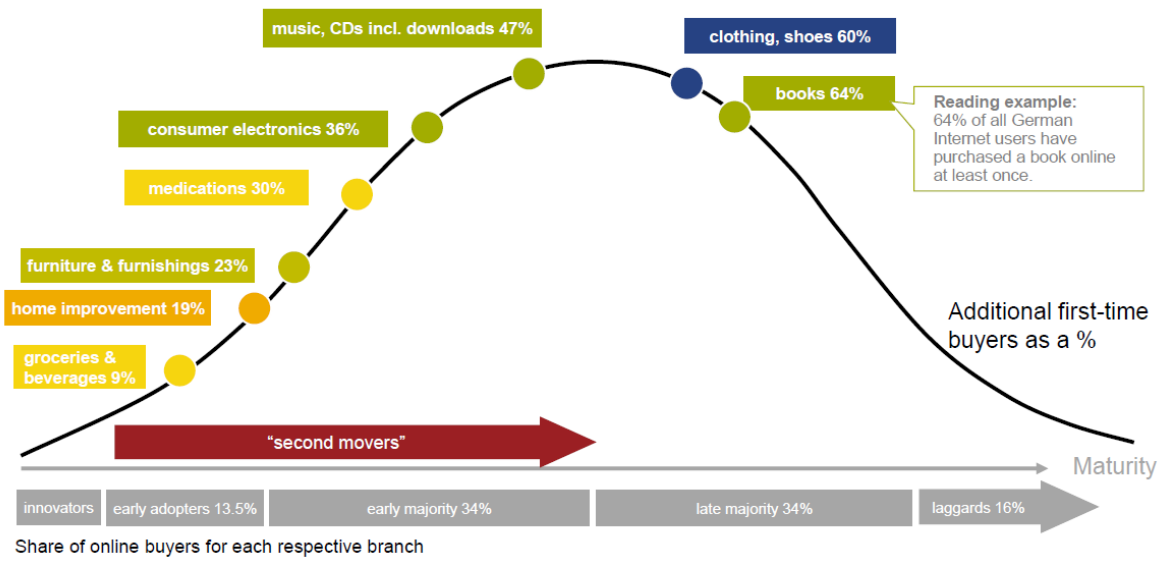
1. We've divided eCommerce into its various product lines and determined a growth cycle for each individual product group **using a diffusion model**.
2. We've then related this diffusion curve to the eCommerce **growth drivers** as well as to the general and product-specific growth limits.

Diffusion model

The diffusion model demonstrates the effect of launching an innovative product or service, such as Internet retail. This takes into account innovation effects such as the quantity and quality of online shops and other technological drivers such as the distribution of smartphones and tablets. Imitation phenomena are simultaneously considered in order to model the impact of innovators and trendsetters on other consumers' purchasing behavior.

For example, the online maturity of the book market is already very advanced: Around 64% of all German Internet users have purchased a book online at least once. Given this, the potential for additional first-time buyers is decreasing and growth rates are slowing. Meanwhile, stationary book retail has made adjustments and again achieved turnover growth.

Diffusion model as theoretical framework
Consideration of innovation and imitation effects

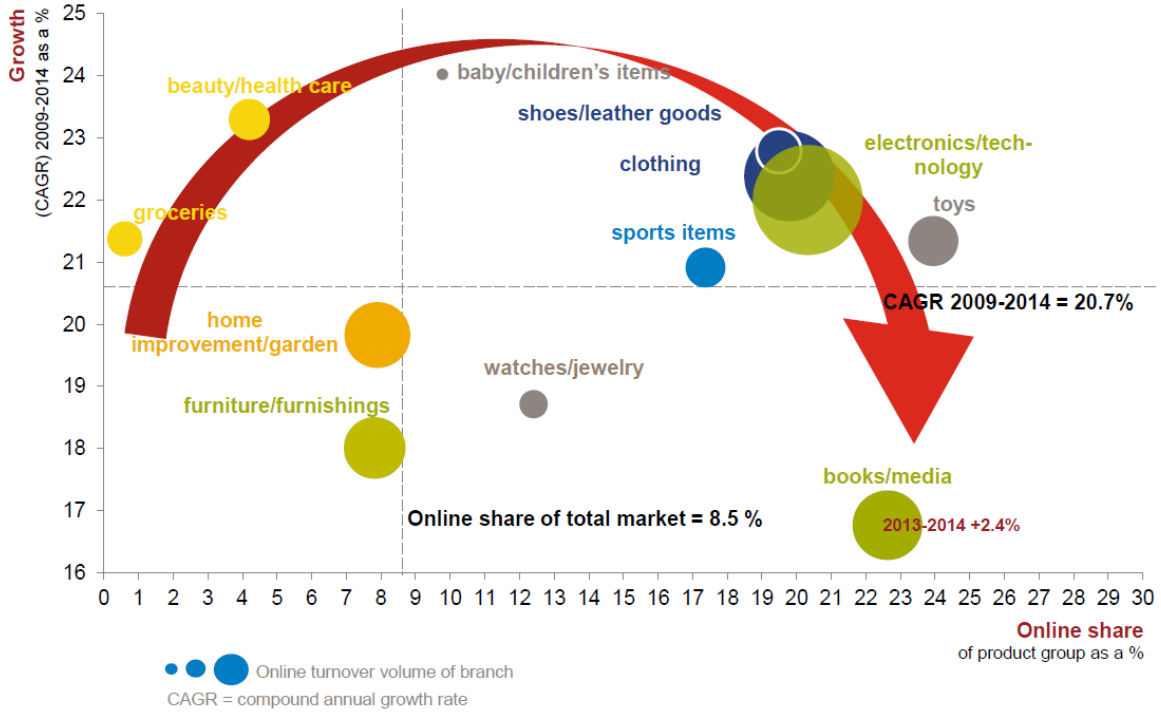


The historic growth curves integrated into the diffusion model can be successfully illustrated using the compound annual growth rates (CAGR). In addition to the speed of growth

(y-axis), the online share of the product group turnover reveals the current relevance of online retail to the various product lines (x-axis).

Current online stars in a four-field matrix (high relevance and high growth) include the fashion & lifestyle segments **shoes/leather goods** and **clothing**. By contrast, the online share is already very high for books/media. But the growth rates that led to this cannot be sustained (only 2.4% growth was most recently achieved).

Online turnover and trend by branch
2009-2014



source: GfK

eCommerce growth drivers

The evolution of eCommerce is propelled by three key factors:

Innovation
The first growth driver is the ability of companies to innovate. At the onset of the online phenomenon, the innovation was the discovery of the Internet as an information medium. With the introduction of continually improving webshops, forward-thinking solutions allowed the Internet to be used as a sales channel. Growth was then further driven through increased Internet access thanks to the distribution of smartphones and tablets.

Market penetration
Amazon launched its first website in Germany in 1998, followed soon by other platforms such as eBay and Buch.de. The first large wave of online shop openings began in 2009 as H&M and C&A optimized their online shops (established in 2007) and Zalando began to shake up the market. This sparked a race among other stationary retail heavyweights to take advantage of the market potential of this new sales channel. Alongside improved Internet access, the availability of online shops increased, resulting in growing interest among ever more consumer types. And thanks to their online presence, stationary retailers also stimulated online growth. Some retailers who originally sold exclusively in stationary venues today generate 15-30% of their turnover online.

Professionalization
The progressive penetration of the online market was only possible thanks to simultaneous measures toward professionalization. These included addressing mistrust about online payments through new services, improving the optical display of products and related information, expanding delivery options and offering free returns. The resulting improvements in reliability and delivery speed led to fierce competition among online retailers.

Three key drivers in an interactive and cyclical relationship
The increasing professionalization heightened competitive pressure, which resulted in online retailers offering innovative solutions for service gaps (e.g., issues related to speed, branding, reliability, pricing, payment and logistics) and consequently extending their reach (regionally, according to target group or product line).

The first sign that this trend is slowing amidst increasing market maturity is the current growth rate of "only" 11% compared to the 20-30% growth rates in previous years. But growth can most certainly be further spurred through additional innovations, which our prognosis considers.

Growth drivers for online retail

Innovation

- mobile shopping
- online consultations
- recommendation systems
- shopping apps
- webshop functionality

Market penetration

- access opportunities
- consumer reach
- availability of online shops
- consumer types (digital natives vs. older generations)
- regional differences (urban vs. rural)

Professionalism

- product information
- product display
- data security
- delivery reliability

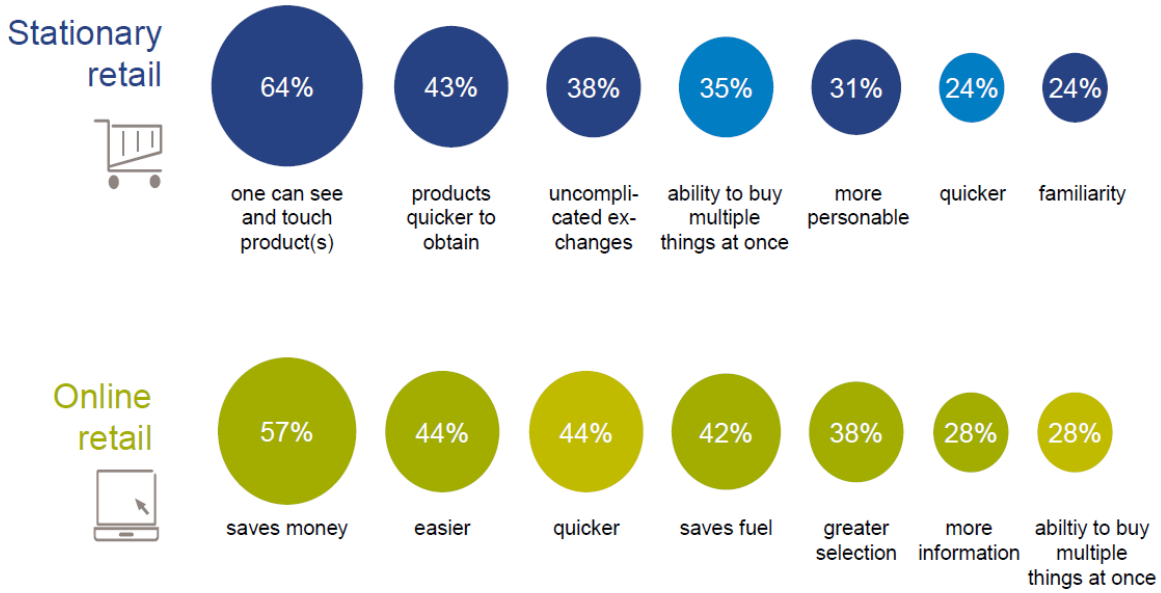
source: GfK

Maturation process and growth limits in online retail

We anticipate that eCommerce will eventually reach a natural growth limit for the reasons detailed below:

- **Onset of saturation tendencies among product lines first to go online**
  First signs of a trend slowdown; e. g., online share for books/media stagnated from 2013 to 2014; technology & media segment grew only marginally
- **Compensatory measures by stationary retailers**
  Competitor reactions unavoidable; in many areas, stationary retailers are responding by improving store design and enhancing the shopping experience at the point of sale.
- **Lacking tactile and emotional qualities**
  Stationary retailers lure customers with tactile and emotional qualities that are difficult or impossible to replicate online. Some strengths of the stationary environment include tactile qualities and the ability to offer an experience and an atmosphere as well as consultancy, service and product encounters. This leads to spontaneous and additional purchases and also allows consumers to immediately take home their purchases.
- **Lengthy or unclear purchasing processes**
  Product availability often cannot keep up with the advertised online offering, and there's an increasing loss of price advantages in online retail compared to stationary retailers. Online payment structures are also often too complicated or not sufficiently trustworthy, which results in many customers withdrawing from the purchasing process.
- **Low or questionable product quality**
  Fresh or high-value products and especially any products requiring explanation are predominantly purchased in stationary venues. Online venues don't permit customers to examine products tactically and consult with store personnel as to whether the items in question meet their needs. Online retail is responding to this by offering virtual consultations and product test options. While these still fledgling innovations are being widely implemented, a corresponding revolution in shopping behavior is not anticipated due to the limited added value.
- **Differing consumer types**
  The trend of emphasizing individuality is a growth driver for eCommerce. The sale of niche products tends to be more lucrative online, because barriers to market entry are fairly low. But there continue to be many consumers who abstain from online purchases for reasons related to age, budget or ideology. Even mass phenomena are not embraced by all consumers. TVs are a case in point: To this day, some consumers refuse to have this device in their homes. This sort of resistance among various target groups (age, income, consumer type) sets certain boundaries to online retail.

Online retail appeals to rational needs;
offline retail appeals to emotional needs



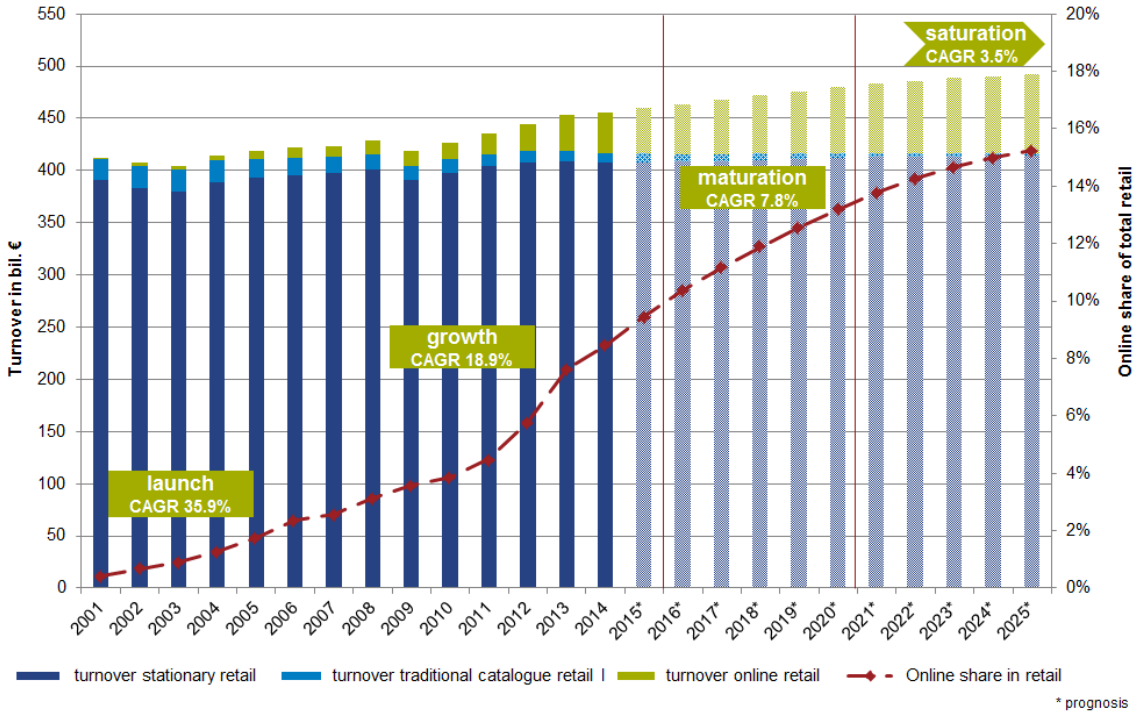
source: GfK Futurebuy
Note: Those surveyed were asked to select their top five reasons.

3.2 Online growth prognosis up to 2025 according to product line

In 2014, eCommerce comprised 8.5% of the total retail turnover in Germany. On the whole, the German retail market is largely saturated, which means market share increases come at the expense of other formats. This competitive pressure has gained momentum as a result of eCommerce. Even if, as predicted, growth rates slow due to saturation tendencies, we still anticipate an almost doubling of the online share of total retail turnover (i.e., food and non-food) to around 15% by 2025. If groceries and drugstore items are excluded, we estimate the online share will be approximately 25%, which is around one-fourth of the non-food segment.

Taking into account where the individual product lines fall on the diffusion curve, we expect eCommerce to continue on its trajectory toward increasing maturity. As the maturation cycle progresses, online share increases will eventually flatten once they hit a certain upper limit. In addition to the already detailed reasons, the cause for this is the innovation of stationary retail, which is already successfully responding to intense competition with new concepts and omni-channel solutions.

Progression of online retail to market maturity



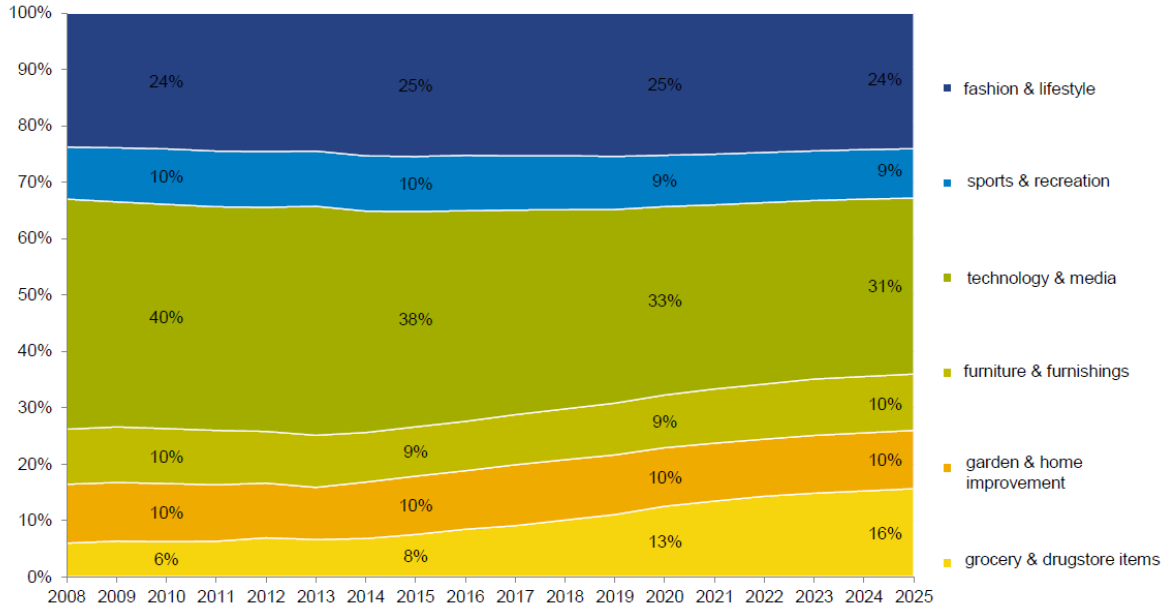
source: GfK

Product line share of total online retail volume

While all branches will grow in absolute terms throughout the prognosis time frame (until 2025) and technology & media will eventually make up the lion's share, the distribution of product line share will shift to the benefit of online newcomers in the grocery & drugstore, furniture & furnishings and garden & home improvement segments. The breakdown is as follows:

- After the peaks achieved in 2008 and 2013, **technology & media** will lose the greatest percentage of the total online turnover: from 38% in 2015 to 31% in 2025. The reason for this is not that this segment will lose online volume, but rather because other product lines will achieve greater gains in the same time frame.
- **Fashion & lifestyle** has currently achieved its peak share of 25% of the total online volume. By 2025, this share will be around 24%.
- **Grocery & drugstore items** will achieve the greatest share increases: This product line should double its share of total online turnover from the current 8% to 16%, a prognosis reinforced by significant innovations already discernible in the logistics sector.
- **Furniture & furnishings** will grow marginally from 9% to 10%.
- **Garden & home improvement** will maintain a stable share of the total online turnover, as other product lines will tend to grow more.
- **Sports & recreation** will achieve its highest share of 10% in 2016. After that and until 2025, the share will decline slightly to 9% of the total online turnover.

Product line share of total online retail volume



All product lines are projected to grow in absolute terms, but online share percentages will shift.

source: GfK

4 Outlook: Implications, explanations, provocations

This analysis of the share of online turnover by product group along with our prognosis for the next ten years give retailers, investors and developers an objective basis for making more informed long-term decisions. These groups can use this information to guide the strategic development of their businesses and endeavors. The white paper is also meant to bring rigor to the subject of online retail while also stimulating discussion among all market players.

Of models and prognoses

Whenever working with numbers, it's essential to do a reality check to take into account new and perhaps very **local developments** as well as **socio-demographic and technical trends**. Each model includes an element of generalization that doesn't adequately convey every detail. But precisely this generalization supports the rigor and robustness of the model's predictions. To paraphrase the physicist Niels Bohr, predictions can be very difficult, especially when they're about the future. Bohr had an intimate understanding of the interdependency of a given model's parameters and the repercussions of even small changes to one of these parameters.

With entries on the purchasing behavior of 20,000 German households and data from the GfK retail panels, the GfK panel data currently offers the most reliable foundation for assessing the entire retail universe, both online and offline. Our fine-tuning of the model is guided by our decades-long retail consultancy as well as observations drawn annually from hundreds of on-site appraisals of locations, retail networks, real estate objects, investments and retail projects.

Competition drives innovation

Based on our knowledge of both the abstract side of retail through data and the concrete side through numerous hands-on consultancy projects, we're confident that retail of the future will continue to have a physical, real-world element. Having said this, the growing share of online retail will force some market players into either insolvency or the next stage of development.

But there's no compelling reason to write off stationary retail. In fact, quite the opposite is true: Rather than killing stationary retail, eCommerce will ultimately force stationary retail to further evolve, resulting in more efficient business models and more attractive offerings that will give consumers better retail options. This reference to evolutionary biology expresses the close relationship between markets and biological growth processes, including their equally natural saturation limits and isolated biotopes.

Answers always lead to new questions

Social interaction, direct contact and the desire to trade will remain part of the consumer experience in the future. Commerce is about far more than merely anonymous purchasing transactions. People want to purchase and sell goods and thereby interact with others; some want to appear more clever through savvy trading, while others want to adorn themselves with lifestyle products; people want to see and be seen, spontaneously discover and acquire. And they want to take advantage of the geographic proximity and special features of retail offerings.

The essential question for retail is therefore not "whether" but "where" these meeting places will be in the future and how they will be structured to make them attractive to consumers and profitable to sellers.

The data presented and analyzed in this white paper provides a basis for venturing some answers to these questions. For example, it's clear that affinity for online purchases stems not just from socio-demographic elements, but also from **regional factors**.

The retail landscape of the future will actively involve many parties, such as urban planners and Internet-of-Things experts as well as retailers, manufacturers, real estate developers and investors.

The affinity for eCommerce differs from region to region, so it's fascinating to contemplate what the retail spaces of the future will look like.

Which **locations and location types** will be favored?

Which **product lines** will be represented?

What **kind of real estate** will characterize future stationary retail venues?

How much **sales area** will they offer?

What will be in demand? And what will be profitable?

Forthcoming GfK studies will explore and offer answers to these compelling questions.

About the author

Dr. Gerold Doplbauer is head of Retail Real Estate Advice in GfK's Geomarketing solution area. He advises investors, banks, project developers and retailers on location and real estate investments. He studied business administration at Vienna University of Economics and Business with a concentration in retail and marketing, and subsequently completed a doctorate on the drawing power of retail real estate. Dr. Doplbauer is a retail expert and has extensive experience in analyzing sales channels. He has represented GfK at conventions both domestically and abroad and has lectured at Leuphana University of Lüneburg on market and location analyses and at the private university Schloss Seeburg on retail real estate development.

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