



University at Buffalo
Center for
Marketing Analysis
School of Management

U.S. Retail | 2024

Subscribing to the Hype: AI in Retail

Retailers can use AI and other new technologies to grow their market share, attracting and retaining subscribers by delivering convenience and value.

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The Rise of the “Subscription Economy”

While the concept of subscription services isn't new, adoption has accelerated in recent years. The integration of subscription benefits into everyday shopping habits signals a fundamental change in how consumers engage with retailers — moving beyond one-time purchases to ongoing, value-driven relationships.

As more consumers opt into multiple subscription services, retailers must rethink their role in the broader “subscription economy.” Subscriptions are now a fixture across virtually every retail category, and consumers are increasingly looking for a consolidated shopping experience that rewards loyalty with tangible, ongoing benefits.

The success of Amazon Prime has prompted traditional retailers like Walmart and Target to invest heavily in their subscription models (e.g., Walmart+, Target Circle 360), aiming to capture the attention of consumers who are willing to pay for convenience, savings, and added value.

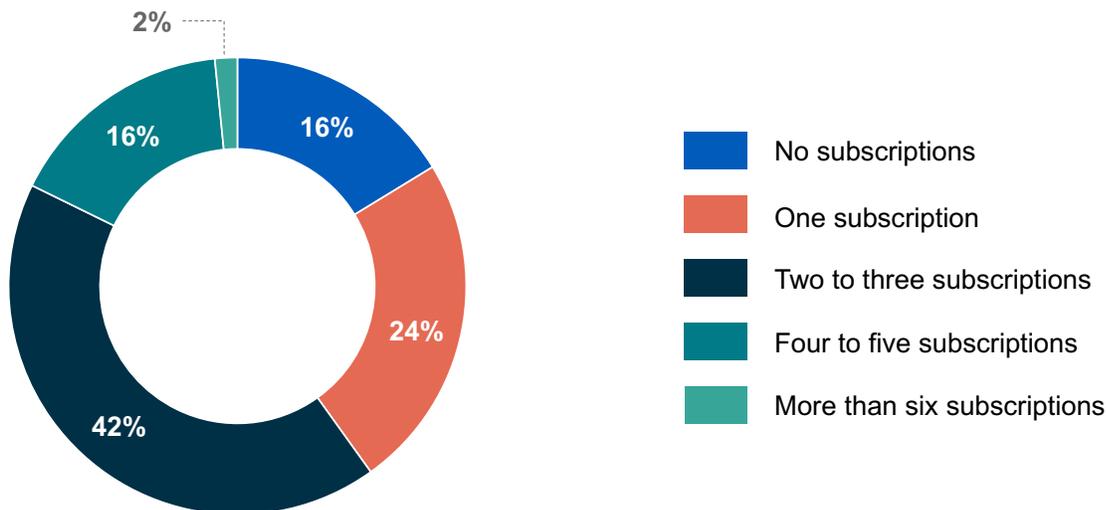
Based on a survey of 1,778 shoppers during the fall of 2024, **60% of shoppers now subscribe to multiple services**. This speaks to the increasing importance of loyalty programs in driving customer retention. Subscriptions are no longer just about free shipping or occasional discounts — they're a powerful tool for creating a continuous relationship with consumers.

For retailers, this means that the traditional transaction-based model is being replaced by a more recurring, membership-driven approach. Offering exclusive perks such as early access to sales, personalized promotions, or tailored content can significantly strengthen the emotional connection with customers, making it less likely they will switch to competitors.

However, as the number of subscriptions per consumer rises, retailers must be mindful of “subscription fatigue” and provide enough value to justify the ongoing expense and differentiate themselves from growing alternatives.

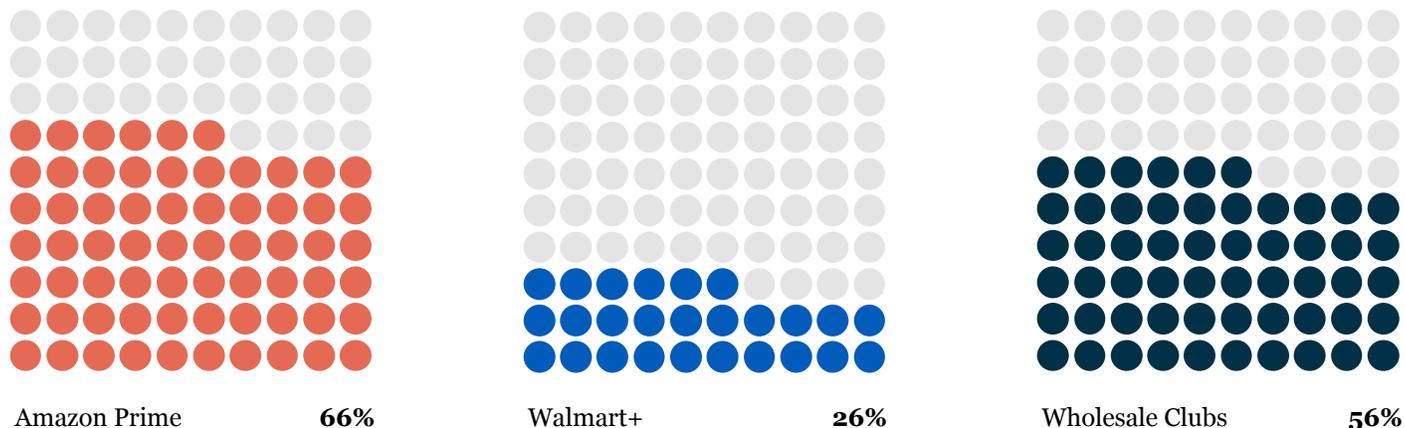
Most shoppers pay for multiple subscription services.

How many retail subscription services do you subscribe to? % of respondents (n = 1,778)



Subscription Showdown: Prime leads, Plus trails, Clubs remain strong

Subscription service penetration, % of respondents (n = 1,778)



No matter where you look in retail today, companies are fighting to gain a larger share of customers' wallets, often through subscription services.

Subscription Showdown

Outside of traditional wholesale club memberships, Amazon Prime and Walmart+ are the two largest subscription services offered today's retail landscape. The varying levels of adoption for these services, club memberships included, highlight an important point: consumers are increasingly selective in the subscriptions they choose, and their preferences depend on the perceived value each service offers.

Prime remains the leader with 66% of respondents paying for the service, driven by its broad range of benefits – free shipping, fast fulfillment times, streaming, exclusive deals, and discounts. This comprehensive offering makes it essential for many shoppers, particularly those seeking convenience and entertainment in one package.

Walmart+, with a modest 26% penetration, is growing rapidly but still lags behind its primary competitor. Its appeal lies in practical benefits like same-day delivery from its large network of stores and fulfillment centers, convenient grocery delivery with services like "In Home" and fuel discounts – all at a lower price point than Amazon Prime.

Club memberships, such as Costco and Sam's Club, remain highly popular for shoppers prioritizing bulk buying and in-store perks, with 56% of respondents paying for at least one club membership. While these memberships cater to a specific group, such as families or value-driven shoppers, they provide significant savings and access to exclusive services like travel discounts. However, their appeal is more limited compared to the broader reach of Prime.

Recurring Retail Revenue

Outside of Amazon Prime, Walmart+, and wholesale club memberships, there are several other subscription services fighting for wallet share. For retailers looking to succeed, understanding the specific strengths of each model is key. For example, Amazon Prime excels by bundling a wide range of services under one umbrella, making it a must-have for tech-savvy and convenience-driven consumers. Club memberships continue to provide value through bulk purchasing and exclusive in-store experiences, appealing to cost-conscious shoppers who enjoy the tangible benefits of membership.

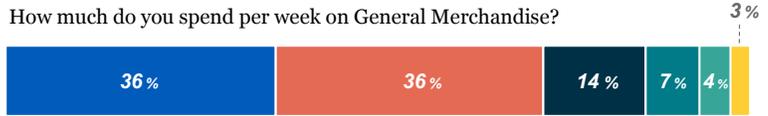
With this in mind, retailers must refine their subscription models, focusing on clear value propositions to attract and retain customers. For Walmart+ and other smaller players, increasing digital services and technology offerings could be key to gaining a larger share of the market.

2024

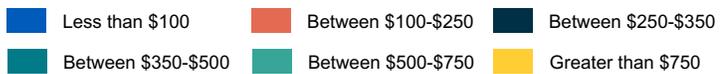
Nationwide U.S. Shopper Behavior Survey

Spending habits by category, % of respondents (n = 1,778)

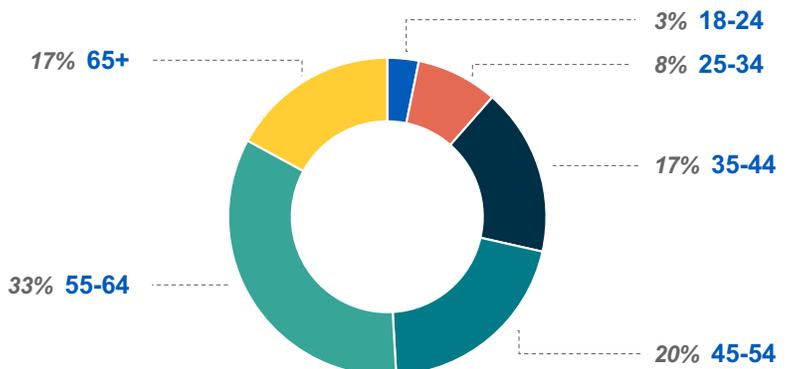
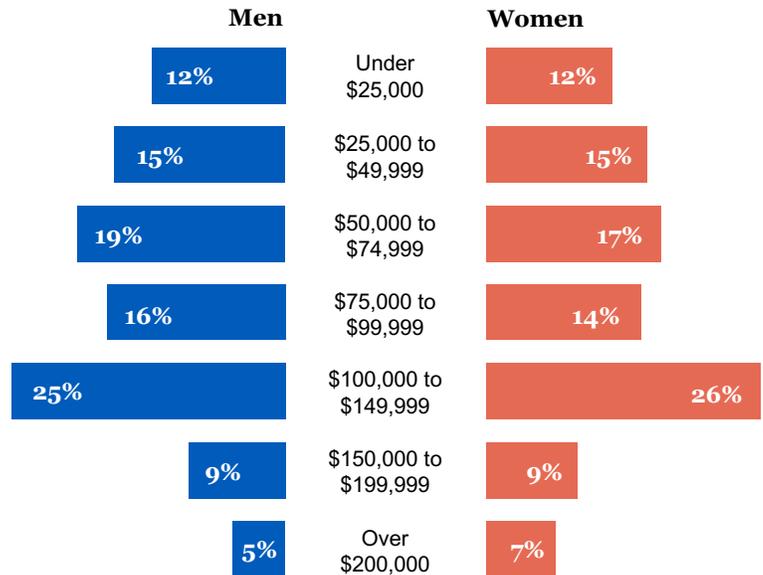
How much do you spend per week on General Merchandise?



How much do you spend per week on Groceries?



Overview by Income, Age; % of respondents (n = 1,778)



With consumers increasingly subscribed to both physical and digital retail services, the line between in-store and online shopping continues to blur. Subscriptions play a crucial role in bridging this gap by providing seamless cross-channel experiences. For example, services like curbside pickup or same-day delivery enhance the convenience of shopping across both online and physical stores.

Hybrid Shoppers Lead the Charge

It makes sense that the appeal of subscription services like Amazon Prime and Walmart+ is strongest among hybrid shoppers – those who divide their shopping evenly between online and in-store channels. The results of our survey underscore this trend, revealing that **hybrid shoppers have the highest subscription rates across both grocery and general merchandise categories.**

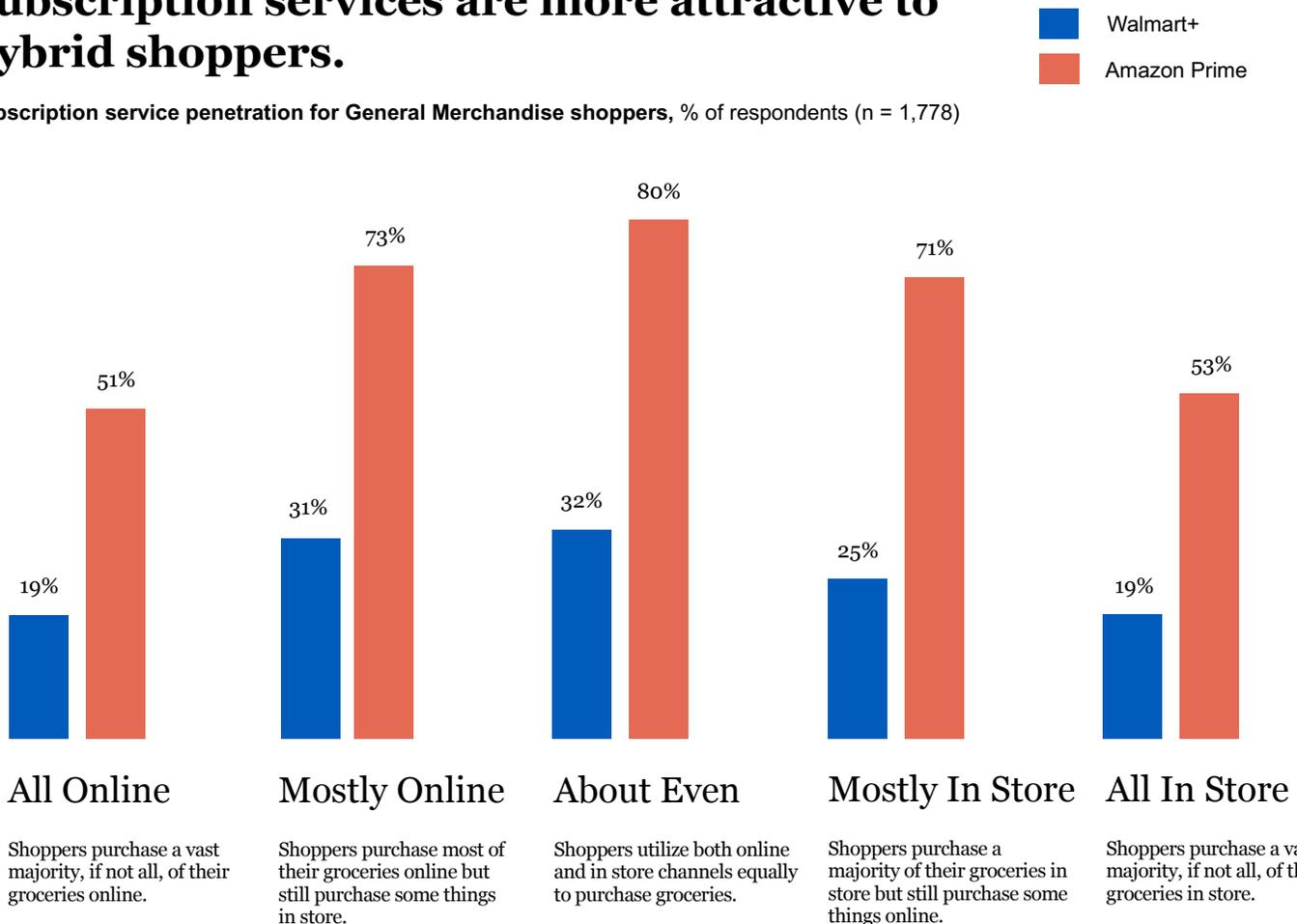
Prime, in its Prime

For Amazon Prime, this behavior is especially pronounced, with ~80% of hybrid shoppers subscribing to the service for both grocery and general merchandise, underscoring the platform’s versatility in meeting the needs of consumers who value flexibility. Hybrid shoppers value the seamless integration of Prime’s benefits, such as fast delivery for online purchases, access to in-store perks at Whole Foods, and a wide array of digital services like streaming and exclusive deals

Online-only shoppers are likely drawn to Prime for its fast delivery services but may find limited value in perks tied to physical stores. On the other hand, in-store-only shoppers, who may prioritize immediacy or a tactile shopping experience, may not see as much value from the service’s ecommerce-focused perks. Hybrid shoppers, however, experience the best of both worlds offered by Amazon Prime.

Subscription services are more attractive to hybrid shoppers.

Subscription service penetration for General Merchandise shoppers, % of respondents (n = 1,778)



Pluses and Minuses for Walmart+

Walmart+ tells a slightly different story, particularly in the grocery segment. Membership among primarily in-store grocery shoppers is notably high at 47%, reflecting Walmart’s strong foothold in the brick-and-mortar market. By contrast, adoption among online-focused grocery shoppers lags behind, with only 10–15% subscribing. Despite convenient delivery options, this suggests an opportunity for Walmart to tailor its online grocery offerings to better attract online grocery shoppers.

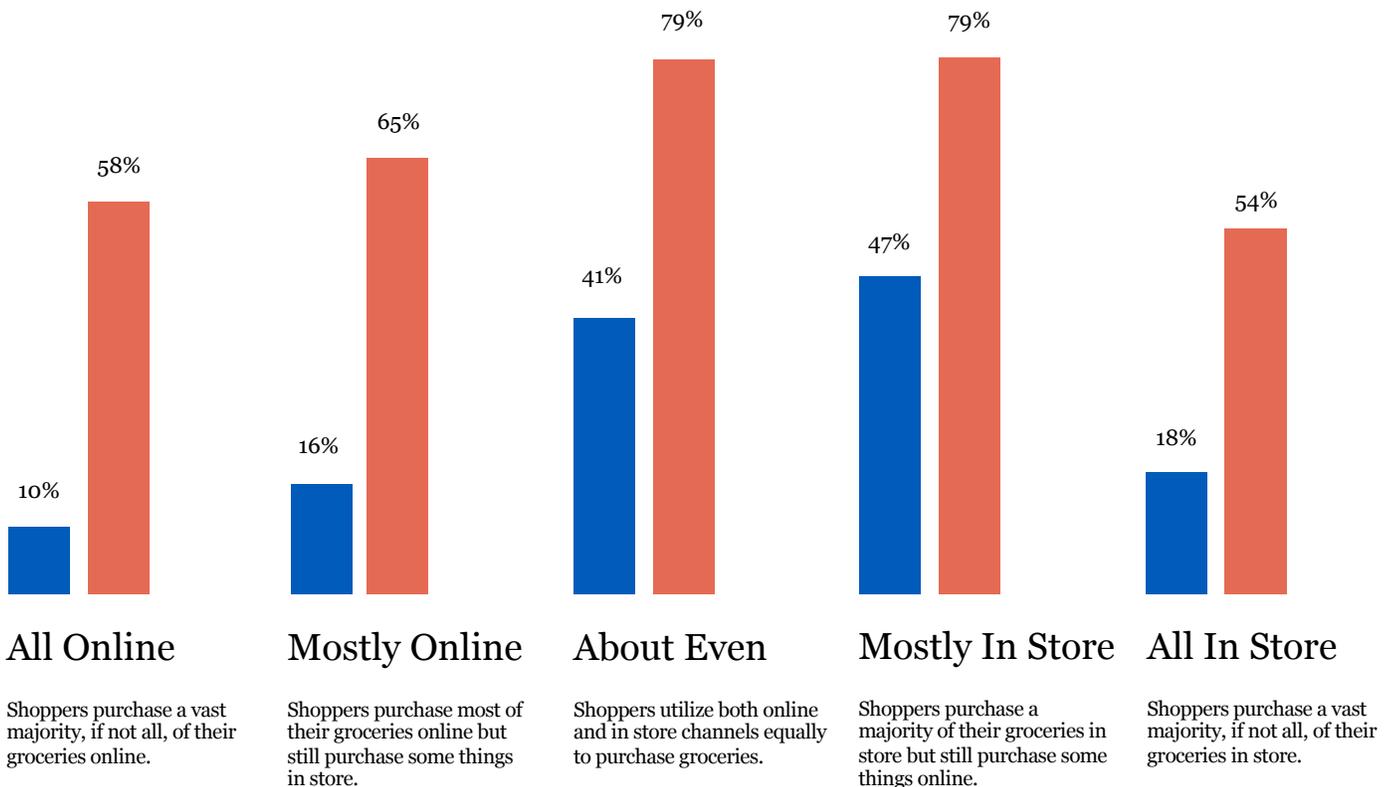
In general merchandise, the pattern flips. Online-dominant and hybrid shoppers have a higher subscription rate for Walmart+ at ~32%, compared to 20–25% for those who shop primarily in-store. This may be due to Walmart’s growing strength in e-commerce, but there remains room to convert more in-store general merchandise shoppers into subscribers.

These findings suggest a clear recommendation for subscription providers looking to grow their market share: **prioritize hybrid shoppers, who are most likely to see value in services that integrate online and in-store benefits.** Additionally, targeted campaigns could enhance membership rates in under performing segments.

For Walmart+, this means doubling down on strategies to capture online grocery shoppers and reinforcing the value proposition for in-store general merchandise shoppers. Walmart’s penetration is notably weakest among shoppers who purchase all their groceries online. Grocers looking to capture market share could establish a foothold in this space by delivering an exceptional online experience. For Amazon Prime, continued investment in cross-channel conveniences will be key to sustaining dominance in the hybrid shopper segment.

Subscription services are more attractive to hybrid shoppers.

Subscription service penetration for Grocery shoppers, % of respondents (n = 1,778)





Retailers offering subscription services can capitalize on technology-driven perks to enhance value, attract new subscribers, and retain existing ones. These benefits can seamlessly integrate into consumers' lives, especially for hybrid and tech-savvy shoppers, while differentiating subscription offerings in a competitive market.

Personalized Shopping Experiences & Tools

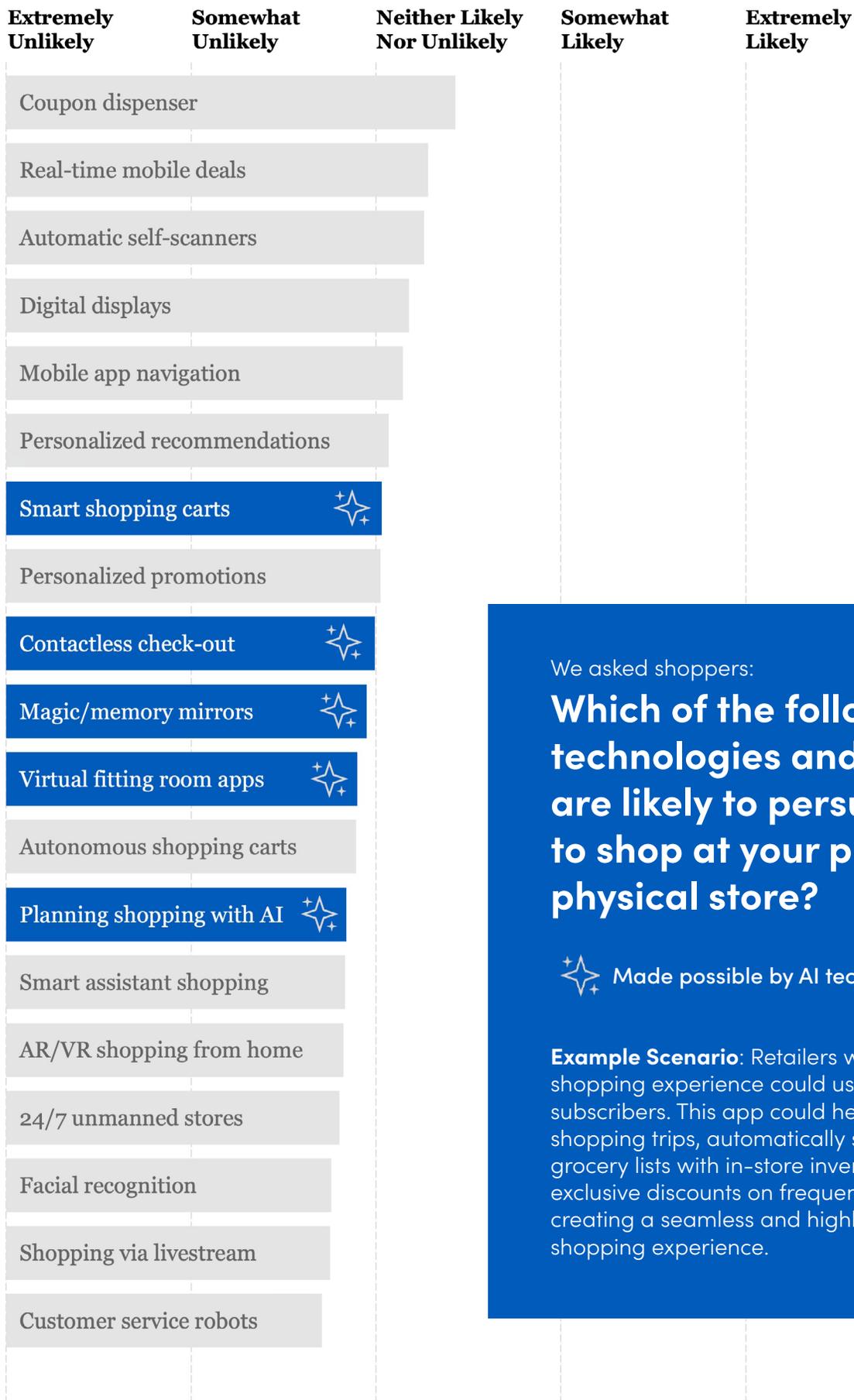
Leveraging AI and machine learning, retailers can offer hyper-personalized recommendations and tailored promotions through subscription programs. These tools can analyze shopping habits across channels to predict consumer preferences, making the subscription feel uniquely curated for each shopper. For example, providing exclusive early access to products that align with a subscriber's past purchases can enhance loyalty.

Retailers can offer premium access to proprietary tools or apps as part of subscription perks. For example, grocery retailers might develop meal-planning apps that integrate with subscription benefits, offering recipes and auto-filled shopping lists. General merchandise retailers could provide augmented reality (AR) tools to help shoppers visualize products in their homes before purchasing.

Creating unique digital ecosystems can also entice subscribers. Retailers might offer exclusive streaming content, virtual shopping assistants, or access to members-only online events. For example, Prime Video is a key driver of Amazon Prime membership, showing how digital content can significantly boost the perceived value of a subscription.

Advances in artificial intelligence (AI) in 2024 have given way to brand new ways to shop. AI has the potential to revolutionize subscription services by offering unparalleled convenience and personalization to subscribers. Smart shopping carts and contactless checkout can streamline the shopping experience, letting subscribers enjoy faster checkouts, loyalty rewards, or exclusive perks. Magic mirrors and virtual fitting rooms enhance the in-store experience by using AI to provide personalized styling advice and virtual try-ons, enabling premium features like tailored recommendations.

AI tools can also generate optimized shopping lists or trips based on past purchases, preferences, and promotions, making them invaluable for subscription members. It is an exciting time in retail; retailers can integrate these technologies into subscription services to enhance loyalty, attract new members, and create seamless, tech-forward experiences for hybrid shoppers.



We asked shoppers:

Which of the following new technologies and services are likely to persuade you to shop at your primary physical store?

 Made possible by AI technology

Example Scenario: Retailers with an AI-driven shopping experience could use it to entice subscribers. This app could help shoppers plan shopping trips, automatically sync personalized grocery lists with in-store inventory and offer exclusive discounts on frequently bought items, creating a seamless and highly personalized shopping experience.



*"We're finding tangible ways to leverage **generative AI** to improve the customer, member and associate experience."*

Doug McMillon, Walmart's CEO, said during the company's Q2 FY25 earnings call.

Subscription models allow retailers to better segment and target their customers. Shoppers who subscribe to multiple services are often looking for specialized benefits that reflect their unique needs — whether that's grocery delivery, exclusive discounts on products, or access to premium services. Retailers can leverage this data to tailor marketing campaigns and offers that speak directly to these segments, whether it's busy parents who value time-saving services or tech-savvy millennials who crave early access to new products.

Retailers face an exciting opportunity to leverage AI-powered tools to create differentiated shopping experiences that not only attract new subscribers but also deepen loyalty among existing ones.

Amazon, with its robust Prime membership, can take personalization a step further by incorporating AI-driven features like memory mirrors and virtual fitting rooms, offering subscribers an exclusive, frictionless way to shop for clothes.

For groceries, Amazon Fresh could leverage AI tools to help Prime members create personalized shopping lists based on previous purchases and store inventory, improving efficiency and satisfaction.

Other retailers with subscription services, such as Kroger, Target, or Best Buy, can also embrace these new technology offerings to capture market share from larger players like Amazon and Walmart. Our survey results show that subscribers are more likely to use these technologies than non-subscribers, likely because these innovations are designed to enhance convenience, speed, and personalization — attributes that align closely with the expectations of subscribers who have already committed to a premium service.

By offering cutting-edge technology as part of their subscription packages, retailers can further solidify their value proposition and drive growth in an increasingly competitive market.

Walmart's Unique Subscriber Base

Walmart+ members are more likely than both Amazon Prime members and non-subscribers to adopt AI-powered technology benefits if offered during the shopping experience. In fact, based on our survey results, they are the only subscriber base that reacted favorably overall toward AI offerings. Amazon Prime members and non-subscribers, in contrast were only neutral or somewhat unfavorable, respectively.

AI-powered Subscriber Growth

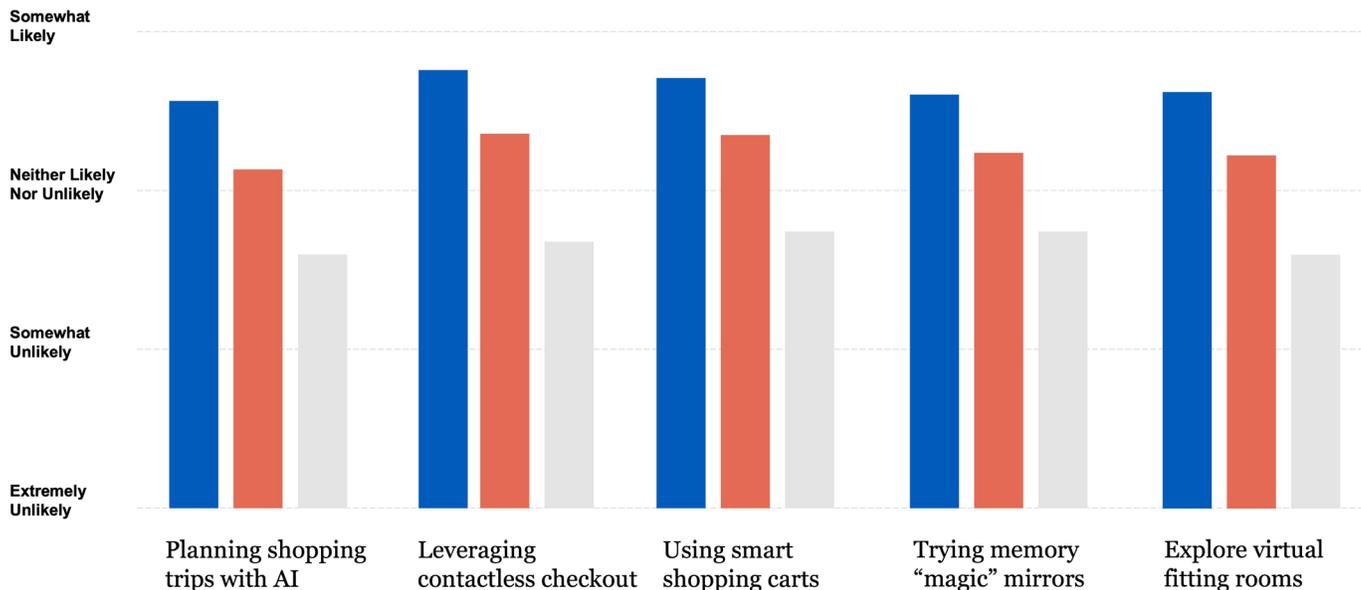
By integrating these technologies into their subscription model, Walmart can offer members exclusive access to faster, more convenient shopping experiences, incentivizing them to engage with the platform more frequently. This convenience, coupled with tailored deals and promotions, makes the subscription especially valuable to tech-savvy shoppers.

Walmart already offers benefits to Walmart+ members on which AI technology can build. The company rolled out mobile scan & go technology in stores, allowing customers to scan items with their phones and skip the traditional checkout process. Walmart+ members can use this benefit for a faster, more efficient shopping experience, especially as the retailer moves towards further automation in its physical stores.

We expect new AI-powered features to be particularly appealing to Walmart+ subscribers, who are more likely to use new tech offerings due to the value they place on convenience and personalized shopping. **By integrating AI features into its subscription offerings, Walmart can differentiate its services and deepen customer loyalty, particularly among tech-savvy, hybrid shoppers who expect a seamless blend of online and in-store experiences.**

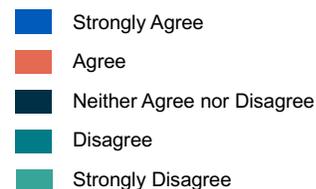
Subscribers, specifically Walmart+ subscribers, are more likely to use or be influenced by AI-powered tech offerings.

Likelihood to be influenced by AI technology, evaluated on a scale of 1 (Extremely Unlikely) to 5 (Extremely Likely)



1. Use of Artificial Intelligence in planning shopping trips based on product availability, store locations, store distance, or best price
2. Mobile contact less check-out (like Amazon Just Walk Out)
3. In-store smart shopping carts that offer real-time information on products you wish to purchase and suggest alternative products
4. In-store memory or "magic" mirrors to try out different styles and colors
5. Virtual fitting software or apps available when shopping online

Parents, especially those with young children, are more likely to use AI to create a shopping list.



I use Artificial Intelligence tools to create my shopping lists, % of respondents (n = 1,778)

Shoppers without children



Shoppers with children



Shoppers with more than one child under the age of 5



Parents Save Time with AI Shopping Tools

Subscription services like Amazon Prime and Walmart+ help save shoppers time and money through convenience and discounts. There's no better segment than busy parents to make use of subscription offerings. As such, AI-powered tools designed to help parents plan and execute their shopping trips should be a key focus. Parents of young children, in particular, are more likely to appreciate time-saving solutions that help them organize grocery lists, find the best deals and ensure they have everything they need for their families.

The survey data reveals that parents, especially those with young children, are far more likely to *already* use AI to build shopping lists compared to shoppers without children. While just 8% of shoppers without children use AI for this purpose, 40% of parents and 55% of parents with young children already use AI to create their lists. This highlights the time and convenience pressures parents face, particularly those with young children, who value tools that can simplify shopping and save them time.

For retailers, this presents an opportunity to integrate AI tools with existing subscription services to better meet the needs of parents. **AI-driven features such as automated shopping lists, personalized meal planning, and reminders for recurring household items would be highly appealing to busy families.**

Retailers can leverage AI to make shopping more efficient, offering parents the ability to quickly generate shopping lists based on past purchases or preferences, streamlining the process and reducing the mental load of shopping.

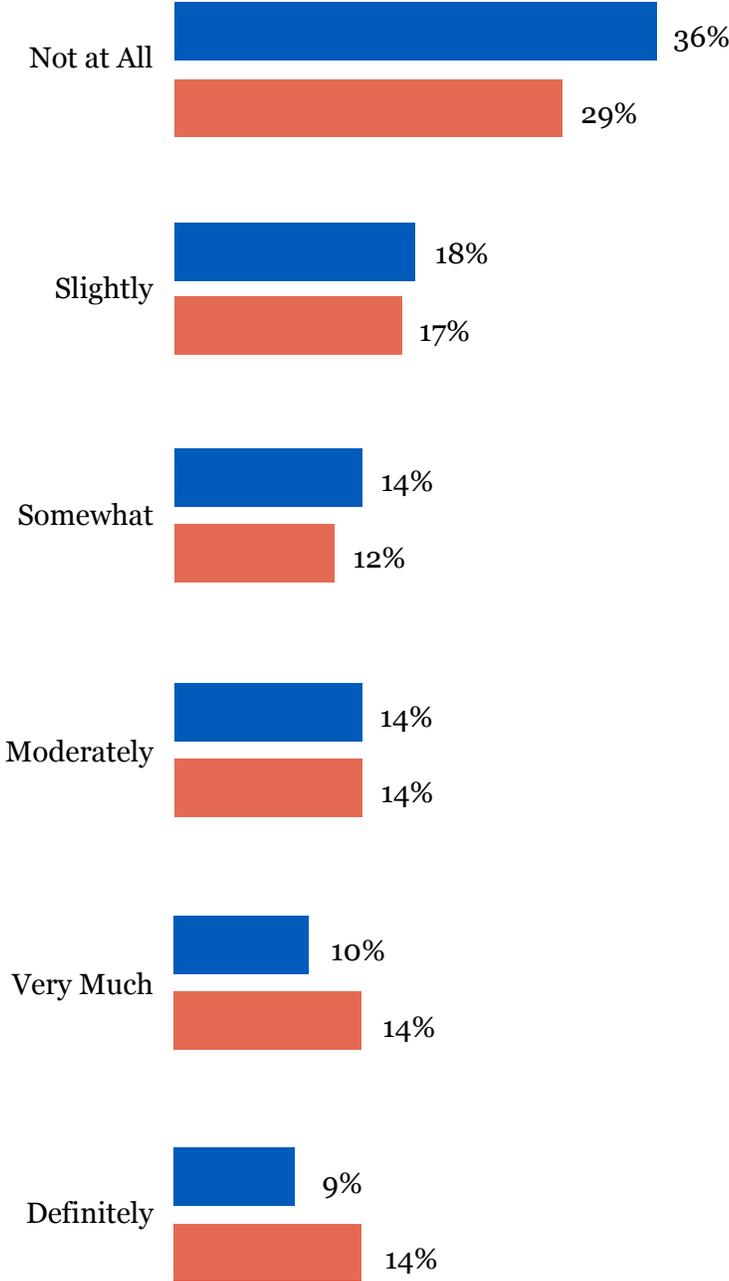
Subscription services like Walmart+ or Amazon Prime can further differentiate themselves by focusing on family-oriented AI features. For example, AI could help create customized shopping lists for different family members, suggest relevant products for children, or offer discounts on bulk or family-sized items. Similarly, voice-controlled features or integrations with smart home devices like Alexa could also be key selling points for busy parents who prefer hands-free shopping assistance.

Retailers can use this insight to drive targeted marketing campaigns, emphasizing the convenience of AI-powered tools in subscription services. Highlighting features like shopping list automation and personalized recommendations for family needs will resonate with parents. By positioning these tools as essential for saving time and reducing the stress of shopping, retailers can attract and retain this high-value demographic. Centralizing helpful tools in a common location, such as within the retailer's app, creates brand loyalty and simplifies the shopping experience.

Shoppers are split when considering the impact of AI

Do(es) __ impact your decision to shop online or in a physical store? % of respondents (n = 1,778)

- The increasing use of AI
- Privacy issues associated with the use of AI



Key Takeaways



Most shoppers pay for multiple subscriptions (e.g., Amazon Prime, Walmart+)



Amazon Prime continues to dominate overall subscription market share



Subscription services are most attractive to hybrid shoppers



Subscribers, especially Walmart+ subscribers, are more likely to use AI offerings



55% of parents of young children use AI to create their shopping lists

Subscribing to the Hype

Most shoppers now pay for multiple subscriptions, with Amazon Prime continuing to dominate the overall market share. These subscription services are particularly attractive to hybrid shoppers, who split their time between online and in-store shopping and value the seamless, cross-channel experience that subscriptions provide, making them a key target for retailers looking to expand their subscriber base.

Our results show that **retailers should enhance their subscription offerings with AI-driven tools to attract and retain customers**. AI isn't new to all shoppers; 55% of parents with young children already use AI to build their shopping lists. This result suggests that AI-powered features would attract any busy, convenience-minded potential subscriber.

By integrating AI-driven tools such as personalized shopping lists, contactless checkouts, and virtual try-on technology, retailers can not only attract more subscribers but also deepen engagement with existing members. Focusing on convenience and cross-channel capabilities positions subscription services as essential for hybrid shoppers and families, driving sustained growth in this competitive landscape.

"Sometimes, people ask us, 'what's your next pillar? You have Marketplace, Prime, and AWS, what's next?'

*This, of course, is a thought-provoking question...If you asked me today, I'd lead with Generative AI ('GenAI'). **Generative AI is going to change every customer experience.**"*

Andy Jassy, Amazon's CEO, wrote in his 2023 Letter to Shareholders and in an interview with CNBC in 2023.



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Dinesh's research and teaching interests are in the areas of retailing, pricing, branding, marketing analytics, store performance measurement, e-commerce and shopper marketing. He has advised or consulted for various companies in these areas, and he is a recognized thought leader in retailing. He was ranked third in the world in the Retailing Journal Influence Index from 2009-15.

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The Center for Marketing Analysis advances the disciplinary core of marketing science through research and collaborates with companies to help develop marketing solutions. The center also designs innovative training programs to prepare students for the era of big data analytics and apply the latest AI and machine learning methods to various marketing challenges.



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