LANDING PAGES IN LOCAL RETAIL: METRICS, EXPERIMENTATION, AND INFRASTRUCTURE DEPENDENCE IN LOW-DEMOGRAPHIC MARKETS

LANDING PAGES NO VAREJO LOCAL: MÉTRICAS, EXPERIMENTAÇÃO E DEPENDÊNCIA INFRAESTRUTURAL EM MERCADOS DE BAIXA DEMOGRAFIA

PÁGINAS DE DESTINO EN EL COMERCIO MINORISTA LOCAL: MÉTRICAS, EXPERIMENTACIÓN Y DEPENDENCIA DE LA INFRAESTRUCTURA EN MERCADOS CON BAJA DEMOGRAFÍA

https://doi.org/10.56238/sevened2026.019-034

Juliana Ferreira Eugênio[1], Lucas Santiago Arraes Reino[2]

ABSTRACT

In low-demographic contexts, low traffic volume makes the interpretation of standardized landing page metrics more unstable. This article analyzes a real local retail campaign based on the reanalysis of data from Google Analytics 4, Microsoft Clarity, heatmaps, and interface logs. Methodologically, it is an exploratory case study, with elements of A/B experimentation in a natural environment, guided by Media Ecology, Software Studies, the discussion on platformization, and usability literature. The reanalysis suggests that CTA performance depends on the interface environment, the device, and the funnel stage; that dwell time and scroll depth are useful metrics, but insufficient when interpreted in isolation; and that performance interpretation becomes more aligned with the page's objective when articulated with signals closer to the payment flow. As a contribution, the article proposes a situated interpretation of performance metrics and derives a lightweight test governance protocol for landing pages in information-scarce contexts.

Keywords: Landing Pages. Low Demographics. Platformization. Usability. Local Retail.

RESUMO

Em contextos de baixa demografia, o baixo volume de tráfego torna mais instável a leitura de métricas padronizadas em *landing pages*. Este artigo analisa uma campanha real de varejo local com base na reanálise de dados do Google Analytics 4, Microsoft Clarity, mapas de calor e registros de interface. Metodologicamente, trata-se de um estudo de caso exploratório, com elementos de experimentação A/B em ambiente natural, orientado pela Ecologia da Mídia, pelos Software Studies, pela discussão sobre plataformização e pela literatura de usabilidade. A reanálise sugere que o desempenho do CTA depende do ambiente de interface, do dispositivo e da etapa do funil; que tempo de permanência e profundidade de rolagem são métricas úteis, porém insuficientes quando interpretadas

[1] Master's degree in Communication. Universidade Federal do Maranhão (UFMA). E-mail: jueugenio2@gmail.com

[2] Dr. in Communication. Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS). Universidade Federal do Maranhão (UFMA). E-mail: lucas.reino@ufma.br

isoladamente; e que a leitura do desempenho se torna mais aderente ao objetivo da página quando articulada a sinais mais próximos do fluxo de pagamento. Como contribuição, o artigo propõe uma leitura situada das métricas de desempenho e deriva um protocolo leve de governança de testes para landing pages em contextos de escassez informacional.

Palavras-chave: Landing Pages. Baixa Demografia. Plataformização. Usabilidade. Varejo Local.

RESUMEN

En contextos con baja demografía, el escaso volumen de tráfico dificulta la interpretación de las métricas estandarizadas de las páginas de destino. Este artículo analiza una campaña real de venta minorista local a partir del reanálisis de datos de Google Analytics 4, Microsoft Clarity, mapas de calor y registros de interfaz. Metodológicamente, se trata de un estudio de caso exploratorio, con elementos de experimentación A/B en un entorno natural, guiado por la ecología de los medios, los estudios de software, el debate sobre la plataformización y la literatura sobre usabilidad. El reanálisis sugiere que el rendimiento de la llamada a la acción (CTA) depende del entorno de la interfaz, el dispositivo y la etapa del embudo de conversión; que el tiempo de permanencia y la profundidad de desplazamiento son métricas útiles, pero insuficientes si se interpretan de forma aislada; y que la interpretación del rendimiento se alinea mejor con el objetivo de la página cuando se articula con señales más cercanas al flujo de pago. Como contribución, el artículo propone una interpretación contextualizada de las métricas de rendimiento y deriva un protocolo de gobernanza de pruebas ligero para páginas de destino en contextos con escasez de información.

Palabras clave: Páginas de Destino. Baja Demografía. Plataformización. Usabilidad. Venta Minorista Local.

1 INTRODUCTION

This article analyzes a local retail landing page in a context of low demographics, based on a real campaign carried out in Barra do Corda, Maranhão, between June 3 and August 31, 2024. In markets of this type, the low volume of traffic makes each visit more relevant and makes it more sensitive to read the performance of the interface. In this scenario, the landing page is no longer just a promotional piece and starts to function as a privileged object to observe how metrics, interface elements, and local conditions are articulated in the production of results.

The analysis is based on operational data from Google Analytics 4 (GA4), Microsoft Clarity heat maps and behavioral logs, as well as simple interface variations tested throughout the campaign. The central problem of the article lies in the fact that, in low-traffic environments, small oscillations in layout, access source, device, and local seasonality can produce disproportionate effects on metrics such as clicks, dwell time, and scroll depth. In these contexts, the automatic reading of standardized indicators tends to be insufficient, as the scarcity of signals makes the interpretation of performance more unstable and requires greater attention to the context in which the interaction occurs.

This question gains relevance because a significant part of the literature on *landing pages*, optimization, and digital performance was produced based on scenarios of abundant traffic and relatively stable patterns of user behavior. Such a framework does not always correspond to the reality of local retail in smaller municipalities, in which the availability of data is reduced and analytical decisions have to deal with more noise, greater sensitivity to conjunctural variations, and stronger dependence on the digital infrastructures that organize measurement. The originality of the study lies, therefore, in shifting the debate to an environment in which measuring does not only mean recording interactions, but interpreting scarce signals in a situated way.

Given this scenario, the article aims to analyze how the reading of the performance of a landing page is organized in a context of low demographics. More specifically, it seeks, first, to examine the conditionality of the *Call To Action* (CTA), considering its relationship with the funnel, the device and the interface environment; second, to discuss the limits of attention metrics, such as dwell time and scroll depth, when mobilized in low-sampling scenarios; and, third, to propose a lightweight protocol of situated reading and test governance, Able to guide analytical decisions in contexts of information scarcity.

The contribution of the article is twofold. On the empirical level, it examines a real local retail campaign in a low-demographic market, contributing to broaden the repertoire of studies on digital performance in peripheral and underexplored contexts. On the methodological level,

it proposes a situated reading of performance metrics in *local retail landing pages*, articulating the empirical case with the discussion on platformization, usability and informational scarcity, and deriving from this path a lightweight protocol of test governance.

2 THE ECOLOGY OF THE MEDIA AND THE INTERFACE ENVIRONMENT

Media ecology shifts the analytical focus from isolated content to the environment that makes communication possible, intelligible, and socially operable. From this perspective, the media do not function only as transmission channels, but as structures that organize perception, modulate attention and condition the action of the subjects. Applied to the study of digital interfaces, this approach allows us to understand the landing page not only as a promotional piece or information support, but as a technical and symbolic environment that frames the user's behavior and guides their navigation (McLuhan, 1995).

This framing is especially relevant for the analysis of *landing pages*, as their performance does not depend only on the content offered, but on the articulation between the position of the elements, visual hierarchy, density of stimuli, loading temporality, and clarity of the action path. Elements such as the CTA, the order of the blocks, the presence of fixed components above the fold, and the proximity between information and payment do not operate in isolation. Their effect is relational, that is, it emerges from the interface environment in which they are inserted.

In contexts of low demographics, this perspective gains additional analytical strength. When traffic volume is reduced, small environmental changes can produce proportionally more visible oscillations in observed behavior. In these scenarios, the environment ceases to be a backdrop and becomes a central variable of interpretation. Media ecology, therefore, offers a useful key to understanding why, in small markets, metrics and behaviors need to be read in light of the concrete conditions of interface and circulation.

In dialogue with this axis, *software studies* allow us to observe how such conditions are technically operationalized. If media ecology emphasizes the environment, software studies help to understand how this environment is structured by systems, dashboards, event taxonomies, and ways of visualizing data. Dashboards, APIs, and analytical tools don't just record experience: they define which actions will be visible, which relationships can be compared, and which problems will be recognized as amenable to optimization (Manovich, 2013). In other words, the user experience is simultaneously lived and modeled in a technical grammar that conditions its interpretation.

2.1 PLATFORMIZATION, METRICS, AND LOCAL VALUE

The discussion about platformization allows us to broaden this reading by situating the landing page within a broader ecosystem of infrastructures, metrics, and forms of governance. In Van Dijck, Poell and de Waal (2018), platformization refers to the expansion of digital platforms as structures that organize social, economic and cultural practices through logics of datafication, monetization and regulation. More than hosting interactions, these infrastructures define visibility standards, measurement criteria, and legitimate forms of circulation and conversion.

In the case of *landing pages*, this means that performance is now read through a vocabulary strongly stabilized by platforms and analytics tools: time engaged, click-through rate, scroll depth, conversions, and other similar metrics. These indicators are useful because they make campaigns comparable and offer relatively standard operating parameters. However, they also function as normative artifacts: by privileging certain events and making others invisible, they help define what counts as success. In this key, measuring is not just describing; it is also to frame value.

This issue becomes even more sensitive in contexts of low demographics. When the volume of data is reduced, the effects of seasonality, variation in traffic origin, differences between devices, and sampling instabilities increase. Under such conditions, standardized metrics preserve comparative utility, but tend to lose strength when mobilized in isolation as evidence of performance. The reading of the panel now requires greater caution, since small oscillations can represent both relevant indications and simple contextual noise.

It is at this point that the notion of local value becomes decisive. Instead of taking success only as what the platform measures in a more visible way, it becomes necessary to put the concrete purpose of the interface in its context of use back at the center. On a local retail landing page with a payment-oriented flow via QR/Pix, for example, the interpretation of performance cannot depend only on generic attention proxies. It also needs to consider signs closer to the effective progression of the desired action. The problem, therefore, is not to abandon standardized metrics, but to articulate their comparability with indicators that are more adherent to the local objective of the interaction.

This perspective dialogues with Nieborg and Poell (2018), by showing that platforms not only host content, but co-produce their own evaluation objects by stabilizing taxonomies, events, and optimization formats. In peripheral markets and smaller-scale operations, this implies additional asymmetries: teams tend to rely on externally defined analytical repertoires, often without control over criteria for visibility, modeling, or data suppression. Grohmann's

(2019) critique helps to situate this problem as a matter of power and analytical capacity: the smaller the local structure, the greater the dependence on ready-made metric grammars. Therefore, a situated reading of metrics is not opposed to platforms, but seeks to prevent them from defining on their own what should be understood as a relevant result.

2.2 USABILITY AND EXPERIMENTATION IN THE CONTEXT OF SCARCITY

The usability literature contributes to this debate by offering a procedural framework for the interpretation and improvement of interfaces. Instead of treating usability only as a set of good visual practices, it is interesting here to understand it as a process discipline: a way to reduce friction, qualify paths, and make the relationship between interface and user behavior more readable. In Nielsen (1993; 1994), the evaluation of usability is built through inspections, tests and systematic observation, based on the principle that basic interaction problems need to be treated before decisive effects are attributed to small variations in layout, color or *microcopy*.

This principle is particularly important in low-traffic environments. In contexts of informational scarcity, each interface change operates on a reduced set of signals, which makes it more difficult to distinguish what results from a specific change and what results from contextual noise. For this reason, experimentation cannot be conducted as a simple succession of visual tests, but must start from minimum conditions of legibility, hierarchy, clarity of flow and operational stability. In other words, before testing for fine differences, you need to make sure that the page isn't producing elementary friction that distorts the reading of the behavior.

This approach is close to the formulations of Marketing 4.0 and 5.0, especially when these works emphasize the centrality of experience, continuous learning, and data-driven adaptation (Kotler, Kartajaya, and Setiawan, 2017; 2021). In local retail operations, however, this logic needs to be calibrated to the size of the market and the actual availability of analytical signals. Rather than relying on extensive cycles and large volumes of observations, experimentation tends to work best when guided by small hypotheses, minimally stable observation windows, and explicit reading and decision criteria.

From this perspective, usability and experimentation converge on the same point: the need to build responsible interpretations in environments of scarcity. This entails not only testing interface elements, but doing so with analytical parsimony, recognizing that attention metrics such as dwell time and scroll depth can be useful, though insufficient when taken in isolation. In low-demographic markets, reading performance requires combining observation of the

interface environment, understanding the context of use, and selecting indicators closer to the specific purpose of the page.

Thus, the dialogue between media ecology, platformization, and usability provides the conceptual basis of this article. Media ecology allows us to understand the landing page as an environment of perception and action; platformization shows how metrics and infrastructures condition what can be seen as value; and usability provides a procedural horizon for thinking experimentation and decision making in low-traffic contexts. Together, these axes support the proposal of a situated reading of performance, suitable for local operations in which measuring well depends less on accumulating large volumes of data than on rigorously interpreting scarce and contextually marked signals.

3 METHODOLOGY

3.1 RESEARCH DESIGN AND EMPIRICAL CONTEXT

This article adopts a methodological design of an exploratory case study, with reanalysis of a real landing page campaign conducted in a context of low demographics. The mobilized data were originally collected and analyzed within the scope of a master's dissertation presented to the Graduate Program in Communication of the Federal University of Maranhão (PPGCom/UFMA), being reinterpreted here in the light of a new theoretical and analytical framework, centered on the articulation between media ecology, platformization, usability and informational scarcity.

The empirical case corresponds to a local retail campaign carried out in Barra do Corda (MA), between June 3 and August 31, 2024, with a landing page oriented to conversion and payment via QR/Pix. Although the corpus dialogues with elements of A/B experimentation in a natural environment, especially with regard to simple interface variations throughout the campaign, the article does not claim robust statistical demonstration of causality. Its objective is, rather, to produce a situated interpretation of the page's performance in conditions of low traffic volume, taking the available metrics and records as empirical evidence to be read in articulation with the interface context and with the inferential limits of the case.

The choice of this design stems from the nature of the problem investigated. In low-demographic markets, the scarcity of signals, the greater sensitivity to local seasonalities, and the relative instability of some metrics make an analytical approach guided by triangulation and contextualization more productive than by universalizing pretensions. Thus, the case study allows us to observe, in depth, how interface elements, standardized metrics and payment flows are articulated in a concrete empirical environment of local retail.

3.2 DATA SOURCES AND ANALYTICAL CORPUS

The analytical corpus was composed of different types of operational and documentary records. The main database gathered data from Google Analytics 4 (GA4) and Microsoft Clarity, including navigation metrics, dwell time, scroll depth, useful clicks, heatmaps, and recorded sessions. To these materials were added variants of the landing page, screenshots and interface configuration notes produced throughout the campaign, used to document changes in layout, block order, microcopy, CTA chromia and payment flow position.

The campaign's consolidated data indicated 1,698 users, 23 clicks on CTA, 56 interactions with Pix/QR and 79 clicks classified as conversion, in addition to an average scroll depth of 26.79% and an average dwell time of 29 seconds. These numbers were treated, in this article, not as sufficient evidence to prove causal relationships between interface variations and conversion outcomes, but as empirical indicators of the user journey and the way performance was captured by the available analytical tools.

For interpretation purposes, it is important to distinguish three levels of registration present in the corpus. CTA clicks correspond to direct interaction with the main action command of the page; interactions with Pix/QR are about the user's progression towards the payment flow; and clicks classified as conversion bring together events treated operationally, in the original corpus, as signs of relevant progress in the journey. As this is a reanalysis of data already collected, the equivalence between these levels is not automatically assumed, but carefully examined, recognizing that each record expresses a distinct layer of the observed behavior. This distinction is methodologically important because it avoids taking every interaction as a synonym for completed conversion.

In addition, the article starts from the recognition that the corpus is conditioned by the very logic of visibility of the analytical platforms used. This means that the available data does not exhaust the user experience, but translates it according to taxonomies, filters, and registration criteria technically defined by GA4 and Clarity. In this way, the corpus is understood simultaneously as an empirical source and as a product of a specific metric grammar, whose reading needs to be contextualized.

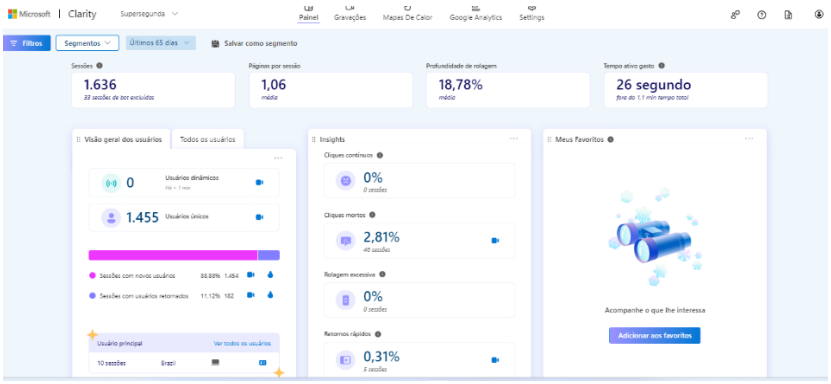
Figure 1

Interface of the "Super Segunda Unillar" landing page, used in the analyzed campaign, highlighting the organization of the visual elements, content hierarchy and positioning of the payment flow

Source: Unillar.com.br.

Figure 2

Campaign performance dashboard in Microsoft Clarity, presenting user interaction and behavior metrics after the data collection period



Source: Microsoft Clarity.

3.3 OPERATIONAL DEFINITIONS

The analysis was structured based on some operational definitions aimed at making the criteria for reading the observed behavior more explicit. The main one is the notion of "qualified visit", mobilized in this article as an analytical operator to identify situations in which there was minimal evidence of attention and/or progression in the flow of the interface. Instead of taking any visit as a homogeneous unit, the category seeks to distinguish accesses with more consistent indications of engagement or purpose.

For this classification, the occurrence of at least one of the following criteria was considered as a qualified visit: (a) combination of minimum attention, expressed as a dwell time equal to or greater than 12 seconds and scroll depth equal to or greater than 60%; (b) presence of informational microinteraction, understood as an action indicative of active search for content or progression in the path; or (c) a sign of progress in the payment flow, ideally associated with the display of the QR code and staying in its area long enough to indicate action-oriented attention.

However, in the empirical case reanalyzed here, not all of these events were fully instrumented at the desirable level for a closed demonstration. In particular, the display of the QR code and the time spent in its area appear in the article less as variables fully measured in the corpus and more as analytical operators and methodological propositions derived from the observed limitation itself. For this reason, the definition of qualified visit should be understood in two ways: as an interpretative resource applied to the available material and, simultaneously, as a more robust methodological formulation for future applications in similar contexts.

A minimum observation window of 14 days was also assumed as parameters for reading the corpus, designed to cushion weekly variations and conjunctural oscillations, and the

adoption of explicit criteria for analytical decision, such as distinction between relevant advance, absence of interpretable gain and occurrence of error or collection noise. These parameters do not operate, here, as a fully validated experimental protocol, but as principles of methodological organization coherent with the proposal of a situated reading of performance.

3.4 ANALYSIS PROCEDURES AND INFERENTIAL LIMITS

The reading of the material was organized into three analytical axes, corresponding to sectors of the user journey on the landing page: (1) interface and CTA, including color, contrast, microcopy, visual hierarchy, and competition of stimuli above the fold; (2) engagement and scrolling, with attention to the interpretive limits of dwell time and scroll depth; and (3) payment flow, taking as a reference the available indications of progression towards QR/Pix and the need for metrics that are more adherent to the local purpose of the interface. This sectorization was not thought of as rigid compartmentalization, but as an analysis strategy to relate different layers of recorded behavior.

The analytical procedure combined quantitative reading and contextual interpretation of the records. Aggregated metrics of attention and interaction were examined in conjunction with heat maps, documentation of page variants, and observation of friction or visibility points in the user journey. Instead of taking time, scrolling, or clicks as self-evident indicators, the analysis sought to triangulate them with the organization of the interface, the position of the relevant elements, and the context of circulation of the campaign. In this sense, the reanalysis sought to shift the focus from a merely descriptive reading of the numbers to a situated interpretation of the available signs.

The analysis also considered stratification by device and stage of the funnel, especially in the distinction between colder accesses and return situations, whenever the corpus allowed this type of reading. However, such stratifications were treated with caution, since the low volume of traffic and the platforms' own modeling and privacy rules can reduce the stability of finer segmentations. Thus, the inferences produced throughout the article are deliberately moderated: it is less a matter of asserting universal effects and more of understanding how the empirical case illuminates recurring problems of measurement in low-demographic markets.

Among the main inferential limits of the study are the reduced volume of data, the sensitivity of metrics to local seasonality, the dependence on analytical tools with their own criteria for recording and visualization, and the absence of more precise instrumentation for some events considered central to the progression in the payment flow. For this reason, the results presented in the following sections should be read as situated inferences, supported by

triangulation between different registers, and not as robust generalizations about causality on *landing pages*. Such delimitation does not diminish the relevance of the case; on the contrary, it reinforces its usefulness as an empirical basis for thinking about test analysis and governance practices in contexts of information scarcity.

4 RESULTS AND DISCUSSION

4.1 CTA, VISUAL HIERARCHY, AND CONTEXT OF USE

The analyzed campaign registered 1,698 users and 23 clicks on the CTA, which corresponds to 1.35% of the observed accesses. Taken in isolation, this percentage does not allow us to conclude, in a direct way, whether the button is effective or ineffective as a conversion device. However, when read in conjunction with the interface configuration and navigation logs, it suggests that the CTA did not operate as a universal trigger for action, but as an element dependent on the environment in which it was inserted.

Observing fixed elements above the fold, such as header and floating icons, reinforces this reading. In low-demographic contexts, where each access has greater analytical weight and competition for attention becomes more sensitive, the effect of isolated attributes—such as color, contrast, or button shape—tends to be diluted when the navigation path has high visual competition. In these cases, the position of the CTA in the flow of the page, its relationship with the informational blocks, and its proximity to the moment of payment seem more relevant than chromatic adjustments considered separately.

The reanalysis also suggests that microcopy participates decisively in this conditionality. More specific and task-oriented labels, such as those that clearly indicate the transition to payment via QR, tend to reduce ambiguity and produce greater adherence to the purpose of the page than generic statements. This does not mean attributing to microcopy a linear or universal effect, but recognizing that, in low-traffic environments, the clarity of the path can have more weight than small isolated visual variations, especially when the user already has some previous familiarity with the offering.

From a theoretical point of view, this result reinforces the ecological reading of the interface. The CTA should not be understood as an autonomous unit of conversion, but as part of a technical and perceptive environment that organizes the user's action. Its effectiveness, therefore, depends on the articulation between visual hierarchy, stimulus density, funnel context, and concrete navigation conditions. Rather than looking for a "pure effect" of the button, the case suggests that call-to-action performance needs to be interpreted as a relational

phenomenon, situated and sensitive to the scarcity of signals conditions typical of low-demographic markets.

Figure 3

Heat map of clicks and scrolling depth of the landing page, evidencing interaction patterns and distribution of users' attention throughout the interface

Source: Microsoft Clarity

4.2 TIME, SCROLLING, AND INTERPRETIVE NOISE

In the campaign as a whole, the average scrolling depth was 26.79%, while the average time spent on the page was 29 seconds, totaling approximately 13 hours and 42 minutes of aggregate dwell. These indicators are relevant to reading browsing behavior, but cannot be taken by themselves as automatic equivalents of interest, intent, or progress in the conversion path.

First, dwell time can include situations in which the page remains open without effective interaction, either due to interrupted browsing or by staying in the background. Second, the low average scroll depth should not be automatically interpreted as page bounce, especially when information central to the action — such as price, payment terms, or the actual access to the purchase flow — is positioned in the first sections of the interface. In this case, less scrolling can mean both disinterest and quick access to the point considered most relevant by the user.

The case, therefore, suggests that attention metrics need to be read in a situated key. In low-demographic contexts, small changes to traffic source, device, local calendar, and page

organization can produce disproportionate swings in timing and scrolling. For this reason, these indicators preserve descriptive and comparative usefulness, but become insufficient when mobilized in isolation as proof of performance. The attention observed in the analytical tools does not necessarily coincide with intention, just as the scanning of the interface does not in itself equate to the rejection of the content.

It is at this point that triangulation is methodologically necessary. Instead of treating time and scrolling as self-evident proxies of success, the analysis proposes to interpret them in conjunction with informational microinteractions, documentation of page variants, and clues closer to the payment flow. Such a movement does not invalidate the standardized metrics of the platforms, but it reduces the risk of their fetishization, that is, the risk of taking as a result what the panel shows in a more visible way, and not necessarily what comes closest to the concrete objective of the interface.

4.3 PAYMENT FLOW AND INTENT SIGNALS

For interpretation purposes, the corpus was read in three levels of registration. The first corresponds to clicks on CTA, understood as direct interaction with the main action command of the page. The second concerns interactions with Pix/QR, taken as signs of progression in the payment flow. The third group includes the 79 clicks classified as conversion, that is, events operationally treated in the original corpus as relevant advances in the user's journey, although not equivalent, by themselves, to the completion of the payment.

This distinction is methodologically necessary because it prevents taking every interaction as a synonym for effective conversion and makes the reading of the different layers of the observed behavior more accurate.

This data is especially relevant because it occurs in a scenario of low average scroll depth. This suggests that, even without going through long stretches of the page, a portion of users were able to access the payment flow, which replaces the visibility and organization of this journey as decisive factors for analysis.

In other words, the case indicates that the efficiency of the landing page does not depend only on retaining attention for longer, but on making the shift between information, decision, and payment readable and accessible. When that short flow — CTA, payment block, and QR — is well-placed, conversion can lean more on the clarity of the journey than the length of the navigation.

At the same time, the analysis itself highlights a decisive limitation of the corpus: the absence of specific instrumentation for events such as effective display of the QR code and

time spent in its area. This restriction prevents conclusive affirmation of the empirical superiority of these signals in relation to the generic metrics of attention in the case studied. What the article can sustain more rigorously is something slightly different and, methodologically, stronger: the reanalysis shows that traditional indicators alone do not capture the progression in the payment flow and, therefore, points to the need to instrument signals that are more adherent to the local purpose of the interface in future applications.

In this key, the payment flow emerges less as the final step of a linear funnel and more as a critical operator for reading performance. By shifting analytical attention to events closer to the transaction, the study proposes a shift in focus: in contexts of informational scarcity, it is less important to multiply general engagement proxies and more to identify which signals are, in fact, closer to the action that the interface intends to enable. Thus, the contribution of the case is not to demonstrate in a closed way the strength of indicators such as QR rendering and dwell time, but to highlight their analytical relevance and their methodological necessity.

4.4 WHAT THE CASE SHOWS ABOUT LOW DEMOGRAPHICS AND SITUATED METRICS READING

Taken together, the case study shows that the measurement problem in low-demographic markets is not limited to the existence of less data, but to the presence of more context-sensitive data. In campaigns with low traffic volume, variations in layout, access source, device, and local seasonality can significantly alter aggregate metrics, making it more difficult to distinguish what corresponds to a consistent interface effect and what results from conjunctural noise. In these scenarios, scarcity is not just quantitative limitation; it constitutes a specific analytical condition.

This condition reinforces the need to articulate two complementary reading lenses. The first is the platform's lens, which offers standardized metrics, comparability, and monitoring basis. The second is the lens of local value, which puts the concrete purpose of the page back at the center and requires attention to signs closer to the desired action. In the case examined here, this means recognizing the usefulness of clicks, timing, and scrolling, without allowing such indicators to define on their own what should be understood as success.

From the point of view of theoretical discussion, the empirical case sustains three movements. First, it reinforces the ecological reading according to which elements such as CTA, blocks of information and payment can only be understood in their relationship with the interface environment. Second, it confirms the criticism of the naturalization of the metrics prescribed by the platforms, showing that they frame the perception of performance, but do not exhaust their

intelligibility. Third, it suggests that usability, understood as a process, needs to function as a precondition for experimentation, especially in contexts in which low traffic makes it more difficult to interpret fine changes in behavior.

In summary, the reanalysis indicates that the reading of the performance of *landing pages* in low-demographic markets should be guided less by supposedly stable metric truths and more by situated interpretations, capable of combining standardized indicators, observation of the interface environment, and signals more adherent to the local purpose of the interaction. It is in this shift that the case gains relevance: not as a basis for strong generalizations, but as applied evidence that, in peripheral and low-scale contexts, measuring well depends less on accumulating large volumes of data than on accurately interpreting scarce and contextually marked signals.

5 PROPOSED TEST GOVERNANCE PROTOCOL

The reanalysis of the campaign allows us to derive, from the empirical case, a methodological proposition aimed at conducting tests on *local retail landing pages* under conditions of low demographics. Instead of taking the case as a basis for the formulation of retroactive hypotheses, this section uses it as a foundation to propose a lightweight test governance protocol, guided by traceability, analytical parsimony, and adherence to the local value of the interface. The objective of the protocol is to provide minimum parameters for conducting and interpreting experiments in contexts in which the volume of traffic is low, sensitivity to contextual factors is high, and standardized metrics, although useful, are not enough to support decisions in isolation.

The proposal is based on the recognition that, in markets with low demography, experimentation cannot depend on an ideal of informational abundance that is rarely realized in practice. Under these conditions, decision-making tends to be more consistent when supported by simple, explicit, and stable procedures, capable of reducing interpretative noise and preventing episodic oscillations from being confused with robust evidence. The suggested protocol, therefore, does not seek to replace the metric grammar of the platforms, but to discipline its use from a situated framework, in which the canonical metrics are read in articulation with signs closer to the concrete purpose of the page.

In this sense, three analytical axes are proposed to guide the governance of the tests:

- **The conditionality of the CTA**, that is, the recognition that the performance of the call to action should not be evaluated as an autonomous and universal effect, but in relation

to the context of use, the stage of the funnel, the access device and the organization of the interface environment.

- **The insufficiency of attention metrics taken in isolation**, considering that dwell time and scroll depth, although relevant, can become noisy in low-sampling scenarios and, therefore, need to be triangulated with microinteractions and signals that are more adherent to the payment flow.
- **The need for a lightweight decision protocol**, based on prior rules and explicit reading criteria, to reduce interpretation biases and increase the consistency of analytical choices.

Based on these axes, the protocol recommends, first, the adoption of a **light pre-registration** for each test, containing the operational hypothesis, the variation applied, the main monitoring metric, the minimum observation window, and the decision rule. This pre-registration does not need to reproduce the formalization of large-scale statistical experiments, but it should be sufficient to establish, before execution, what is expected to be observed and under what conditions a variation will be interpreted as promising, inconclusive or problematic. The function of this procedure is to reduce the possibility of interpretative adjustments made a posteriori, preserving greater traceability in the decision-making process.

Secondly, the protocol proposes to define a **minimum observation window**, preferably of two weeks, in order to buffer oscillations associated with specific days, irregular traffic flows and local seasonalities. In contexts of low demographics, periods that are too short tend to amplify noise and make any variation more vulnerable to hasty readings. Observation by minimal windows does not eliminate data instability, but it improves comparability between different moments of the campaign and favors decisions less dependent on occasional fluctuations.

Thirdly, it is recommended to **freeze the other relevant variables during the test**, avoiding simultaneous changes in layout, traffic origin, offer or positioning of central elements of the page. As the volume of accesses is reduced, competing changes make interpretive attribution even more difficult and make the experiment less readable. From this perspective, governing the test also means constraining parallel interventions, so that the observed variation can be read in relation to a minimally stable environment.

The fourth component of the protocol is the adoption of a **minimal event dictionary**, which allows distinguishing different layers of user behavior in the page path. Instead of treating every interaction as equivalent, the proposal is to separate at least four levels: interaction with

the CTA, visibility of the payment block, progression towards QR/Pix, and signals closer to the effectiveness of the intended action. In the specific case analyzed in this article, the absence of finer instrumentation for displaying the QR code and staying in its area was identified as an important limitation; Therefore, the protocol now explicitly recommends that these events be incorporated into future applications, whenever technically feasible.

The fifth element concerns the **decision criteria**. Instead of pursuing an ideal of statistical significance that is difficult to sustain in low-scale operations, the protocol proposes to work with three decision-making categories: interpretable gain, absence of relevant gain, and execution error or noise. The first category corresponds to situations in which the tested variation shows consistent signs of improvement in relation to the local objective of the interface; the second covers cases in which the observed difference does not justify a practical change; and the third includes collection failures, instability of the experiment or external interference that makes reading unfeasible. This typology does not solve the problem of scarcity by itself, but organizes the decision in a more transparent way that is compatible with the real conditions of the field.

Finally, the protocol recommends maintaining a **synthetic record of the tests performed**, bringing together the execution period, observed variant, main metrics, decision made, and any incidents. This turns the experiment into cumulative analytical memory, allowing local operations to learn from their own variations instead of relying solely on generic prescriptions offered by external dashboards and models. In peripheral environments and lean teams, this cumulativeness is particularly important, because knowledge about public behavior tends to be built less by the abundance of data and more by the rigorous systematization of scarce signals.

Thus, the proposed protocol should not be understood as a closed, universal model or fully validated by this research, but as a methodological proposition derived from the reanalysis of the case, aimed at guiding decisions in contexts of low demographics.

Its central function is to put the local purpose of the interface back at the center of interpretation, articulating standardized metrics, observation of the use environment, and explicit analytical governance criteria.

Table 1 summarizes, in a propositional key, the operational components of this protocol, understood as an initial formulation to be refined in future applications:

Table 1

Lightweight test governance protocol for landing pages in low-demographic contexts

Dimension	Description
Objective	Standardize the conduct of tests on *local retail landing pages* under traffic scarcity, ensuring reproducibility, transparency and alignment of metrics with local value (payment via QR code).
Hypothesis	Objective formulation, in a single sentence, indicating the relationship between the variation applied and the expected result (e.g., increase of qr_render and qr_dwell_s ≥ 6 s).
Benchmark Metrics	QR code display rate (qr_render, %) and time spent in the QR area (qr_dwell_s, in seconds).
Observation window	Minimum period of 14 days, including weekly variations in behavior.
Decision criteria	Vitória: ≥ +2 p.p. in qr_render and ≥ +3 s in qr_dwell_s; Futility: absence of relevant gain; Error: Collection or execution failures.
Monitored events	Interaction with CTA; payment block visibility (≥ 1 s); display of the QR code; length of stay in the QR area; optional: copy of the Pix key.
Qualified visit	Occurrence of at least one of the following criteria: (i) time ≥ 12 s and rollover ≥ 60%; (ii) informational microinteraction; (iii) QR displayed permanently ≥ 6 s.
Usability (control)	Readability, CTA contrast, visible focus, and mobile-friendliness.
Performance (control)	Page loading stability (e.g., proper LCP and TBT).
Ethics (control)	Availability of a user-accessible privacy policy.
Experimental control	Absence of simultaneous changes to the interface or traffic sources during test execution.
Follow-up	Periodic checks of the stability of the experiment, the correct triggering of events and the integrity of the interface.
Reporting of the results	Period record, variant distribution, key metrics (qr_render and qr_dwell_s), decision (win/futility/error), verification of controls and incidents.
Attachments	Inclusion of empirical evidence (screenshots, data logs, change logs).
Context and traceability	Prior registration of hypotheses, metrics, interface freezing, seasonality factors, and analytical segmentation (device and funnel stage).

Source: The authors.

6 CONCLUSION

This article analyzed the performance of a local retail landing page in the context of low demographics, from a campaign carried out in Barra do Corda (MA), based on records from Google *Analytics* 4, Microsoft Clarity, heat maps and documentation of interface variations. By shifting the discussion about *landing pages* to an environment with low traffic volume, the study sought to understand not only the user's behavior in front of the page, but above all the limits and possibilities of measurement in contexts marked by scarcity of signals, infrastructural dependence, and strong sensitivity to contextual variations.

The reanalysis suggests, firstly, that the CTA cannot be understood as an autonomous element of conversion. Its performance appears conditioned by the organization of the interface environment, the stage of the funnel, the access device and the articulation with elements such as visual hierarchy, clarity of the path and microcopy. Second, the study indicates that attention

metrics such as dwell time and scroll depth remain useful as descriptive indicators, but become noisy when mobilized in isolation as evidence of intent or performance. Thirdly, the case reinforces the need to approximate the analytical reading of signals that are more adherent to the specific purpose of the page, especially those related to the payment flow, even though the reanalyzed corpus does not allow conclusively demonstrating the empirical superiority of these indicators in the specific case.

In this sense, the main empirical contribution of the article is to show that, in markets with low demography, the problem of measurement does not arise only from the existence of less data, but from the presence of data that are more sensitive to seasonality, traffic origin, device, and interface organization. Scarcity, therefore, is not just a quantitative limit; it constitutes an analytical condition of its own. This requires that the reading of performance be done with greater interpretive caution and with less dependence on standardized metrics taken as self-evident truths.

From a methodological point of view, the article contributes by proposing a situated reading of performance metrics in *local retail landing pages*, articulating media ecology, platformization, and usability to interpret scarce signals in a way that is more adherent to the local value of the interaction. From the case analyzed, a lightweight test governance protocol is derived, guided by simple pre-registration, minimum observation window, explicit decision criteria, and attention to indicators closer to the purpose of the interface. This proposal should not be understood as a universal model or as a fully validated protocol in a statistical sense, but as an initial methodological arrangement, compatible with local operations and with conditions of information scarcity.

The limits of the study need, however, to be kept in the foreground. The low volume of traffic, the sensitivity of metrics to contextual factors, the constraints imposed by analytics platforms, and the absence of finer instrumentation for events such as QR code display and staying in your area prevent strong generalizations and recommend that findings be read as situated inferences. In addition, the absence of explicit warning of experimentation in the original campaign constitutes a relevant ethical limitation, which should be considered in future applications of the proposed protocol.

Still, precisely because it operates under these restrictions, the case offers an important contribution to the field of communication and applied digital marketing. By examining a real campaign in a peripheral and low-scale context, the article shows that measuring well in these environments depends less on accumulating large volumes of data than on rigorously interpreting limited, contextually marked, and technically framed signals by the platforms. It is

in this displacement that its central contribution lies: to put the local purpose of the interface back at the center of the analysis and to demonstrate that, in markets with low demographics, the quality of the analytical decision depends on the ability to articulate standardized metrics, interface environment and concrete context of use.

REFERENCES

Instituto Brasileiro de Geografia e Estatística. (2023). Estimativas da população e perfil dos municípios brasileiros – 2023. IBGE.

Grohmann, R. (2019). Os rastros digitais na circulação de sentidos: Pela desnaturalização e contextualização de dados na pesquisa em comunicação. Galáxia (São Paulo), 42, 150–163. https://doi.org/10.1590/1982-25532019340183

Kotler, P., Kartajaya, H., & Setiawan, I. (2017). Marketing 4.0: Moving from traditional to digital. Wiley.

Kotler, P., Kartajaya, H., & Setiawan, I. (2021). Marketing 5.0: Technology for humanity. Wiley.

Manovich, L. (2013). Software takes command. Bloomsbury Academic.

McLuhan, M. (1995). Os meios de comunicação como extensões do homem (10ª ed.). Cultrix.

Nieborg, D. B., & Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. New Media & Society, 20(11), 4275–4292.

Nielsen, J. (1993). Usability engineering. Morgan Kaufmann.

Nielsen, J. (1994/2024). 101 usability heuristics for user interface design. Nielsen Norman Group. https://www.nngroup.com/

Paiva, D. T., Duarte, P., & Rodrigues, R. G. (2015). O impacto das cores, do tamanho e do posicionamento na captação da atenção dos consumidores: Uma análise com eye-tracking. Revista Portuguesa de Marketing, 38, 31–51.

Van Dijck, J., Poell, T., & De Waal, M. (2018). The platform society: Public values in a connective world. Oxford University Press.

Zarnescu, A. (2016). Measurement and evaluation methods used in social media campaigns. Politehnica Graduate Student Journal of Communication, 1(1).