Numerator

Evaluating the Health of a Static Consumer Panel

About the Author

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1. Introduction

A new era requires new evaluation. The Numerator Total Commerce Panel is fundamentally different from any other consumer insights panel – because it is conceived of and constructed differently. As such, the way one evaluates consumer panel health and uses consumer panels to drive growth is also different. This document provides guidance into evaluating panels in this new era, while also reviewing and mitigating the limitations of all panels.

We begin with a review of key questions to ask (figure 1) when assessing panels followed by more in-depth. In general, a panel represents a sample of households, so it is important to evaluate and judge how that sample is being drawn.

Figure 1

Key Questions to Ask

QUESTION	OVERVIEW	
Is the panel measuring what you want to measure?	Natural consumer behavior	Unbiased, no promotional influence
	Right people	Demographics, Psychographics
	Right places	Outlets, Channels, Retailers
	Right products	Categories, Brands
	Right details	Omni characteristics
Does the design of the panel deliver the right participation and compliance rates?	The more passive the better	Less burden on panelist to participate = higher rate of participation and compliance
	Single sourced collection	If multiple data sources used, assumptions are made which sacrifice true consumer understanding across channels and over time, causing misleading insights about shifting behavior, loyalty and more
How is the panel design set up to help minimize/mitigate the error found in panel data?	All data sources are subject to error, however, the right sample design can help mitigate this error	
How is the panel data scaled to protect natural consumer behavior?	Goal is to minimize any weighting needed and to benchmark to the complete and relevant universe	

2. Making Sure a Panel is Measuring What You Want to Measure

A Reflection of Natural Consumer Behavior

The purpose of a consumer panel is to reflect natural consumer behavior to help you make better decisions to grow your business. If that behavior has been altered by promotions and offers, then you degrade the very insights that you sought in the first place. A keystone of a quality panel is ensuring that the panelists are not biased in any way.

This means, for example, not sending targeted promotional offers to panelists to incentivize them to purchase specific brands or to shop in specific retailers. It also means not limiting incentives to a specific list of brands or certain categories within a specific set of retailers. To collect information reflective of natural consumer behavior, panelist incentives need to be designed in a way that leads to active panelist participation across all channels and retailers and across all formats (digital, paper, ship to home, instore pick up, etc.)

The Right People: Evaluating "Who" is Being Measured

Since a panel is used to understand the behavior of a population, such as Total U.S. households, it is essential that the composition of the sample being used aligns with that population and that behavior. In the case of a national consumer panel, one wants to make sure that the sample being drawn represents all types of people (all types of shoppers and consumers). Typically, this evaluation first involves examining the demographic and geographic composition of the panel to make sure that all key demographic groups are represented and that the sample is geographically dispersed.

Consumer panels involve recruiting a representative sample of households to collect purchasing, demographic, and other data (such as attitudinal data). Generally, there are certain demographic groups (figure 2) that are more difficult to recruit and maintain (that is, keep active in the panel on an ongoing basis to provide a longitudinal read of purchasing behavior).

> **Look for panels that most organically mirror your target sample.**

Figure 2

Difficult-to-Recruit Demographics

Age	Young, more mobile households like Millennials
Ethnicity	Ethnic households
Income	Very low-income and very high-income households
Activity	Very busy households like those with "new moms" or "new parents"

The collection methodology used in the panel design and the amount of burden placed on the panelists to participate greatly impacts the ability to attract different demographic groups, especially the harder-to-recruit groups.

Because of this, Numerator's Total Commerce Panel is (and has always been) designed as an unbiased, consumer-centric, single-source panel focused on using the right technology to remove burden from our panelists. Specifically, Numerator's Total Commerce Panel leverages a diversified data collection methodology to collect paper and digital receipts from the same households. This means that we do not need to stitch together disparate datasets to try to get to a holistic view of consumer behavior, we designed our panel to collect the data that way. And we do not bias our panel by sending them targeted promotions (our business model is not built on influencing or changing consumer behavior, it's built to reflect natural consumer behavior).

Numerator's Total Commerce design leads to a "raw" (unweighted or unprojected) panel composition that is best-in-class for representing the Total U.S. population. The graphic below (figure 3) depicts our "raw" (unweighted and unprojected) panel composition across key demographic characteristics. This shows the starting point of the panel design. The closer the "raw" panel is to the Total U.S. distribution, the less "work" the weighting and projection systems have to do.

Figure 3

Demographic Composition of Numerator's Total Commerce Panel
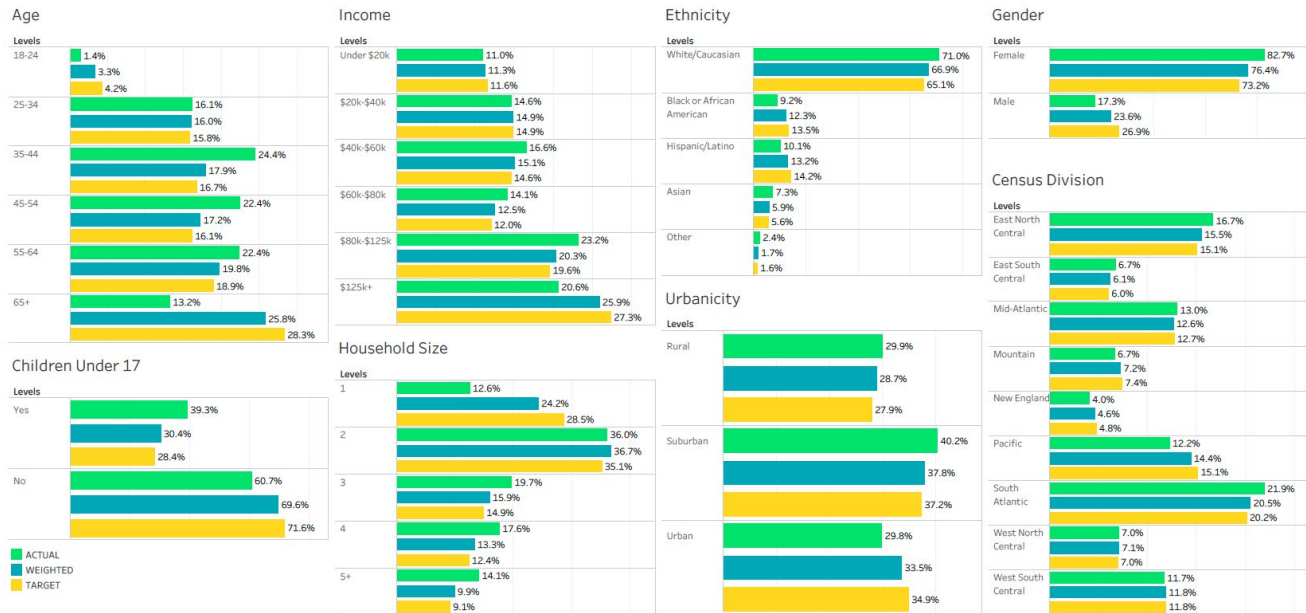
The Right Places: Evaluating the "Where" of Consumer Shopping Behavior

In addition to the "who" a panel is measuring, a consumer panel must also measure the right "where" of purchasing behavior. In today's world, this means designing a panel that incorporates shopping and purchasing from **all outlets from the same shopper,** especially ecommerce/online, specialty and small format stores, as well as new forms of distribution channels (i.e., click & collect, Instacart, home delivery, etc.). Consumers are more reliant than ever on a large number of channels, fulfillment methods and delivery services in order to fulfill their needs.

The Numerator Total Commerce Panel has been designed for this modern channel coverage (again due to our diverse digital data collection design). This is another area in which Numerator's Total Commerce Panel leapfrogs other panel designs. Where other designs try to stitch together disparate data sources or leverage different panels for various questions, our panel uses unbiased, single-source, consumer-centric, first-party data that reflects natural consumer behavior. Cherry-picking data sources does not lead to true consumer understanding.

The Right Products: Evaluating the "What" of Consumer Purchasing Behavior

It is also important to ensure that a consumer panel is measuring the right "what" of purchasing behavior (in terms of category and brand coverage). Because Numerator's Total Commerce Panel uses a diverse digital collection methodology, it is easy for panelists to participate and send us purchases across all types of categories (figure 4). Legacy scan panel collection methodology (like NCP) has several deficiencies when it comes to these types of purchases (these will be discussed further in the next section).

Additionally, while some providers claim "you simply cannot get a complete omnichannel read of below-the-brand attributes solely from a standalone receipt panel" and recommend you cherry pick data from scan panels and receipt panels, Numerator offers one source for both. We collect item level and product characteristic data across all channels because we know it's critically important. And we know that because the channels driving growth for 89 of the top 100 Major Categories are within the untracked channels of our competitors. If you don't have item-level data for the channels driving your growth, you're missing the most important item-level information.

Figure 4

Difficult to Capture Purchases

CATEGORY	EXAMPLES
Sensitive Purchases	Adult incontinence, sexual wellness, pregnancy tests
On-the-go Products	Single-serve carbonated beverages or energy drinks
Larger-sized Products	Dog food, diapers

3. Designing a Panel to Maximize Participation and Cooperation Rates

In addition to helping us recruit and maintain a better represented panel (from a demographic composition standpoint), the Numerator Total Commerce Panel's modern design helps improve participation and cooperation rates from all panelists. Our panel is architected to evolve with the consumer and we have seen this in action through the changes in trip capture. It is clearly reflected in our evolution beyond receipt capture to digital data collection.

Through our Receipt Hog app, panelists can snap a quick picture of a receipt to send to us (takes only seconds), or connect their Amazon and other online purchases automatically, or enable us to connect to their retailer loyalty program accounts. As mentioned previously, digital receipts are growing significantly (now representing over 40% of the receipts we collect), so enabling digital collection methodologies has been a natural step in our evolution beyond paper receipt collection.

Most of the National Consumer Panel (NCP) participants are still using a hand-held scanner technology (developed in the 90's) or mobile scanner apps that require scanning every item they purchase individually and answering other prompts (like price paid) for each of those items. Though NCP has started to move to phone apps to capture the purchasing data, the data collection process of having to scan each and every item (as well as other manual entries such as store, price paid, presence of deals, use of frequent shopper card, etc.) still remain.

Aside from putting a tremendous burden on their panelists through this data collection process, the NCP design also leads to other issues. If you think about the NCP data collection process, and put yourself into the "shoes" of their panelists these issues are not surprising and are detailed in figure 5.

Figure 5

Items with very low compliance using scanners

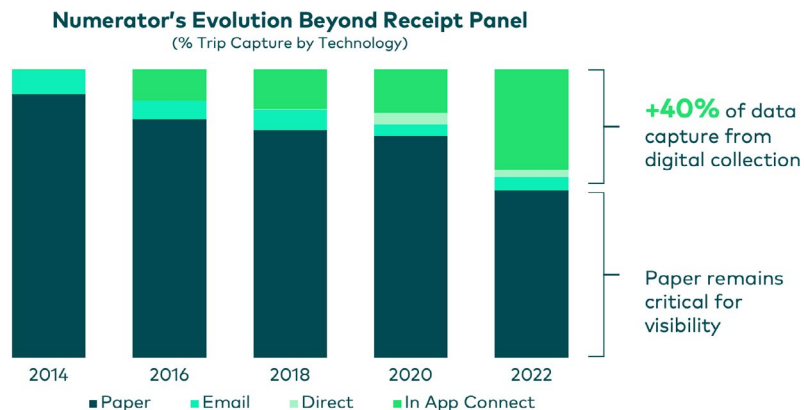| TYPE	DESCRIPTION
Online Purchase	It is very difficult for NCP to get any Amazon or other online purchases from their panel, as their panelists have to remember to scan the items they buy after they are shipped to them — compliance is extremely low
Items Not Brought Into Kitchen	Many items aren't brought into the kitchen (e.g., large dog food bags taken immediately to garage or large diaper packs taken directly to nursery leading to very low incidence of being recoded)
Frozen Foods	Frozen items (e.g., ice cream) are frequently put into the freezer immediately upon getting home to prevent melting, so panelists forget (or decide not) to scan them
Sensitive Items	Sensitive items (e.g., sexual wellness, pregnancy/diagnostic kits, adult incontinence, etc.) are underreported as panelists choose not to report them
On-the-go Items	On-the-go items (e.g., convenience store purchases) that never make it home are not reported (NCP suggests to their panelists to bring wrappers home to scan later (remember, they have to have the physical product to scan the UPC, not just the receipt), but few panelists remember or choose to do so)
Items Without UPC Codes	Items not UPC coded (e.g., fresh produce, meat, seafood and deli cheeses) cannot be scanned; NCP uses a supplementary coding process for these items (sometimes referred to as "magnet panel" as the code book used to be printed on a refrigerator magnet; with their move to an app-based collection methodology, this process has changed and has moved to the app, but is still a secondary and tedious process leading to low compliance)
Items with Internal Store UPCs	Items must have a true UPC code, not just a bar code (for example, though Bath & Body Works items are bar coded, these are internal B&BW codes, not true UPC codes, so NPC cannot use them leading to data outages when it comes to Specialty outlets)

Modern Tools Capture Modern Consumer Behavior

Our competitors from an omnipanel standpoint have started to use receipt capture technology for paper receipts (after ten years of trying to convince the industry that receipt capture technology was not a valid collection methodology, they are now conceding the point). However, their designs are more in line with what we had in place 5 years ago and are focused primarily on paper receipt capture. We've invested heavily over the past several years in innovation in digital data collection to keep pace with the changing consumer to ensure we have a holistic view of consumer behavior (and, as mentioned, over 40% of our receipts are now digital receipts).

To remove burden from our panelists, we know the importance of having a modern panel that evolves with the consumer. We have always leveraged receipt capture using the smartphone technology people already have at their fingertips and automating collection of Amazon purchase data and other online retail sales. However, it is abundantly clear that paper-receipt-capture-only panels are insufficient, as they can no longer collect purchase and shopping behavior that reflects today's consumers. As the marketplace continues to evolve, a diverse and digital data collection methodology is becoming more and more important. Consumers are more reliant than ever on a large number of channels, fulfillment methods and delivery services in order to fulfill their needs, and a healthy panel design needs to have the flexibility and sophistication to collect all this information in a way that makes it easy and seamless for panelists to participate.

In fact, we are now seeing over 40% of our trip data comes from digital collection (including sources like email, loyalty accounts, apps, third party delivery, etc.) (figure 6).

Figure 6

Growth of importance

of digital collection

Numerator's Evolution Beyond Receipt Panel
(% Trip Capture by Technology)

+40% of data capture from digital collection

Paper remains critical for visibility

2014 2016 2018 2020 2022

■ Paper ■ Email ■ Direct ■ In App Connect

Our modern approach to our Total Commerce Panel design sets us apart from legacy panels (such as the National Consumer Panel (NCP) that uses a labor-intensive scan each UPC approach) or other omnipanels that try to cob together disparate datasets (like paper-receipt data from one set of households with the labor-intensive data from a set of NCP panelists).

4. Mitigating Error In Panel Data

To mitigate the errors found in a data source (and all data sources have errors, not just panel data), you have to first understand what causes them. There are two main types of errors that impact panel data: Sampling Error and Coverage Error. The discussion below provides a basic understanding of both of these error types as well as how they can be mitigated.

Sampling Error

This type of error is driven by the number of respondents (in this case panelists) that are in the sample (e.g., increasing the sample size will decrease the sampling error).

Although this is actually the easiest error to quantify (there are proven statistical formulas that can be applied), it is actually the type of error that impacts panel data accuracy the least. However, clients often point to this type of error or want to know what the "error ranges" are around the data based on the sampling error (likely because it can be easily quantified and understood).

To mitigate this type of error, you grow the size of the panel. As mentioned, there is a direct and known statistical correlation between increasing the size of the panel and decreasing the error. Because Numerator's Total Commerce Panel has a significantly larger static panel compared to the National Consumer Panel (NCP), we have reduced the sampling error compared to their panel data. And this gap widened as we expanded our Total Commerce Panel from 100K panelists to 150K in 2023, including 4 years of back data with our expansion.

There is obviously a trade off between how large you grow the panel (due to the cost of recruiting and maintaining the panel) and the reduction of the sampling error. To eliminate sampling error altogether, you would need to recruit every U.S. household (in other words, move to a census instead of a sample) which is

unrealistic. And, since sampling error actually is the form of error that impacts panel data accuracy the least, we tend to take other things into consideration when determining how large to grow the panel (for example, it is more likely that we would decide to grow the panel to get higher buyer counts on smaller brands, more niche segments, etc.) vs to reduce sampling error.

Coverage Error

By Coverage Error we are talking about factors that impact the ability to ultimately project the panel data up to the total universe (e.g., Total U.S.) level (and these are some of the factors that then lead to panel data being different from POS data).

From a more statistical standpoint, this type of error is technically caused by Measurement Error and Bias, but, for our discussion, we'll simplify the explanation and put them in the overall bucket of "coverage" error.

There are a few different things that create this type of error:

Not all panelists fully cooperate (report everything that they buy)

Example: In a three-member household, the male and female head may do a great job of scanning items or sending in their receipts, but when the teenager stops at a Convenience store, those items are not scanned or the receipts are not captured.

Numerator Approach:

To mitigate the impact of this type of error, Numerator uses innovative collection approaches (smartphone receipt capture, automated collection of Amazon purchase data and other online retail sales, and direct connections to our panelists' retailer loyalty accounts) to make it much easier for panelists to participate vs. NCP's "painstakingly scan every item approach" or competitive omnichannel offerings that are focused on paper receipts (and missing digital receipts) -- hence we reduce this type of error by taking the burden off our panelists to participate.

Additional Considerations:

Item attribution errors can also impact our ability to record everything the panelists purchase which is why we make continuous improvements to Numerator's system to help reduce it.

Every type of panelist doesn't participate equally (in terms of demographics, geographics, etc.)

Example: Households with new moms may report less than other types of households given their hectic lives.

Numerator Approach:

Numerator's panel design and approach of collecting information from our panelists attracts even harder-to-recruit demographics which leads to a more balanced panel vs what NCP can deliver.

Additional Considerations:

Keep in mind, too, that although we recruit and maintain our panel based on rigorous demographic characteristics (household income, Ethnicity, etc.), there are other characteristics that could be influencing purchase behavior (e.g., health conscious consumers, diabetic households, locally-sourced preferences, etc.) — it would be impossible to take all of these into account when recruiting a panel.

Panelists tend to be more deal savvy, leading to spikes in sales during the promotional period which can lead to trend disruption. (By their nature, consumers who are attracted to being on a panel are more attracted to deals and tend to be more "market savvy" in taking advantage of deals.)

Numerator Approach:

We actually capitalize on this by leveraging unique reward applications to attract them (like Receipt Hog) that provide non-biasing rewards for their participation. Deal bias is evident in all panels (including NCP) and is typically understood and acknowledged by experienced panel data users. It is a normal characteristic of panels.

However, we do NOT bias our panelists' behavior by sending them targeted promotional offers for specific categories and brands, etc. (like Fetch and iBotta). Our business model is not built on influencing or changing consumer behavior, it's built to reflect natural consumer behavior.

As an FYI, keep in mind that Coverage Error can impact Retail POS data too (as mentioned, all data sources are subject to errors). For example:

- Nielsen or IRI POS data can exclude key retailers like Trader Joe's, Costco, Petsmart (depending on who they can get to cooperate), and certainly Amazon and Online stores.

- Within a channel that they claim to cover, like Convenience, they still may be missing key players and/or stores in their POS solution.

- Even channels where they are supposedly collecting census data (data from all stores for a retailer), some stores will not send the POS data for a certain week (or weeks) due to a variety of situations (e.g., power outages, severe weather, system problems, etc.) — for these weeks, the POS data for those store weeks are modeled based on previous weeks and/or similar stores that did report data (but it is not the actual POS data for that store for that week).

5. Scaling the Data In a Way that Reflects Natural Consumer Behavior

There are two basic steps we use to create the most representative panel data: Panelist Selection and Data Calibration. We discussed the panelist selection step in the second section "Making Sure the Panel is Measuring What You Want." Within the calibration step, factors are created to demographically weight the static panelists to align to census, to project the data up to reflect total country households and to scale the sales projections to reflect benchmark data sources. The last step of calibration is allocating the projected sales across HH Penetration and Buy Rate. (figure 7)
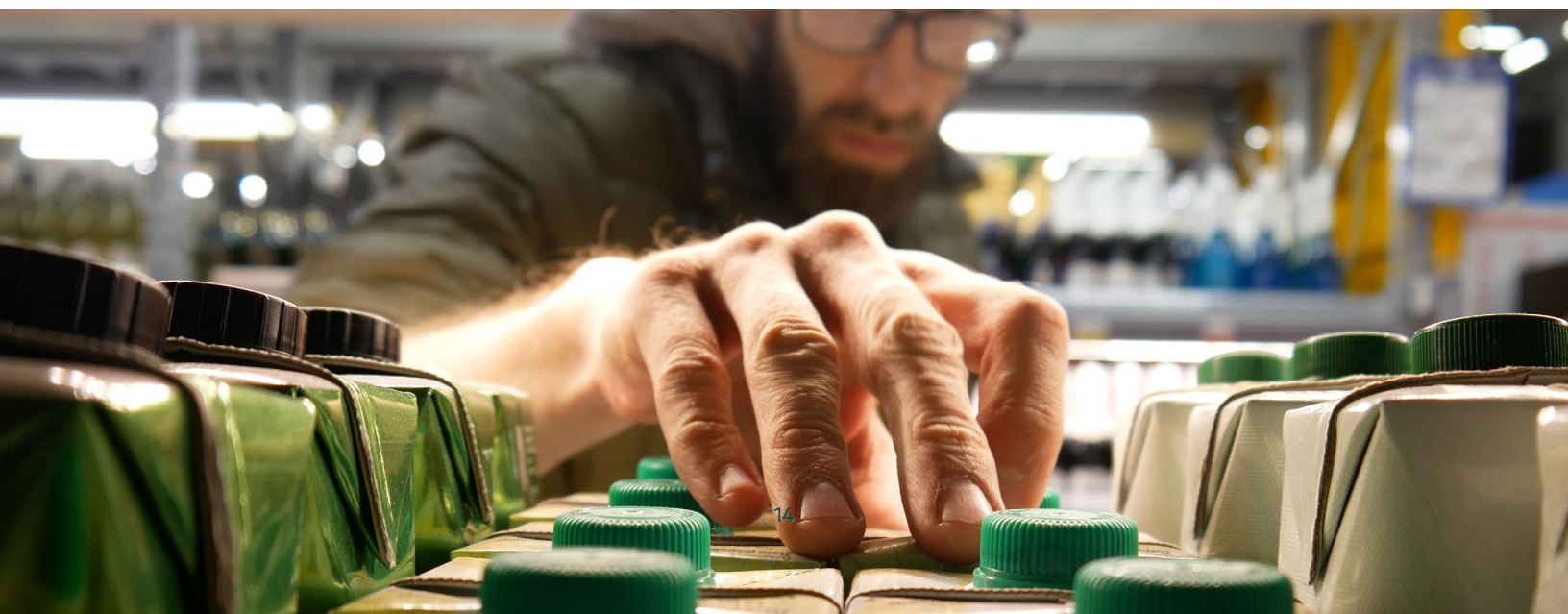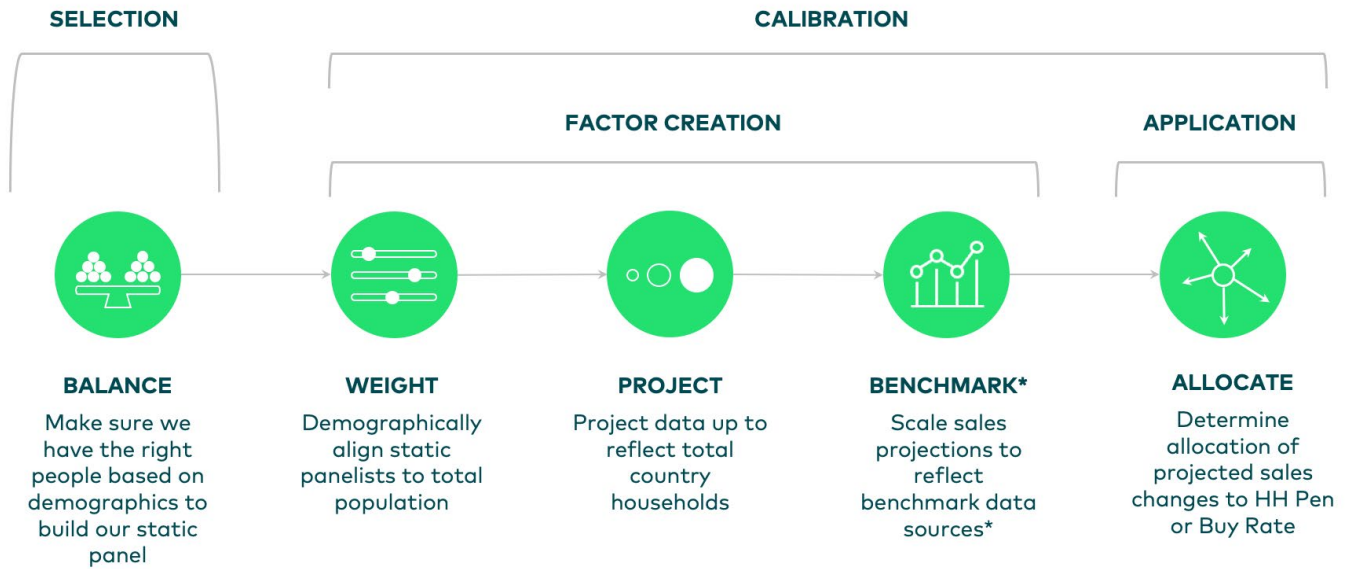
Figure 7

Panelist selection and data calibration

SELECTION		CALIBRATION		
		FACTOR CREATION		APPLICATION
BALANCE	**WEIGHT**	**PROJECT**	**BENCHMARK***	**ALLOCATE**
Make sure we have the right people based on demographics to build our static panel	Demographically align static panelists to total population	Project data up to reflect total country households	Scale sales projections to reflect benchmark data sources*	Determine allocation of projected sales changes to HH Pen or Buy Rate

*Benchmark Calibration is applied to total panel metrics where we have an applicable total benchmark.
 Calibration may not be applied on filtered subsets / cross-sections of the panel, or on stores/products for which we do not have benchmarl

Data Calibration

Once our static panel is selected, there are two key steps to how our data is calibrated for the final panel analyses (reports run in our Insights platform): factor creation and application.

Factor creation: this step leverages multiple data sources to generate factors used to scale and weight total sales data

Weight: It is not possible to correct fully for the demographic differences between the "raw" panel and the Total U.S. distribution just by using balancing (it gets us most of the way there, but not all the way – no panel would be able to do this due to the different cooperation rates across different types of demographics). So, once we have our balanced "raw" panel, we apply demographic weights to the panelists to get us the rest of the way there (to more closely mirror the actual Total U.S. distribution).

Project: Next we apply a projection factor to each household so that the data is projected up to Total U.S. levels. This is actually a very straightforward factor. For example, if we have 150K households in our static panel and if there are 130 million households in the Total U.S., then each panel household would represent roughly 867 projected households — in other words, their data would be projected up (multiplied by) a factor of about 867.

Benchmark: As a final refinement, we implement proprietary methodology that leverages multiple benchmark data sources to scale the data to be more in-line or at scale with these benchmarks.

Application: Because our factor creation projects data to be more in-line or at scale with benchmark data sources, we then need to allocate the projected sales changes to key consumer metrics (penetration and buy rate).

Keep in mind that our goal is always to minimize the degree of adjustment done at any step in the process. We have two key advantages in this regard:

1.   The massive size of our panel allows us to select panelists so we more organically align to census.
2.   The massive scale of the trips we collect minimizes the amount of calibration required.

Other panels, such as the National Consumer Panel (NCP) also use demographic weighting and projection schemas, as this is a standard industry process (it is based on the premise that similar demographic/geographic households purchase similarly). Their process may be somewhat different from ours, but has the same intent of getting to demographically weighted and projected data. From there, Nielsen and IRI then employ different techniques to adjust the NCP data to align to Retailer POS data – since Retailer POS data only covers part of the market (well under half of the marketplace), this is a weakness in their approach. Our methodology enables us to ingest benchmark data from multiple sources to ensure we are calibrating across the shopping universe (including online, gas & convenience, specialty channels, etc.).

It is important to understand where you are starting from (i.e., the "raw" distribution). That "raw" distribution should be a critical consideration in evaluating the health of a panel. As your "raw" distribution deviates from

the actual distribution that you are trying to get to, higher weights are put on the panelists in the demographic groups that you do have in your sample to represent the purchasing behavior of all people in that group. Said another way, if you only have a few Hispanic households in your sample, you are making a leap of faith that those that you have managed to capture truly represent the purchasing behavior of all Hispanic households.

6. Key Evaluation Metrics

In addition to the questions you should be asking about the panel you are evaluating, there are also some metrics that can be very helpful for your assessment (figure 8).

Figure 8

Key metrics to help your evaluation of panel health

Raw (unadjusted) buyers and trips	Alignment of raw panelist distribution to total U.S.	Participation (static) rates

"Raw" (unweighted or unprojected) buyers and trips

By far the most important factors to consider when evaluating the health of a panel are the number of "raw" (unweighted or unprojected) buyers and "raw" trips supporting the observations of the consumer purchase behavior you are trying to understand. By "raw" we mean that no projections have been applied to the data. (This information can be found in Insights via the Sample Size metric.)

Since buying behavior has become more fragmented, it is important to make sure that the panel being used collects sufficient information for purchases across the Total Commerce shopping environment. A very simple exercise of comparing the "raw" (unweighted or unprojected) buyers and trips for the category and key brands by channel, outlet and key retailers for the panel (or panels) being evaluated is the best starting point and a very good recommendation to make to all clients (figure 9). (Numerator will always win over NCP in this evaluation due to our robust panel size and method of data collection.)

Figure 9

Suggested format for evaluating "Raw" buyers and "Raw" trips

CATEGORY	BRAND	NUMERATOR PANEL			NIELSEN		
		RAW HHS	RAW TRIPS	RAW TRIPS/HH	RAW HHS	RAW TRIPS	RAW TRIPS/HH
Taped Diapers		**43,092**	**177,341**	**4.1**			
	Huggies	17,708	63,622	3.6			
Training Pants		**15,474**	**52,764**	**3.4**			
	Huggies	9,504	29,213	3.1			

Alignment of raw panelist distribution to total U.S.

As previously covered, it is important to make sure that the panel represents the population that is being sampled, including harder-to-reach demographics like Gen Z, Hispanic, and Millennial households, etc. For this evaluation, examine "raw" (unprojected) buyers and trips for these key demographic segments.

Participation (Static) Rates

Every panel has a certain amount of attrition or "churn" that occurs. Some panelists will leave the panel and need to be replaced by new panelists. And, as mentioned in the previous section, not all panelists will cooperate or participate fully (for example, they may skip sending data for a certain amount of time). In conducting longitudinal analyses using panel data, the impact of these factors needs to be removed from the data to ensure that consumer behavior is being evaluated correctly.

As such, before using or processing the data for a panel data analysis, it is important to make sure that all of the panelists included in that analysis have been consistently reporting over the entire analysis time period. For example, if a panelist is only providing data for part of the year and then drops off the panel (or stops

participating and sharing their data), their full purchasing behavior is not captured in the analysis (this might lead to incorrect assumptions or conclusions -- for example, that this household left the category when, in fact, they just didn't provide their purchasing information in the second half of the year).

For this reason, when panel data is processed, it is processed using what is called a "static." This just means that the data is being processed using a static (stable) group of consistently reporting households. The "static" requirement is typically set up based on the number of months the panelist is actively reporting. For example, NCP typically uses a 10 out of 12 (10/12) static which means that, to be included in the dataset, a panelist had to report at least one purchase in ten out of twelve months of an annual period (in other words, an NCP panelist can miss reporting in 20% of the time period — two full months — and still be included in analyses).

Numerator uses a more strict and realistic reporting static; to be included in an annual analysis, a Numerator panelist had to report a minimum of two trips in every month (12 out of 12 months) in that year. **The "tighter" (more strict) the static, the harder it is for a panelist to qualify, but it also ensures higher quality data (as we get a more accurate picture of everything they bought).**

The primary purpose of applying a static requirement to panel data is to ensure consistent reporting and high compliance from panelists over the analysis period as that produces higher quality data and insights. As we continue to adapt and evolve to ensure our panel data reflects the modern consumer, we believe that it is critical to impose the right requirements to reflect current consumer behavior and make sure our panelists are actively participating and engaging with us. As such, we have raised the bar even further for panelists to qualify for our Total Commerce static panel.

Quality controls have been put into place for the Total Commerce Panel to prioritize users who demonstrate the following, more representative shopping behaviors:

1. **Consistency:** A minimum of at least 2 *qualified transactions* per month of the static (This replaces the previous requirement of only one trip reported per month)

2. **Diversity:** Q*ualified transactions* from a minimum of 5 distinct *qualified retailers* during the static period (A qualified retailer is any retailer that has an FMCG banner or is a key .com retailer. We now consider both online and paper receipts from qualified retailers. Critically, we do not consider every banner under a qualified retailer. A qualified transaction must come from a banner of a qualified retailer who has a parent channel of FMCG or ecommerce.)

3. **Representativeness:** We compare the total spend of each household to the average total spend of households of the same size and in the same income bracket. If this household has a total spend which is significantly higher, or significantly lower than the average, we consider it an outlier and exclude it from the static

Despite the fact that we use a tighter static than our competitors (like NCP) and have now imposed even stricter standards for our static requirements, we still have significantly more panelists in our Static Panel (150K for Numerator's Total Commerce Panel vs 65K for NCP based on an annual static).

In some publications, you may see panel suppliers advertising a certain size panel (such as NCP advertising a 100K U.S. panel). However, you have to be careful in assessing whether that advertised size is their total panel design pre-static or if it truly reflects their static requirements. For example, NCP advertises a 100K U.S. panel, but that is NCP's total panel design (meaning all the panelists they have that are "active" in a year.) This is analogous to Numerator's All Shopper Panel of 500K households (Yes, our panel is really that much larger!)

When a static is applied, NCP's panel size drops to 65K U.S. households; and that again is using an easier (looser) static requirement that a panelist has to report in only 10 out of 12 months during an annual period. Numerator maintains a 150K static panel for our Total Commerce Panel that meets all the strict requirements mentioned above. Even as we expand the length of time period for the static, we continue to have a more robust panel, for example, our Static Panel size over a 3-year period is still significantly larger than NCP can manage to deliver over only a one year period (see Figure 10 below)

Figure 10

Numerator's Total Commerce Static Household Counts

PERIOD LENGTH (STATIC)	NUMERATOR STATIC PANEL SIZE
1 year (2x12/12)	150k
24 months (2x24/24)	110k
36 months (2x36/36)	80k

We are able to maintain these high levels of static household counts because we have a superior panel design. These high static counts then trickle down to the category, brand, channel, key retailer, demographic segment, etc. levels. That is, when you start with a higher overall static number of households, you have higher buyer counts (or observations) as you slice and dice the panel data to get to the consumer and shopper insights needed. This is why we win on "raw" buyer count and "raw" trip count comparisons.

7. Summary

Numerator's Total Commerce Panel is a very healthy panel and has been designed to measure today's modern consumer. When using panel data analyses to understand the purchasing and shopping behavior of today's consumer, you need to make sure that the panel you are using is delivering on those requirements, and we do.

Our Total Commerce Panel delivers on getting to the right people (demographics), right places (outlets/ channels/retailers) and right products (categories/brands). It leverages today's technology to maximize cooperation and participation rates. And the proof is in the numbers: our high static counts, the high number of "raw" buyers and "raw" trips supporting our panel data, and our ability to get participation from even harder-to-recruit households. We should not be shy in touting the benefits and superiority of the Numerator Total Commerce Panel, our claims are warranted, our panel is very healthy.