Marketing Research
Chapter 12
Test-Markets and Experimental Design
Lecturer: Michaella DeLeon Castillo, DBA - Philippines

Marketing Research – Lecture 12

LESSON 12

Test-Markets and Experimental Design

Learning Objective 12.1 – Using Test-Markets

Scientific testing and under-controlled field research are part of test marketing. As a result, test marketing encompasses much more than simply "trying something out in the marketplace." Just because a product is launched in a limited market before determining whether to perform a nationwide launch does not imply that a test-market has been conducted. People that disregard the necessity of a strict test-marketing strategy frequently "succeed" in their test markets but fail when it comes time to sell their products. The most common kind of field experiment is test marketing.

A market experiment known as a test-market is one that is carried out in a real product market, or in real-world circumstances. Although test markets are typically associated with determining the viability of a freshly developed product, they are also helpful in analyzing other aspects of marketing strategy. Test markets do test marketing questions on a smaller scale than the total market, even if they are not "small scale" research initiatives.

Effective Uses of Test-marketing

In marketing research, test-marketing has three main applications. For a more in-depth examination of a particular problem, each use can be further split down. These are the three main uses:

1. Forecasting the success of a newly developed product.
2. Testing hypotheses about different options for marketing mix elements.
3. Identifying weaknesses in product designs or marketing strategies.

Advantages of Test-marketing

It should be evident from this description of test markets that they offer benefits that are very challenging to match with other research methodologies. The fact that the experiment is conducted in a real-world environment is test-marketing's main benefit. The actual customer behavior in a genuine test-market site is much more likely to produce accurate estimates, even though focus groups and surveys can also be beneficial in describing what people may appreciate in a new product.

The outcomes of test marketing are typically straightforwardly presented to management, which is a second benefit. The experiment itself may be challenging to carry out for a variety of reasons, the most of which have to do with transitory or small-scale marketing, but the data analysis is typically quite straightforward. The methods employed in any straightforward experiment may frequently be applied to test marketplaces. We shall see that this substantially depends on some comparison of means. Marketing managers are considerably more responsive to these types of outcomes, according to researchers, than they may be to those derived from intricate mathematical models or qualitative methods relying on in-depth subjectivity interpretation.

Disadvantages of Test-marketing

Test markets have drawbacks as well. While it may seem like test markets are so effective at making precise forecasts that businesses would employ them for all significant marketing adjustments, this is hardly ever the case. Test-markets are utilized less frequently than one may anticipate due to the drawbacks.

When Not to Test-market

Not every new product launch involves test marketing. Due to the exorbitant expense of making test units, expensive durables like refrigerators, cars, or heavy equipment are rarely test-marketed. Additionally, test marketing is not ideal for products with low marketing costs. This might be the situation when established products undergo minor adjustments. A new idea might be easily copied by rivals in other instances,

therefore test marketing is utilized as a last resort. In these situations, secrecy is more crucial than research.

Learning Objective 12.2 – Selecting a Test-Market

The majority of the time, choosing test markets is a sampling problem. A sample of test-market cities that is representative of the total customer population in the concerned marketing area is what the researcher is looking for. The researcher must pick cities that are representative of all Australians, for instance, if a new product is being introduced nationwide in Australia.

International Test-markets

Every day, more and more businesses expand internationally. As a result, they might be testing their marketing abroad. The fundamentals remain the same: "Which cities better represent the wider market?In many ways, Americans and Canadians are similar. A product's success in the United States should not be assumed to translate to success in Canada. Because of this, a business may decide to undertake a test-market in Canada even after a successful American debut. Additionally, even if the Canadian market approves of a new product, a novel marketing strategy might be required. In general, Calgary, Alberta, is regarded as one of the best test markets for the Canadian market. The product was evaluated in Canada when the Podere Castorani Winery of Italy wanted to develop there.

Factors to Consider in Test-market Selection

A representative test market must be obtained, and this involves taking into account a variety of criteria that may not be clear to a novice researcher. Consider the following comment made by an ITT Continental Banking vice president:

When I first entered the industry, I believed people choose Columbus, Ohio, because of its normal population. However, I discovered that the main explanations were that they were remote media markets and that their distribution strategies meant they were not concerned about chain warehouse shipments outside of Columbus. It is challenging to convert data from a city that makes up 0.1 percent of the US and multiply that by 99.9 to get the percentage. Gaining control over the distribution and the advertising

message, in my opinion, is considerably more crucial. The decision-makers' goals will affect the option they choose, as they do with all decisions.

The following factors should be considered in the selection of a test-market.

■ Population Size

There is no single population that best represents a test-market city. In the United States, almost all urban areas are sizable enough. Simply put, the population must be both large enough to produce results that are relevant to the greater population and small enough to ensure that expenditures are manageable. Like Chicago and Los Angeles in the United States, New York City is just too big to be a common test-market. Tokyo and Mexico City are also seen as being too big to be useful test markets.

■ Demographic Composition and Lifestyle Considerations

The market segment that an offering is intended for should be reflective of the market in terms of ethnic backgrounds, incomes, age distributions, lifestyles, and other factors. The product should then be tested-marketed in cities with populations that are most similar to those of the entire U.S., such as Wichita Falls, Texas, if it is meant to be similarly targeted toward the entire U.S. market. People that live in cities around the Pacific Coast tend to be different in several ways, thus test marketing on the West Coast might not be representative.

■ Competitive Situation

In order for test markets to accurately represent other geographical areas, competitive market shares, competitive advertising, and competitive distribution patterns should be common. It will be challenging to extrapolate the test-market outcomes to other markets if they are not representative.

■ Media Coverage and Efficiency

Newspapers and television commercials won't ever perfectly imitate national media. However, it's crucial to replicate or use a strategy similar to the national media plan. There are occasions when

Sunday newspaper supplements are utilized in place of national magazine advertising. This does not mimic a national strategy, but it could give a ballpark idea of its effects. A market should ideally be covered by newspapers, the major television networks, and normal cable television programming. There are regional or advertising inserts in some magazines.

■ Media Isolation

The test-market might become contaminated by advertising in areas outside of it. Additionally, when advertisements reach customers who cannot purchase the promoted goods because they reside outside the test area, advertising dollars are lost. Due to the lack of advertising spillover, markets like Tulsa, Oklahoma, and Green Bay, Wisconsin, are highly sought after.

■ Self-Contained Trading Area

Distributors must to focus their sales mostly or solely in the test-market region. Chain warehouse shipments into and out of marketplaces can result in perplexing shipping statistics. In Cedar Rapids, Iowa, Frito-Lay trialed selling Olean-based versions of Ruffles, Lay's, Doritos, and Tostitos under the Max brand. However, substantial numbers of customers bought the chips in markets far from the test site.

■ Overused Test-Markets

Consumers and retailers will act differently than usual if they learn about the testing. Consequently, it is not a smart idea to create one excellent test-market and use it repeatedly. Because Tucson residents now respond unusually to the arrival of new products, Tucson is one region that is now less frequently visited than it formerly was. Perhaps their response to creative marketing is now below average because they are so used to in-store product promotion and advertising.

Learning Objective 12.3 –Estimating Sales Volume: Some Problems

Therefore, it is necessary to base sales predictions on how well a product sells in a test market. Estimating nationwide sales results based on regional tests is challenging due to numerous methodological issues. These issues frequently arise as a result of errors in the test-market's planning or execution.

Over attention

A new product may be more successful than it would be under more typical marketing circumstances if too much emphasis is placed on testing it. The company's advertising agency might make sure that the test markets receive top-notch television coverage (which might or might not be indicative of the national television coverage) there. Salespeople may spend exceptional amounts of time making sure the new product is accessible or properly exhibited if they are aware that a test is being run in their region.

Unrealistic Store Conditions

Instead of setting store conditions at the federal level, consider setting them at the level of the market leader. In the test market, for instance, additional shelf facings, eye-level stocking, and other distribution-related circumstances might be attained. Problems with the research design or excessive attention, as previously mentioned, may be the cause of this circumstance.

Reading the Competitive Environment Incorrectly

Making the assumption that the competitive climate will be the same nationwide as in the test-market is another typical error. Results won't reflect competitors' responses to firm strategy if they are not aware of a test-market. After a national launch, competitors' reactions could be very different from what they were in the test market. Competitors, on the other hand, might try to undermine a test-market in response to it. If they are aware that a company is testing, they could try to undermine the results of the test market by, among other things, increasing marketing and lowering the cost of their own items.

Incorrect Volume Forecasts

Unit sales volume or market share are the main topics of discussion in the typical test market. The main data source for estimating sales may be shipments, warehouse withdrawals, or store scanner data. To

account for test distribution levels, measurement issues with store data, and other variations between test-markets and national markets, forecasted volume for test-markets should be adjusted.

Time Lapse

The interval between the test-market experiment and the product's nationwide debut causes one somewhat uncontrollable problem. Frequently, a year or more passes between the test market and the national introduction. This might be inevitable given how long it takes to increase production capacity, create distribution channels, and win over customers. However, one should anticipate that the results will be less accurate the longer the gap between the test market and the actual selling market.

Learning Objective 12.4 – Projecting Test-Market Results

Consumer Surveys

The majority of academics use consumer survey information from test markets to support sales statistics. These aid in tracking consumer knowledge of and sentiments toward the product being tested as well as the possibility of repeat purchases. Frequently, consumer panels are used to gather this data.

Straight Trend Projections

The market share for the test area may be computed and sales can be detected. Straight trend predictions are the most straightforward technique for estimating test-market outcomes. Consider a test-market location where the market share is 3.5 percent. 3.5 percent is the true actual market share after debut, according to a straight-line estimate. The test market is assumed to be indicative of the wider target market by researchers who use straight-line forecasts. This presumption is frequently made because there isn't a strong reason to offer an alternative prediction. After all, the test market is designed to be a representative sample of the market.

Ratio of Test Product Sales to Total Company Sales

Results from the test market may be adjusted based on an indicator of the firm's level of competitive strength in the test-market area. A baseline for adjusting predictions into other markets may be obtained by calculating the ratio of test product sales to overall business sales in the region. In other words, if a

new product contributes 5% of overall company sales in a test market region, it is anticipated that 5% of overall business sales will be contributed by the new product throughout all markets.

The chance of recurring purchases can be considered in sales predictions in a third method.

To calculate market share for products that are subject to repeat purchases, the following formula is used:

market penetration (trial buyers) - repeat purchase rate - market share

The rate of repeat purchases must be determined by long-term studies that create some sort of historical record. A consumer panel has always been required for tracking purchases over time. As a result, in the first few weeks of the test market, panel data may show a cumulative product class buying rate, or market penetration. The proportion of target market consumers who bought the product is one way to think about market penetration. Repeat purchases from these customers can be tracked as long as the test market exists and the quantity of trial purchases hasn't peaked.

Learning Objective 12.5 – Alternative Test-Market Methods

Standard and Control Methods

The regular practice of test marketing has been the main topic of discussion thus far. This means that the company selects test markets and then uses its own sales staff to achieve distribution inside those markets. This method has a very high level of external validity. Everything is exactly how you would expect it to be in a full-scale introduction.

Researchers have recently used controlled shop tests that replicate real retail situations to lower test-market costs and the likelihood of competitive interference. A "minimarket test" in a small city employing forced or control store distribution constitutes the control approach of test-marketing. The complete test-marketing task is carried out by a marketing research firm with expertise in test-marketing, including the sell-in, storage, distribution, and stocking of the test product. As a result of paying merchants for shelf

space, the research firm is able to ensure distribution to establishments that account for a specific share of the market's total commodity volume (i.e., the total dollar sales for that product in a given market). As a result, the company is guaranteed distribution in the retailers that account for a specific portion of the market.

High-Technology Systems Using Scanner Data

A number of research vendors provide test-marketing systems that integrate technologically advanced broadcasting platforms with scanner-based consumer panels (described in Chapter 10). This enables the testing of various marketing messages via split-cable broadcasts or other technology. These platforms, also known as electronic test-markets, give researchers the ability to gauge the direct effect of watching particular commercial television shows on unit sales volume. When a member of the family makes a purchase, the store's computer enters the barcoded identification number for the household. During comprehensive test-marketing initiatives, the computer integrates the household's item-by-item purchases with television viewing statistics. As an illustration, Information Resources Incorporated (IRI) has chosen a few medium-sized localities, such Pittsfield, Massachusetts, to act as scanner-based test markets. Every television in the homes chosen to be members of the scanner-based panel has a gadget installed by the corporation. To identify whether a specific television commercial was watched in these electronically connected homes, the device records television viewing patterns every five seconds.

Simulated Test-markets

Plans for simulated test markets are frequently included in marketing research program strategies because managers want to limit the number of items that go through the time-consuming and expensive process of full-scale marketing. In a research lab known as a "simulated test-market," the typical purchasing procedure is condensed into a brief period of time. Visitors to research facilities are exposed to advertising, which are typically aired as part of a television program in a theater setting. Then they go shopping in a space that mimics a grocery store aisle. Based on their simulated purchases in the experimental store, researchers calculate the trial buy rates and how frequently consumers will repurchase the goods.

Virtual-Reality Simulations

How computer-based simulations can be utilized to simulate actual customer behavior is demonstrated in the Research Snapshot box above. Virtual consumers can occasionally be programmed using sophisticated mathematical derivations. The mathematics is meant to represent purchasing decisions. Then, virtual customers can respond to virtual marketplaces with virtual new products and businesses. This high-tech testing approach may be less expensive than using a real test market. In other virtual test markets, customers sign in and choose various products for various scenarios while in simulated purchasing environments. Customers can choose their preferred T-shirt design from a variety of ideas at http://www.threadless.com. The most popular designs are then transferred from the virtual market to the actual market. Even the consumer can take part in the design process. Additionally, retailers can test-market how customers could respond in a novel retail shop setting. Real customers can virtually shop by navigating the store with a computer mouse. A virtual-reality simulated test market seeks to mimic the ambience of an actual retail store with visually appealing graphics that appear on a computer screen. Even putting items in a virtual shopping cart is possible by clicking on them. Retailers may determine how long customers spend in specific areas of the store and what might catch their interest in this way.

Learning Objective 12.6 – Complex Experimental Designs

An experimental design that assigns individuals to different treatment levels of an experimental variable is known as a completely randomized design. The researcher's attempt to manage uncontrollable variables while manipulating putative causes is the randomization of experimental units. As long as individuals are assigned in a random manner to a certain experimental treatment level, a one variable experimental design can be entirely random. Consider doing an experiment to determine the impact of different incentives on mail-in survey response rates. As a result, the incentive is the experimental variable. Three different treatment levels can be used to control this:

1. no incentive to the control group
2. a one dollar personal incentive
3. a one dollar charity incentive

Randomized-block Design

The entirely randomized design is expanded upon by the randomized-block design. The majority of random variation is eliminated using some type of randomization; nonetheless, the researcher has discovered one extraneous element that has the potential to systematically influence subject responses. By excluding its impacts, the researcher will try to isolate the effects of this one variable. A categorical variable that is anticipated to be connected to various values of a dependent variable for each group is known as a blocking variable. For instance, a typical blocking variable is gender. For men and women, certain potential dependent factors are anticipated to differ. Women, for example, are more cost-conscious than men. Therefore, in addition to the experimental variables' price and packing, a researcher who is examining the impact of price and package design on purchase may additionally want to record a person's gender. In agricultural research, where different levels of a treatment variable were administered to each of numerous blocks of land, the phrase "randomized block" first appeared. The randomized-block approach can control systematic disparities in agricultural production caused by the quality of the land blocks. In marketing research, the researcher may want to focus on block impacts that include store size, territorial location, market shares of the test brand or its main competitors, per capita consumption levels for a product class, city size, and so on. Let's say a Mexican food producer is debating between two packaging options.

Factorial Designs

Let's say a brand manager thinks that a study that merely modifies the pricing element is insufficient because price modifications necessitate more robust promotional assistance. The brand manager advises that the research design must include more than one independent variable. The single-factor trials that have been taken into consideration thus far may have one particular variable blocked and other confounding factors managed, but they are still constrained. Testing the effects of two or more treatments (factors) at different levels is possible with a factorial design.

Latin Square Design

The Latin square design makes an effort to reduce or eliminate the impact of two or more distracting outside influences. The arrangement of the table that serves as the design's representation led to the design's given name. A balanced, two-way classification system is a Latin square.

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Progress Check:

Requirements:

1. Due Date : _____ before 5pm
2. Essay format, minimum of 20 words and maximum of 200 words.

Questions

1. Know the basics of test-marketing.
2. Recognize the appropriate uses of test-marketing.
3. List the advantages and disadvantages of test-marketing
4. Use manipulations to implement a completely randomized experimental design, a randomized-block design, and a factorial experimental design
5. Display experimental results using graphical charts

Answer

1. A test-marketing strategy is an experimental technique that offers the chance to evaluate a new product or marketing strategy in real-world situations. Due to the near resemblance of the conditions to reality, test markets maximize external validity. Test marketing gives you the chance to predict the results of different strategies. Based on how well they represent the target consumer market, test-market cities are chosen. Additionally, because it is less expensive than using a big city, medium-sized cities are frequently used as test markets.

2. Testing theories about various alternatives for marketing mix components, predicting the success of a newly generated product, and spotting flaws in product designs or marketing tactics are some of the major purposes of test marketing. The fourth reason frequently happens when test-market results are less positive than anticipated, in contrast to the first two reasons, which are typically planned results because they are the reason a test-market is adopted in the first place.

3. The real-world environment and the simplicity of interpreting and communicating results are the two main benefits of test markets that are covered in this chapter. These benefits must be considered against a number of significant drawbacks. These include the high expense of conducting a test market, the time required to plan, implement, and assess a test market, as well as the loss of product secret that results from public marketing. The competition will be aware of the majority of your strategic thinking after a thorough test-market, which can cost millions of dollars and take over a year.

4. The secret to randomization is to place participants in experimental cells in a way that evenly distributes unimportant factors among all of the conditions. Simple randomized experimental designs can be supplemented with blocking factors to regulate categorical variables that are anticipated to be connected to the dependent variable. When several experimental and/or blocking variables are included in a single model, a factorial design is the final outcome. There are both primary effects and interactions.

5. When there are variations in the height of the lines linking points that denote an experimental treatment condition, the graphical charts display main impacts. Lines with various slopes represent interactions.

Identification

1. Intentional attempts to disrupt the results of a test-market being conducted by another firm.
2. The percentage of target market customers who purchased the product—often measured early in a test-market.
3. A “minimarket test” using forced distribution in a small city; retailers are paid for shelf space so that the test-marketer can be guaranteed distribution.
4. A system of test-marketing that measures dependent variables with scanner-based consumer panels and manipulates advertising based on a special delivery system that can swap out one television commercial or advertisement for another.
5. A research laboratory in which the traditional shopping process is compressed into a shot timespan.
6. An experiment that attempts to reproduce the atmosphere of an actual retail store with visually compelling images appearing on a computer.

7. An experimental design that uses a random process to assign subjects to treatment levels of an experimental variable
8. An extension of the completely randomized design in which a single, categorical extraneous variable that might affect test units' responses to the treatment is identified and the effects of this variable are isolated by being blocked out.
9. A categorical variable that is expected to be associated with different values of a dependent variable for each group. It effectively controls for an extraneous cause in experimental analysis.
10. An experiment that investigates the interaction of two or more independent variables on a single dependent variable.

Answer

1. Test-market sabotage
2. Market penetration
3. Control method of test-marketing
4. Electronic test-markets
5. Simulated test-market
6. Virtual-reality simulated test-market
7. Completely randomized design
8. Randomized-Block Design
9. Blocking variable
10. Factorial design