FACULTAD DE CIENCIAS ECONÓMICAS Y DE ADMINISTRACIÓN

DEPARTAMENTO DE ECONOMÍA

UNIVERSIDAD DE LA REPÚBLICA URUGUAY

The Political Foundations of Consumption Home Bias: Evidence from Scan Consumption Data in Brazil.

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Programa de Maestría en Economía de la Facultad de Ciencias Económicas y de Administración
Universidad de la República

Montevideo - Uruguay

Marzo de 2025

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Tesis de Maestría presentada al Programa de Maestría en Economía de la Facultad de Ciencias Económicas y de Administración, Universidad de la República, como parte de los requisitos para la obtención del título de Magíster en Economía.

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Montevideo - Uruguay

Marzo de 2025

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UNIVERSIDAD DE LA REPÚBLICA URUGUAY

Página de aprobación

El tribunal docente integrado por los abajo firmantes aprueba el Trabajo Final:

Titulo

The Political Foundations of Consumption Home Bias: Evidence from Scan Consumption Data in Brazil.

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Posgrado

Maestría en Economía

Puntaje

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Tribunal

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Agradecimientos

Quiero agradecer a mi tutor por su guía y apoyo a lo largo de este proyecto.

A mi familia y amigos. A mi madre, padre y tía, por acompañarme y ocuparse de mí mientras realizaba esta tesis. A mi hermano, por escucharme y darme su opinión en más de una ocasión. A Martín, Rodrigo y Mahia, por las tardes de café y tesis. A Vanessa por ser mi refugio. A Camila por su eterna amistad. Y a todos aquellos que, en algún momento, prestaron su oído a mis desahogos.

A Alexandra, por facilitarme el acceso a la bibliografía.

A Scanntech, por proveerme los datos necesarios para este estudio, y a Tomás, por asegurarse de que los obtuviera.

Finalmente, agradezco al Programa de Becas de Maestría de la FCEA y al Programa de Becas para la Finalización de Posgrado de la CAP, por su apoyo durante la realización de esta investigación.

The Political Foundations of Consumption Home Bias: Evidence from Scan Consumption Data in Brazil.

Paula Martinez Mazza *

Abstract

Consumers increasingly consider factors beyond quality and price when making purchasing decisions, including product origin. This paper explores consumer home bias —the preference for domestically produced goods— and its political determinants. While home bias is well-documented in trade literature, its political underpinnings remain underexplored. I investigate nationalism as a key driver of home bias, examining how nationalistic sentiment influences consumer choices and whether this effect varies across voters' political leanings.

To empirically assess this relationship, I leverage the 2022 FIFA World Cup as an exogenous trigger for nationalism and analyse its impact on market share growth for perceived domestic brands in Brazil. Using a two-way fixed effects model on weekly data from over 14,000 stores across 2,700 municipalities, I find that the surge in national pride during the World Cup increased the market share of brands with Portuguese-sounding names. Moreover, this effect is politically heterogeneous: while no significant impact is observed in municipalities with low support for the right-wing party, areas with strong support exhibit a pronounced shift toward domestic-sounding brands.

These findings contribute to the literature by providing empirical evidence on the link between nationalism and consumption, highlighting political heterogeneity in home bias, and leveraging real-world consumption data rather than hypothetical surveys.

Key words: Home Bias; Consumer Behaviour; Nationalism; Right-Wing Populism; Real-World Consumption Data.

Resumen

Los consumidores consideran cada vez más factores más allá de la calidad y el precio de los productos al tomar decisiones de compra, incluido el origen del mismo. Este trabajo analiza el sesgo de consumo nacional —la preferencia por bienes producidos de forma local— y sus determinantes políticos. Si bien este sesgo está ampliamente documentado en la literatura sobre comercio, sus fundamentos políticos siguen estando poco explorados. En este estudio, investigo el nacionalismo como un factor clave del sesgo de consumo nacional, examinando cómo el sentimiento nacionalista influye en las decisiones de consumo y si este efecto varía según la orientación política de los votantes.

Para evaluar empíricamente esta relación, utilizo la Copa Mundial de la FIFA 2022 como un detonante exógeno del nacionalismo y analizo su impacto en el crecimiento de la cuota de mercado de marcas percibidas como nacionales en Brasil. A través de un modelo de efectos fijos bidireccionales aplicado a datos semanales de más de 14.000 tiendas en 2.700 municipios, encuentro que el aumento del nacionalismo durante la Copa del Mundo incrementó la cuota de mercado de marcas con nombres de origen portugués. Además, este efecto es heterogéneo en términos políticos: mientras que en los municipios con bajo apoyo al partido de populista de derecha radical no se observa un impacto significativo, en aquellas áreas con un fuerte respaldo se evidencia un marcado aumento en la preferencia por marcas con nombres asociados a lo nacional.

Estos hallazgos contribuyen a la literatura al proporcionar evidencia empírica sobre la relación entre nacionalismo y consumo, resaltar la heterogeneidad política en el sesgo del consumidor y utilizar datos de consumo reales en lugar de encuestas hipotéticas.

Palabras clave: Sesgo Nacional del Consumidor; Comportamiento del Consumidor; Nacionalismo; Populismo de Derecha Radical; Datos de Consumo Reales.

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1 Introduction

Consumers are placing increasing value on aspects of goods beyond quality and price. For instance, their interests extend to the ethical production practices and values upheld by the brands, their creators, or ambassadors. In this regard, consumers have demonstrated fervent responses to news detailing issues such as Balenciaga's photoshoot allegedly conveying inappropriate messages concerning child exploitation (Rousseau, 2023), labour exploitation in Shein factories (Havel, 2023), or corporate alignment with specific political positions, exemplified by statements attributed to Starbucks and McDonald's regarding ongoing Israel's war in Gaza (Ravjanshi and Serhan, 2024), to cite a few.

Another area of growing interest relates to the origin of products, as evidenced by the expanding body of literature on the subject. A key topic within this field is the study of consumer home bias. This refers to the disproportionate consumption of domestically produced goods (Morey, 2016). It can also be interpreted as a higher willingness to pay for domestically produced items.

Home bias plays a significant role in shaping international trade patterns. Empirical studies consistently show two key patterns: firstly, trade between countries is lower than predicted by classical trade models, a phenomenon known as 'missing trade'; secondly, intra-country trade vastly exceeds international trade, even in regions with minimal barriers, such as the European Union or the U.S.-Canada border, a phenomenon known as the "border puzzle" (Balta and Delgado, 2009; Wolf, 2000; McCallum, 1995; Nitsch, 2000).

The causes of home bias can broadly be classified as supply-side and demand-side factors. On the supply side, some researchers argue that domestic products dominate simply because foreign firms fail to enter the market (see Evans, 2001; Hillberry and Hummels, 2002; Olper et al., 2012; Friberg et al., 2011). On the demand side, consumers may intrinsically prefer domestic goods, even when identical foreign alternatives are available. While some studies do not identify the specific reasons behind this preference (e.g. Olper et al., 2012; Lopez and Matschke, 2011; Friberg et al., 2011), others attribute it to factors such as habit formation (Atkin, 2013), environmental concerns and the "buy local" movement (Tarola and Zanaj, 2023), support for local producers (Darby et al., 2006; Morey, 2016; Hu et al., 2012), a means of expressing political views (Morey, 2016), or the perception that local products offer higher quality and freshness (Brown, 2003; Darby et al., 2006; Hu et al., 2012).

Despite the extensive literature on home bias in consumption, little is known about its political foundations. My work contributes to filling this gap by examining the political economy of consumer home bias, focusing on how nationalism —a politically malleable emotion— shapes consumption patterns and,

consequently, international trade. Moreover, I explore how individuals' preferences for domestic versus international products vary according to their political leanings, particularly across the size of the popular vote for the radical right-wing populist party.

Nationalist sentiment is deeply intertwined with economic behaviour, where it manifests as a preference for national economic interests over foreign competition, known as economic nationalism (Baughn and Yaprak, 1996). Given its relevance, this study investigates nationalism as a key driver of home bias in consumption. Notably, nationalism and radical right-wing politics share a strong, bidirectional relationship: populist right-wing parties actively promote nationalist narratives, while nationalist sentiments strongly influence voter preferences (Farias et al., 2022; Inglehart and Norris, 2016). This ideology frequently translates into protectionist policies, but it is important to distinguish between populist protectionism—driven by cultural and political attitudes—and traditional protectionism, historically associated with left-wing economic concerns (Rodrik, 2018).

To empirically assess the impact of nationalism on consumer preferences, an external trigger for nationalist sentiment is necessary. Sports, as a key component of national identity, provide an ideal setting. Sporting events reinforce narratives of "us" versus "them," fostering a sense of imagined community through shared rituals and national symbols (Arnold, 2021). Fans actively generate national meanings through sports, making major events—such as the FIFA World Cup—particularly effective in reinforcing national pride and influencing consumer behaviour.

This study employs the 2022 FIFA World Cup as an exogenous shock to investigate the relationship between nationalism and home bias in consumption, using Brazil as a case study. It addresses two key questions. Firstly, does the effect of sports events on nationalistic emotions translate into consumer choices between imported and domestically produced goods? Secondly, how do different partisan voters react to sports event-induced home bias?

To answer these questions, I analyse annual market share growth for perceived domestic brands across 14,149 stores in 2,731 municipalities in Brazil, using data aggregated at the municipality-week level [1]. The dataset covers four product categories —rice, sugar, ground coffee, and oil— over 40 weeks spanning 2021 and 2022. To assess political heterogeneity, I incorporate municipal-level electoral results from Brazil's 2022 presidential election.

The empirical strategy employs a two-way fixed effects model, comparing market share growth across weeks and years. Results indicate that the World Cup-induced surge in nationalist sentiment increased the market share of brands with Portuguese-sounding names. However, the effect is politically

[1] Scan POS data are provided by the firm Scanntech.

heterogeneous: while no significant impact is observed in municipalities with low support for Bolsonaro, areas with strong right-wing support exhibit a pronounced shift toward domestic-sounding brands.

This study makes three key contributions to the literature. Firstly, it provides empirical evidence on the role of nationalism in shaping consumption patterns. Secondly, it highlights the interaction between political orientation and consumer behaviour, addressing a gap in the literature on the heterogeneity of home bias. Thirdly, it utilises actual consumption data, contrasting with most prior research, which predominantly relies on willingness-to-pay estimates and may suffer from hypothetical bias in survey responses.

The paper is structured as follows: Section 2 reviews the literature on home bias. Section 3 explores the relationship between nationalism, economics, politics, and sports. Section 4 presents the empirical strategy, including the case selection, data, and model. Section 5 discusses the results, followed by a broader discussion in Section 6.

2 Home-Bias: Definition, Causes, and Measurement

2.1 Definition of Home-Bias

Home bias referes to the disproportionate consumption of domestically produced goods (Morey, 2016). It plays a significant role in shaping international trade patterns. Empirical studies consistently find that trade between countries is: (i) less than what classical trade theory models predict, a phenomenon known as "missing trade," and (ii) far exceeded by intra-country trade, even in regions with minimal trade barriers, such as the European Union or the U.S.-Canada border. This is referred to as the border puzzle (see Balta and Delgado, 2009; Wolf, 2000; McCallum, 1995; Nitsch, 2000).

2.2 Causes of Home-Bias

The causes of home bias can be broadly divided into supply-side and demand-side factors.

2.2.1 Supply-Side Factors

The supply-side explanation suggests that the market share of national products is larger because foreign firms simply do not enter the national market.

Evans (2001) found that locational effects, such as barriers to imports or access to local distribution networks drive home bias in the US. Using data on local sales of foreign affiliates of US multinational enterprises, bilateral US exports, and domestic sales by host country firms, they estimated that the ad valorem tariff equivalent of producing at home and shipping abroad ranges between 51% and 105% across industries.

Similarly, Hillberry and Hummels (2002) highlighted the role of intermediate inputs in concentrating production in the US. Their study showed that home bias in trade patterns arises endogenously due to the co-location of intermediate and final goods producers.

Olper et al. (2012) and Friberg et al. (2011) provide valuable insights into the causes of home bias. Olper et al. (2012) found that the drivers of home bias vary by product: in the EU, home bias in beer is largely due to the home market effect, as firms locate near consumers to minimize the high trade costs of beer exports, whereas in the wine sector, consumer preferences play a dominant role. Similarly, Friberg et al. (2011) showed that home bias in the New Hampshire wine market results from both high foreign fixed entry costs and a preference for US wines. Their simulations indicate that if all source countries were assigned the same valuation, the domestic market share would drop from 58% to 38%.

2.2.2 Demand-Side Factors

The demand-side explanation suggests that people simply prefer domestic products. This means that they have an intrinsic preference for domestically produced goods, even if an identical foreign-produced alternative is available.

Home bias can be explained by habit formation, as Atkin (2013) found for India. Adults tend to favour food they ate in childhood —foods that were locally abundant— leading to home bias in household consumption emerging over generations.

Home bias can also stem from the "buy local" phenomenon, where campaigns encourage support for local businesses and domestic employment. It can also be driven by environmental concerns, as consumers prefer local goods to reduce transportation-related emissions (Tarola and Zanaj, 2023). Locally produced and consumed food requires less fuel for transport, leading to lower pollution levels and reduced dependence on oil.

Similarly, Brown (2003) found that consumers in Missouri prefer locally produced goods, associating them with higher quality and freshness due to shorter transport distances. Likewise, Darby et al. (2006) found that food shoppers in Ohio were willing to pay 21–39% more for locally grown strawberries. Supporting local businesses was a key motivation, though cited less frequently than freshness. Moreover, Hu et al. (2012) found that consumers in Ohio and Kentucky were willing to pay a premium for locally produced blackberry jam and to support small family farms.

Morey (2016) further explored home bias, showing that it serves both as a means of supporting local businesses and as a way for consumers to express political views. Their study found that Malagasy consumers were willing to pay roughly 8% more for domestically grown rice, leading to a 5% reduction in imported rice consumption. This bias towards national production was also driven by their rejection of imported French rice, as Madagascar was formerly a French colony.

Some studies, such as Lopez and Matschke (2011), found that consumers prefer national brands in the US beer market. However, they do not identify the specific reasons behind this preference. The same applies to Olper et al. (2012) and Friberg et al. (2011), cited earlier.

2.3 Measurement of Home-Bias

Three main empirical strategies are commonly used to measure home bias: (i) gravity models, (ii) experiments on consumer preferences, and (iii) real-world consumption data frameworks.

2.3.1 Gravity Models

The gravity equation and its modifications are widely used to measure home bias. This approach relies on market-level data, using aggregate trade flows —such as national production and imports— to compare intra-country versus cross-border trade. However, since it captures market-level behaviour rather than individual consumer choices, its applicability to this study is limited.

2.3.2 Experiments on Consumer Preferences

Choice experiments and willingness-to-pay studies provide direct evidence of consumer preferences. Studies such as Brown (2003), Morey (2016), Darby et al. (2006), and Hu et al. (2012) use consumer surveys and experimental data to estimate the premium individuals are willing to pay for domestically produced goods. These methods offer granular insights into consumer motivations but may be limited by hypothetical bias.

2.3.3 Real-World Consumption Data Approaches

This approach is less common due to the extensive data requirements. When available, studies often estimate discrete choice models using the Berry approach or apply the Berry, Levinsohn, and Pakes market equilibrium model, as done by Lopez and Matschke (2011) and Friberg et al. (2011) respectively.

A less conventional but insightful empirical strategy involves applying a difference-in-differences (DiD) framework. Although typically employed to assess the impact of boycotts, this method can be adapted to measure home bias in response to nationalist shocks. By comparing changes in consumer behaviour before and after an event, while controlling for time-invariant factors, this approach enables causal inference.

For instance, Pandya and Venkatesan (2016) examined how nationalist sentiment influenced consumption during the 2003 Iraq War dispute with France. Analysing changes in the market shares of French-sounding brands relative to the same week in the previous year, they found that US supermarkets in areas with strong national identification exhibited more pronounced boycotts.

Building on this framework, my study extends the analysis of home bias by leveraging real-world consumption data from the 2022 World Cup to identify behavioural shifts in response to a nationalist event.

3 Conceptual Framework

3.1 Nationalism

The term nationalism encompasses a range of interpretations across multiple levels of analysis. According to Griffin (2003, cited by Dunn, p. 21, 2015), nationalism is "the sense of belonging to and serving a perceived national community". It conceptualizes the nation as a collective entity defined by shared language, history, culture, territory, religion, and/or ethnicity. Within this ideology, the nation is sovereign and possesses a unique cultural identity, which grants it a special historical mission, fostering a sense of pride and duty among its members.

Scholarly literature commonly divides nationalism into two broad categories: (i) ethnic, cultural, or exclusionary nationalism and (ii) civic, inclusionary, or liberal nationalism. The latter conceptualizes the nation as a flexible and inclusive entity, where shared political participation unites individuals in an imagined community (Dunn, 2015; Rydgren, 2018). In contrast, exclusionary nationalism is rooted in a primordial belief that the nation is a fixed and unchangeable entity. In this view, natives are favoured over foreigners in both society and the state, while non-native elements are perceived as threats to national homogeneity (Dunn, 2015; Rydgren, 2018).

3.2 The Political Foundations of Nationalism

A strong connection exists between radical right-wing politics and ethnic nationalism. This relationship is bidirectional: populist right-wing parties actively promote nationalism, and populist right-wing voters exhibit a preference for nationalist ideologies.

On the one hand, populist right-wing parties frequently incorporate nationalist rhetoric into their discourse. Alongside anti-establishment and authoritarian tendencies, populist radical right parties are characterized by nationalism, often intertwined with xenophobia, a phenomenon known as nativism (Farias et al., 2022). In populist discourse, the people are portrayed as a homogeneous unit, excluding not only the political elite but also minorities, such as immigrants, individuals practising different religions, or those belonging to different ethnic groups. This perspective promotes monoculturalism, national self-interest, closed borders, and traditionalism, while opposing multiculturalism, international cooperation, free movement of people, labour, and capital, as well as progressive values (Inglehart and Norris, 2016).

On the other hand, nationalism also serves as a key motivator for its voters. Numerous studies highlight nationalism as a core value among those who support radical right-wing parties, suggesting that nationalist sentiments play a crucial role in shaping electoral preferences.

As Margalit (2019) stated, understanding why individuals vote for populist radical right parties is complex, as vote choice is neither linear nor always consciously motivated. Firstly, voters are often unaware of the underlying factors influencing their decisions. Secondly, they may struggle to articulate their motivations, not only to interviewers but even to themselves. Moreover, Shayo (2009) argues that vote behaviour may be driven more by identity considerations than by economic self-interest.

When examining the factors behind populist support, most of the literature links it to voters' nationalist tendencies. Margalit (2019) states that increased exposure to foreign influences through globalization, such as new lifestyles, religions, and cultures, along with structural social changes, including urbanization and evolving gender roles, has fuelled a heightened sense of cultural and demographic threat. This perceived displacement of traditional social values has generated resentment among segments of the population who, once part of the dominant majority, now feel their social standing has eroded. As a result, they have become increasingly receptive to populist rhetoric portraying a disconnected, cosmopolitan elite as having abandoned them. In response, these voters embrace the populist nostalgia for a so-called "golden age" of cultural homogeneity, traditional values, and strong national identity.

Empirical studies reinforce this link between nationalism and radical right-wing support. Dunn (2015), analysing radical right populist parties in Austria, Belgium, Denmark, the Netherlands, and Switzerland, found that nationalism was a strong predictor of support for radical right-wing populist parties. Similarly, Lubbers and Coenders (2017) demonstrated that across all European countries, individuals who feel greater national pride and a stronger national identity are more likely to vote for the radical right. Additionally, Kulin et al. (2021) found that public attitudes aligned with nationalist ideology are closely linked to voting for right-wing populist parties. These findings further confirm that nationalism is not merely an ideological stance promoted by radical right parties but a defining feature of their electoral base.

3.3 The Economic Expression of Nationalism

One domain where nationalist sentiment is particularly evident is the economic sphere, where consumers and policymakers prioritize domestic economic interests over foreign ones. Unlike economic liberalism, which promotes open markets and global trade, economic nationalism fosters a "us-first" mentality, emphasizing "our companies," "our products," and "our workers" (Baughn and Yaprak, 1996).

As a result, nationalist sentiment can amplify perceptions of economic competition, reinforcing the notion that global trade operates as a zero-sum game—where one country's gain is another's loss (Baughn and Yaprak, 1996). This perspective contrasts with economic theories that view trade as mutually ben-

eficial. Within this framework, individuals may perceive national prosperity as directly linked to their personal well-being, fostering support for domestic industries and a preference for locally produced goods.

In this sense, even though populism does not propose specific economic policies, its distaste for foreign influences and its desire to avoid organisations, international commitments, and relations lead to protectionist policies, as they not only avoid importing goods from other countries but also impose tariffs and other trade restrictions (Ehrlich and Gahagan, 2023).

Populist protectionism should not be confused with traditional protectionism. Although they can sometimes coincide, the ideology behind their actions differs greatly, since opposition to trade in the former has nothing to do with economic insecurity, as in the latter, but with cultural and political attitudes, seeing free trade—and foreign people and products in general—as a 'scapegoat' for all problems (Ehrlich and Gahagan, 2023; Rodrik, 2018).

For instance, Ehrlich and Gahagan (2023) provided a clear example: while populist protectionism would oppose imports irrespective of whether the country in question manufactures those products, traditional protectionism would not, as it does not perceive such imports as a threat. In this sense, the authors understand that as the populist movement grows, there is greater opposition to trade, whether of a nationalist or economic nature, which is only partially offset by a decline in other forms of non-economic opposition (particularly fair trade concerns).

Along the same lines, Ehrlich and Gahagan (2023) and Rodrik (2018) argue that while the root cause of these populist movements and populist protectionism may be fundamentally economic, spurred by globalisation or economic insecurity, they frequently take on cultural and nativist political expressions, that persist even after economic conditions improve. Thereupon, opposition to trade is no longer about economic insecurity, but rather about cultural attitudes.

For its part, traditional protectionism has historically been more aligned with left-wing parties. Leftist critiques of globalization stem from concerns about inequality and labour market disruptions. As Rodrik (2018) notes, globalization's benefits are unevenly distributed, often exacerbating income disparities. For instance, Rudra et al. (2021) found that high-skilled workers gain the most from trade liberalisation, as the skill premium remains steady or increases over time, regardless of the nation's level of development. In particular, in Brazil, after the great import-tariff reductions in the 1990s decade, regions exposed to larger tariff reductions experienced, after liberalisation, a temporary increase in crime, worsening labour market conditions, reduced public goods provision, and increased income inequality (Dix-Carneiro et al., 2018); a decline in labour market formality, a shift of workers from the tradable to the non-tradable sector,

and a rise in informality and unemployment (Dix-Carneiro and Kovak, 2019): and, prolonged declines in formal sector employment and earnings relative to other regions (Dix-Carneiro and Kovak, 2017).

These outcomes illustrate that while protectionism can stem from both populist and traditional left-wing concerns, their ideological foundations differ: the former is driven by cultural and nationalist attitudes, while the latter is rooted in economic redistribution and labour market protections.

In fact, these two forms of protectionism differ so significantly that while a nationalist shock strengthens populist protectionism —as previously stated— it may weaken traditional protectionism. This occurs because national identification tends to weaken support for redistribution (Shayo, 2009; Chang and Kang, 2018). Chang and Kang (2018) found that national identification leads the poor to withdraw their support for income redistribution while also experiencing a boost in self-esteem, which, in turn, narrows the attitudinal gap between them and the wealthy. Similarly, Shayo (2009) argues that a common national threat—such as intensified international competition or conflict with another country—heightens the salience of national identity. In particular, it fosters a sense of unity between rich and poor, reinforcing the perception that they are "all in the same boat". A stronger national identity shifts focus away from class issues, ultimately reducing support for redistribution (Shayo, 2009).

Moreover, the relationship between national identification and redistribution is bidirectional. Not only does a stronger national identity reduce support for redistribution, but low levels of redistribution also make identification with the lower class less appealing, thereby reinforcing national identity (Shayo, 2009).

3.4 Sports and Nationalism

Sports —particularly those in which a nation traditionally excels and where failure could mean a loss of prestige— play a crucial role in shaping national identity (Arnold, 2021). Orwell (1945, cited in Arnold, 2021) argued that sports are deeply intertwined with the rise of nationalism.

Sports contribute to conforming to the idea of an imagined community, a feeling of togetherness (Bergholz, 2018; Fox, 2006; Arnold, 2021). They serve as rituals where people reunite surrounded by national symbols, such as flags, anthems and colours, generating national cohesion, favouring the 'alignment of national allegiances' and reproducing collective identities (Fox, p.226, 2006; Brentin and Cooley, 2015). Beyond fostering unity, sports also reinforce national rivalries. The emotional intensity of sports rivals that of warfare, creating a fable of 'us' versus 'them' in which now athletes embody the nation, making the abstract concept of national identity tangible (Fox, 2006; Arnold, 2021). In this process, fans now not only consume but also generate national meanings (Fox, 2006; MacClancy, 1996

cited by Brentin and Cooley, 2015).

3.5 Empirical Implications

Building on the literature review and theoretical framework, this section formulates testable hypotheses to address the research questions: (1) whether Sporting Mega Events influence consumer home bias, and (2) whether this effect varies based on partisan affiliation.

The first hypothesis establishes the general relationship between Sporting Mega Events and consumer behaviour:

- H1: Sporting Mega Events positively affect consumer home bias, by increasing consumer preference for (perceived) domestically produced goods over imported alternatives.

Beyond this overall effect, the focus of my research lies in the potential heterogeneous effects of Sporting Mega Events. Drawing from existing literature about the political foundations of nationalism, I expect to find strong heterogeneity in home bias effect after exogenous shocks of national sentiment:

- H2: The effect of Sporting Mega Events on consumer preference for domestically produced goods is stronger in municipalities with higher levels of political support for Bolsonaro's party.

This study is primarily exploratory. By examining heterogeneous treatment effects, I aim to identify key correlates of consumer home bias rather than establish direct causal relationships. Such descriptive expectations represents a contribution to the literature insofar as little is known about the relationship between home bias and individual consumer characteristics. By identifying patterns in how national sentiment influences purchasing decisions, this research may help to build new theories of home bias as well as justify future research on its individual-level causal chains.

4 Empirical Strategy

4.1 Brazil as a case study

Brazil presents an exceptional case for examining the relationship between nationalism and consumer behaviour for several reasons.

Firstly, Brazil is a major player in international trade, ranking 23rd in global exports, 24th in global imports, and 9th in terms of Gross Domestic Product (Bank, 2023). Given its economic weight, if home bias significantly influences Brazilian consumption patterns, it could have important implications for international trade. Investigating the extent of this bias is therefore crucial.

Secondly, the 2022 FIFA Men's World Cup provides an exceptional empirical setting to study the intersection of nationalism and consumer behaviour, as it coincided with Brazil's most polarized presidential election in history. The election, held on October 30, 2022, resulted in Jair Bolsonaro losing re-election with 49.1% of the vote for the Partido Liberal (PL) and 50.9% for the Partido dos Trabalhadores (PT). By the time the World Cup began, the election had concluded, allowing the municipal-level vote share for Bolsonaro to serve as a precise and contemporaneous measure of right-wing support. This creates a rare opportunity to analyse how nationalist sentiment, heightened by a globally significant sporting event, translates into economic behaviour at a highly localized level.

Thirdly, Brazil's municipal structure provides a unique advantage for empirical analysis. With over 5,500 municipalities, the small analytical units reduce the risk of ecological fallacy, enabling a more direct association between store-level purchasing behaviour and local political characteristics. Additionally, Brazil's high variability in voting patterns across municipalities[2] offers an ideal setting to explore how political affiliation influences consumer choices.

Fourthly, Jair Bolsonaro is a prime example of a radical right-wing populist leader with a strong nationalist discourse. His presidency was characterized by anti-globalization rhetoric, economic protectionism, and a pronounced emphasis on national identity. This makes Brazil a particularly relevant setting to examine the connection between nationalist sentiment and home bias in consumption. For further information on Bolsonaro's populism, see Annexe A.1.

Lastly, nowhere is the link between sports and nationalism more evident than in Brazil, where football is not just a game but 'the national passion'(Gordon and Helal, p.309, 2001). Brazil has hosted multiple Sporting Mega Events (SMEs), including the 2014 FIFA World Cup and the 2016 Olympic Games, further cementing football's central role in national identity. Additionally, the Brazilian national

[2]See Figure 2 for more information.

team holds five World Cup titles (1958, 1962, 1970, 1994, and 2002), reinforcing both international prestige and national self-esteem. Success in football strengthens national identity by creating winners and fostering collective pride (Arnold, 2021).

Beyond symbolism, football in Brazil serves as a mechanism of social integration and mobility. It unites diverse social classes, bridging racial and economic divides, and plays a crucial role in consolidating national identity (Gordon and Helal, 2001; Arnold, 2021). This universal appeal makes football a powerful and homogeneous nationalist force, ensuring that exposure to nationalist sentiment during the World Cup is not limited to specific socioeconomic or geographic groups but instead permeates the entire country.

Moreover, according to Kantari (2023), over 59% of the Brazilian population watched the 2022 World Cup, making it a widespread and powerful moment of national unity. This homogeneity in viewership strengthens the study's validity, as the nationalist sentiment triggered by the tournament was not confined to specific groups but rather permeated Brazilian society as a whole.

4.2 Descriptive Data

To address the research questions, I use a detailed dataset containing purchase information from 14,149 points of sale (POS) across Brazil. These POS are distributed across all 27 Federative Units and 2,731 of the country's 5,568 municipalities. The dataset covers transactions from 2021 and 2022, with their geographical distribution shown in Figure 1.

For each POS, the dataset provides comprehensive purchase details, including the number of units bought, total volume, price, and barcode (formally known as the Global Trade Item Number). Although these variables are recorded daily at the store level, I aggregate the data at the weekly-municipality level to enhance manageability. Additionally, I retain only stores that operated throughout the entire study period to avoid biases stemming from store entry or exit, which could distort product availability.

This study focuses on four product categories: rice, ground coffee, oil, and sugar. The selection of these goods is based on three key criteria. Firstly, these products are relatively homogeneous, minimizing the influence of quality differences or other product characteristics on consumption decisions. Commodities like these exemplify such homogeneity, making them ideal for analysing shifts in consumer preferences.

Secondly, they are frequently purchased, increasing both the likelihood of detecting changes in buying behaviour and ensuring widespread consumer familiarity. According to the Brazilian Family Budget Survey (Pesquisa de Orçamentos Familiares 2017–2018), rice and coffee are the most frequently con-

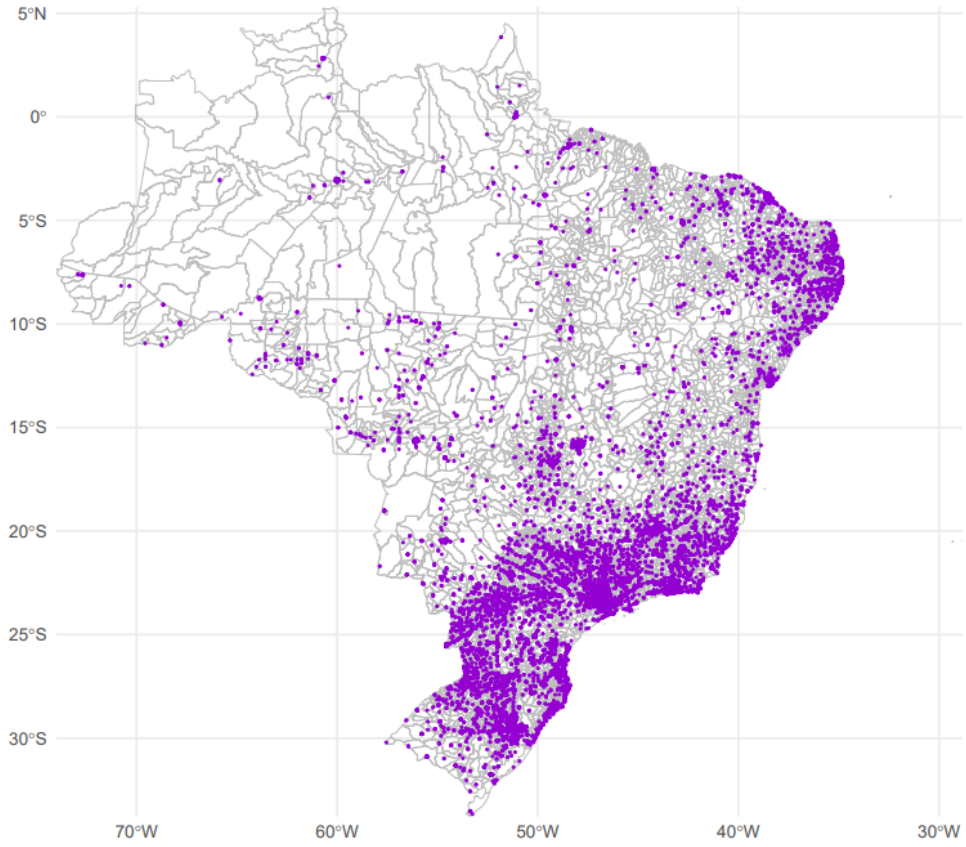

Figure 1: Map of Brazil divided by municipalities, with each point representing a POS used in this study.

sumed food items at the household level, with consumption rates of 78.1% and 76.1%, respectively. Oils and fats rank fifth, with a frequency of 46.8%, while sugar consumption is significantly lower at 8.4%.

Thirdly, these categories represent a mix of market structures: while oil and ground coffee compete with imports, rice and sugar are predominantly national products, as shown in Table 1. This distinction reinforces the idea that home bias in consumption is driven by demand rather than supply-side constraints.

	Ground Coffee	Oil	Rice	Sugar
Home	599	155	813	328
Foreign	67	112	63	30
Total	666	267	876	358

Table 1: Distribution of national and foreign-produced brands according to barcode across each product category.

Using this dataset, I construct the outcome variable: the annual growth in market share between a given week and the same week in the previous year. Market share is defined as the proportion of total volume sold within a brand-product category relative to the total volume sold in that category for a

given municipality and week. The mathematical representation of this variable is provided in the next subsection.

To determine whether a unit is treated, I establish criteria for classifying products as national or foreign. The first two (or sometimes three) digits of a product's barcode indicate the country where it was last manufactured [3]. However, relying on barcodes has limitations, as the country of manufacture may not align with consumer perceptions of a product's origin. This discrepancy has been observed in cases such as the 2003 US-French boycott, as demonstrated by Pandya and Venkatesan (2016).

Since the treatment targets goods perceived as Brazilian, rather than those objectively produced in Brazil, it is crucial to account for consumer perceptions. If this distinction is overlooked, the analysis may mistakenly focus on products that were not actually subject to the treatment effect.

Given that conducting a survey to determine perceived origin is not currently feasible, I identify the perceived origin of brands through automated language detection. Consumers often associate languages with specific regions or countries, making this a useful proxy for national identity. The process follows these steps:

- Extract brand names from the dataset.
- Manually verify spelling for brands covering 80% of the market, given the impracticality of reviewing all brands.
- Apply a language detection tool to each brand name.
- Assign Brazil as the perceived origin if the detected language is Portuguese.
- Exclude brands with inconclusive language detection results to maintain consistency in cognitive associations.

In summary, the units of analysis are brands within a specific product category in each municipality (e.g., a unit is defined as a unique combination of brand-product category-municipality). If the language detector identifies the brand as Portuguese, it is classified as "home" (treated); otherwise, it is categorized as "foreign" (control). Brands for which no language is detected or for which the results are unreliable are excluded from the analysis. Table 2 presents the distribution of treated and control brands across product categories.

As stated before, the event under analysis is the 2022 FIFA Men's World Cup, held from November 20 to December 18. The treated period begins with Brazil's first match (November 24, 2022), as matches

[3] https://www.gub.uy/comunicacion/noticias/codigo-de-barras

	Ground Coffee	Oil	Rice	Sugar
Home	412	106	494	182
Foreign	254	161	382	176
Total	666	267	876	358

Table 2: Distribution of treated and control brands across each product category.

represent the peak of the shock, and extends until January 30, 2023, to account for any lingering effects. However, as demonstrated later in the robustness Section 5.2, this decision does not affect the estimated results.

To examine potential heterogeneity in the treatment effect, this study leverages municipal-level results from the second round of the 2022 presidential election, obtained from the Superior Electoral Court. Figure 2 presents a heat map illustrating the municipal variability in electoral outcomes, while Figure 3 depicts this variability in a histogram. Additionally, Figure 4 shows the distribution of electoral outcomes, but only for the municipalities included in the study. Although the sample leans more to the right politically, it still exhibits substantial variability.

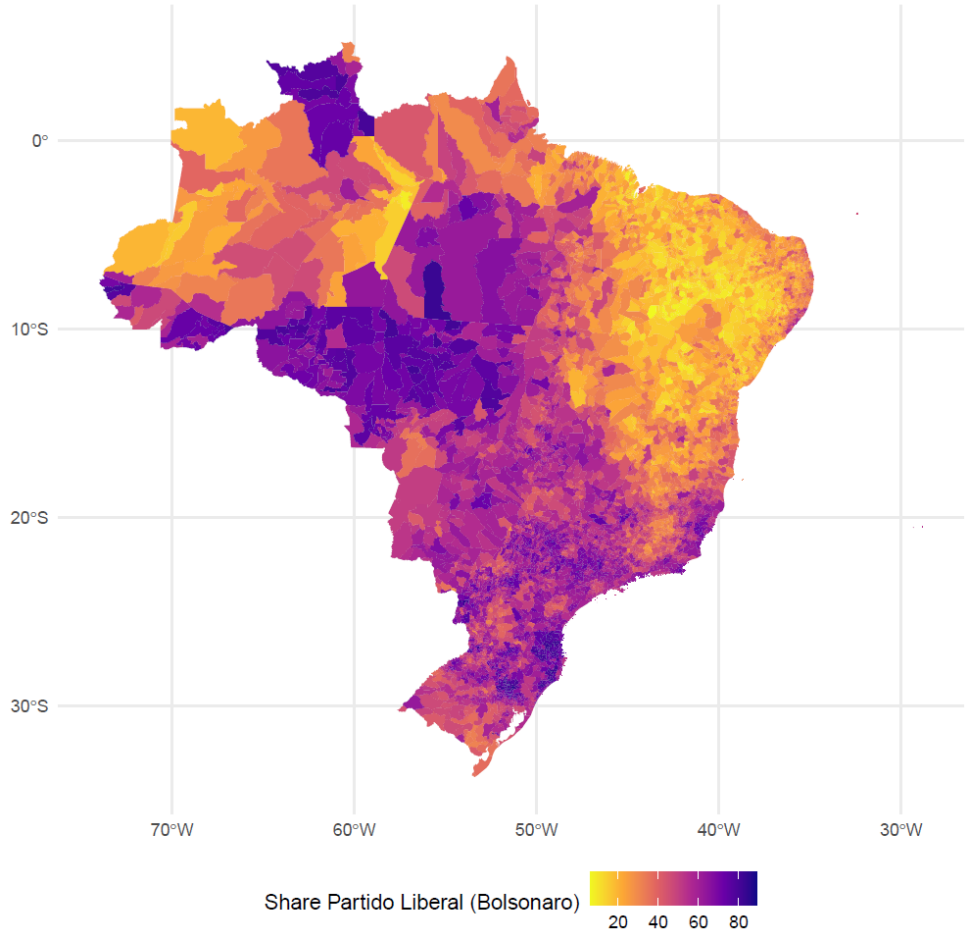

Figure 2: Heat map of Bolsonaro's second round 2022 election results.

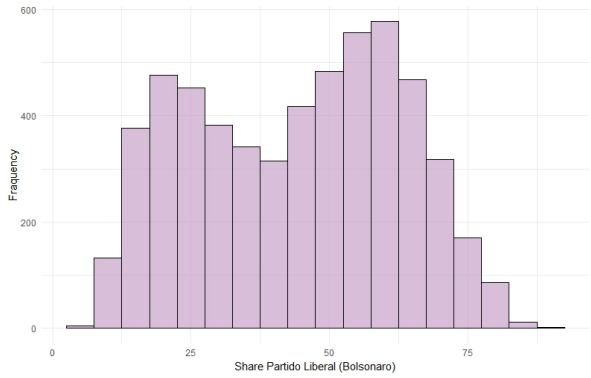

Figure 3: Histogram of Bolsonaro's second round 2022 election results, including all municipalities of Brazil.

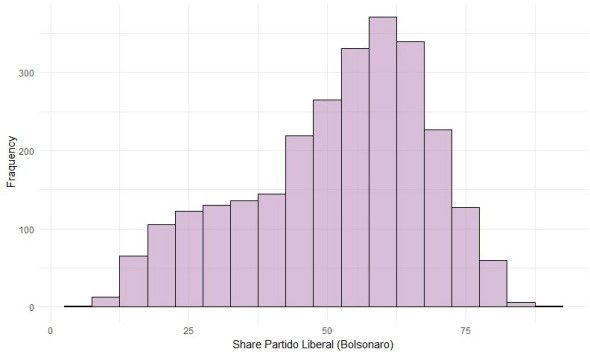

Figure 4: Histogram of Bolsonaro's second round 2022 election results, including only the municipalities in the study sample.

4.3 Empirical Model

Building on Pandya and Venkatesan (2016), I will use a two-way fixed effects (TWFE) which exploits the assumption of parallel trends as in difference-in-difference models (Angrist and Pischke, 2009). I compare the annual growth in market share between a week and the same week the year before, of nationally identified brands during the occurrence of the nationalist shock. One advantage of my identification strategy is that all units adopt the treatment simultaneously. This avoids the challenges associated with staggered treatment adoption and heterogeneous effects across units (Goodman-Bacon, 2021).

The model for annual changes in each brand-product category-municipality-week market share can be represented as follows:

$$\Delta\text{Share}_{ikjt} = \beta_1 \text{D}_{ikjt} + \beta_2 X_{ikjt} + \gamma_{ikj} + \delta_t + \varepsilon_{ikjt}$$

where:

- $\Delta\text{Share}_{ijkt}$ is the difference in market share from the year previous to the shock, $Y-1$, to the year of the shock, Y, of week t, for the brand i product category k in municipality j. This is, $\Delta\text{Share}_{ijkt} = \text{Share}^{Y}_{ijkt} - \text{Share}^{Y-1}_{ijkt}$.

- D_{ikjt} is a dummy variable that equals 1 if the brand is identified as home during the treatment period and 0 otherwise.

- γ_{ikj} and δ_t are unit and time fixed effects.

- ε_{jkt} is a normally distributed random error term, clustered by municipalities.

Among the control variables X_{ikjt} , I include the total volume sold for product category k in munic-

ipality j and week t, which accounts for overall changes in demand. Additionally, I include the price per kilogram or litre of brand i product category k in municipality j and week t. The last control variable is the annual growth in the number of product varieties available within brand i and category k in municipality j and week t, as according to Pandya and Venkatesan (2016), consumers are more likely to purchase a brand when more varieties are available in stores.

The β_1 coefficient indicates the estimated causal impact of the treatment, which is the average effect on the market share annual growth of the 2022 World Cup on the (perceived) national brands.

This approach has multiple benefits, similar to the ones stated by Pandya and Venkatesan (2016). On the one hand, comparing the market share with that of the previous year mitigates potential seasonality effects in the analysis. On the other hand, measuring changes in market share annual growth enables me to identify variations in demand by origin, independent of changes in demand for a given product category. Additionally, this approach controls for all time-invariant characteristics of the municipality's customer base that could affect sales.

Next, I study the heterogeneity of the treatment across political views. For this, the vote share for Bolsonaro's party -Partido Liberal- in the second round of the presidential elections of 2022 is brought into consideration. All the estimation results are presented in the next section.

The central identification assumption is that treated brands -those perceived as national- and those belonging to the control group -those perceived as foreign- would have evolved in parallel in the absence of the World Cup. To provide evidence to support this assumption, I estimate an event study specification of the form:

$$\Delta\text{Share}_{ijkt} = \sum_{a\neq 0, a=-10}^{10} \beta_a 1(P_{ikjt} = a) + X_{ikjt} + \gamma_{ikj} + \delta_t + \varepsilon_{ikjt}$$

In addition to the factors mentioned above, we find P, which indicates the weeks since Brazil played its first match in the World Cup. The coefficients β_a measure the difference in the outcome variable between treated and control brands a weeks relative to the treatment.

Figure 5 provides evidence in support of the parallel trends assumption, while the corresponding regression results are presented in Table A.2.

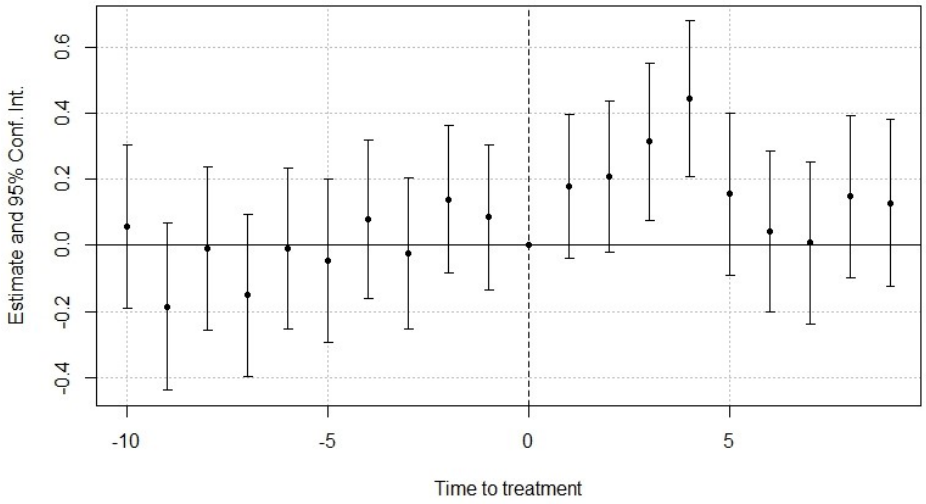

Figure 5: Event study β_a coefficient plot.

5 Results

5.1 Main results

Table 4 summarises the three main models results. The coefficient of D is the estimated causal effect of the nationalist shock perpetrated via the 2022 World Cup on sales of Portuguese-sounding brands. As seen in the baseline model (Model 1), this treatment has a positive point estimate of 0.1690, with a standard error (SE) of 0.0597. This suggests that, on average, for Portuguese-sounding brands the annual market share is 0.1690 percentage points bigger than their market share the same week the year prior.

When interacted with the vote share for Bolsonaro, in Model 2, the effect changes sign but is now statistically indistinguishable from zero (SE = 0.1670), suggesting that, on average, there is no significant change in market share at low levels of Bolsonaro support. However, the coefficient of the interaction is positive and statistically significant (SE = 0.0028), which means that the treatment effect increases with the Bolsonaro vote share.

When the control variables are aggregated, in Model 3, the coefficients and significance of the effect and its interaction with the vote share do not change. It is worth noting the statistically significant findings, even after controlling for product variety and price, key factors influencing consumption.

Figure 6 illustrates the heterogeneity in the effects of the treatment. In municipalities where Bolsonaro's vote share is below 47.67%, the effect of the World Cup on Portuguese-sounding brand sales is not statistically significant. However, for municipalities with greater support, the effect becomes positive and significant, indicating that nationalistic sentiment triggered by the World Cup influenced consumer choices in politically aligned areas. For municipalities where Bolsonaro's vote share is 50%, the estimated treatment effect is 0.14. When Bolsonaro's vote share reaches its maximum (89.99%), the estimated effect increases to 0.40, this represents 0.04% of a standard deviation in the dependent variable.

Table 3: Main Models Results

Dependent Variable:	market share annual growth		
Model:	(1)	(2)	(3)
Variables			
D	0.1690***	-0.1943	-0.1957
	(0.0597)	(0.1670)	(0.1671)
D × Vote Share for Bolsonaro		0.0067**	0.0067**
		(0.0028)	(0.0028)
Controls			
Volume Category	No	No	Yes
Price Category	No	No	Yes
Varieties (annual growth)	No	No	Yes
Fixed-effects			
id	Yes	Yes	Yes
week	Yes	Yes	Yes
Fit statistics			
Observations	1,026,549	1,026,549	1,026,549
Weeks	20	20	20
Brands	2167	2167	2167

Clustered (code_mn) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

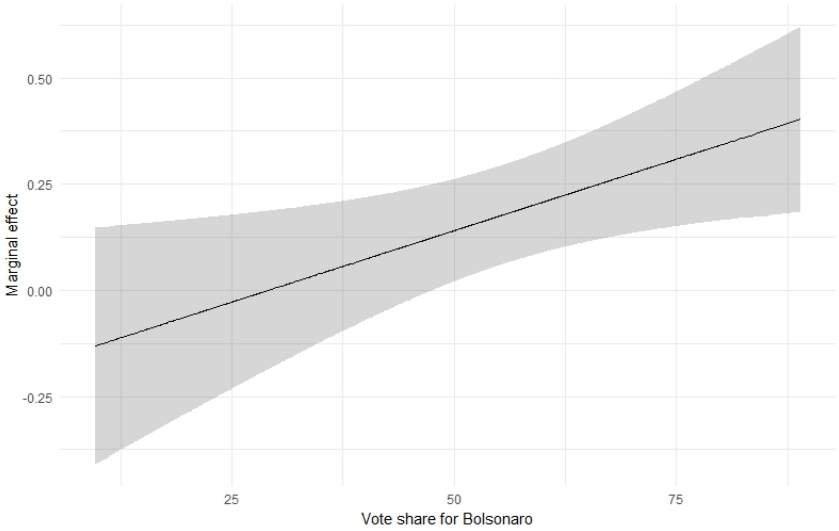

Figure 6: Heterogeneity of the Effect of Treatment on Home Brands

5.2 Robustness Tests

Many robustness tests can be done, in this study, I opted for four. Firstly, the condition to enter the universe of observations is relaxed. As before, only those brands which the language detector reliably identified as Portuguese are considered as treated; however, now all other brands are considered not

treated, and the sample is no longer restricted to brands with a reliable language detection. This allows the entry of 68% new brands that may distort the effect as the difference between treated and controls fuses. As shown in Table 4, Model 1, the treatment coefficient is not significant. However, the interaction with Bolsonaro's vote share remains significant and positive (0.0067), closely aligning with the estimate from the main model, as illustrated in Figure 7.

Secondly, I enforce an import restriction, by which I do not allow any product with EAN different from Brazil to be an observation, by which now I have 13% fewer brands than before. Therefore, I do not allow imports and, eventually, international commerce to play a role in the results. As shown in Table 4, Model 2, while the treatment coefficient remains insignificant, the interaction with Bolsonaro's vote share remains significant and positive, with an estimate (0.0070) very similar to that of the main model, as depicted in Figure 8.

Thirdly, I reduce the period stamp considered for the treatment to only the five weeks in which the World Cup actually took place. By now considering a shorter window time frame, where the treatment was more concentrated, a greater effect may be expected. Moreover, this shorter window frame makes it easier to assume parallel trends. As shown in Table 4, Model 3, the treatment coefficient is not significant. However, the interaction with Bolsonaro's vote share remains significant and positive, with an estimate (0.0061) closely resembling the main model, as shown in Figure 9.

Lastly, I estimate the model separately for each product category. This allows us to determine whether the treatment effect is consistent across all categories or specific to certain ones. Table 5 presents the results for rice, sugar, oil, and ground coffee. The treatment coefficient is not significant for the first three categories but is significant and negative for ground coffee. Furthermore, when significant —specifically for sugar and oil— the interaction with Bolsonaro's vote share remains positive. The marginal effects of this interaction are illustrated in Figure 10 for rice, Figure 11 for sugar, Figure 12 for oil, and Figure 13 for ground coffee.

6 Final Thoughts

This study finds that, on average, Portuguese-sounding brands experienced a higher annual market share during the 2022 World Cup period compared to the same week the year before. This confirms Hypothesis 1 (H1), which posits that a sport-induced nationalist shock positively affects brands perceived as domestic.

However, this effect varies depending on political affiliation. While no significant impact was observed in municipalities with the lowest support for Bolsonaro, those with stronger right-wing affiliations experienced a greater shift toward domestic-sounding brands. This supports Hypothesis 2 (H2), suggesting that the nationalist sentiment triggered by the event is not uniform but rather shaped by political leanings.

These findings have important implications beyond the immediate context of this study. Firstly, they highlight that consumer behaviour is shaped not only by economic factors but also by symbolic and identity-driven motivations. This adds to the literature on consumption drivers, which includes habit formation (Atkin, 2013), environmental concerns (Tarola and Zanaj, 2023), support for local producers (Darby et al., 2006; Morey, 2016; Hu et al., 2012), and consumption as a means of expressing political views (Pandya and Venkatesan, 2016; Morey, 2016). The impact of national identity on purchasing decisions suggests that major sporting events can influence consumer choices, favouring domestic brands even in the absence of explicit policy interventions. This has direct implications for marketing strategies, as brands may benefit from aligning their image with national identity in politically favourable contexts. From a policy perspective, these findings indicate that governments can leverage large-scale national events to promote domestic industries without resorting to protectionist measures.

Secondly, the results contribute to the literature on the intersection of politics and consumption. They build on existing research on the link between populist right-wing parties and nationalism (Farias et al., 2022; Inglehart and Norris, 2016) by providing evidence that consumers' political affiliation moderates their responsiveness to nationalist shocks. This suggests that economic behaviour can serve as an extension of political identity. In an era of increasing polarization, understanding these dynamics is crucial for both businesses and policymakers.

Finally, these insights are particularly relevant in the current global landscape of rising nationalism and populism. The study suggests that nationalist rhetoric, when combined with highly emotional collective experiences such as the World Cup, not only strengthens national identity but also shapes economic decisions in ways that could have long-term political and economic consequences. This expands on a

relatively underexplored dimension of sports and its broader implications while reinforcing the argument made by Shayo (2009) on how governments and political actors strategically use national identity to influence economic outcomes and public opinion.

Despite the robustness of the findings, some limitations must be acknowledged. Firstly, the language detector may not fully capture the complexity of brand perception. For example, some foreign sound brands can still be seen as locals due to historical reasons or common knowledge. Additionally, unobserved factors may be influencing the results. For instance, grocery shopping is typically done by women, whereas Bolsonaro's electorate is predominantly male. These differences could lead to an underestimation of the true effect of sport-induced nationalist shocks on home bias.

Future research incorporating individual-level survey data could offer more robust results and deeper insights into the psychological mechanisms driving nationalistic consumption patterns. Additionally, exploring treatment differences across product categories would offer valuable perspectives on how nationalism influences consumer behaviour in distinct market segments.

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A Annexe

A.1 Bolsonaro's Nationalism and Populism

Jair Bolsonaro exemplifies the archetype of a radical right populist, with nationalism as a central pillar of his political identity. His nationalism manifests primarily through sovereignism and civilisationism, two key ideological components frequently observed in radical right-wing populist movements.

Civilisationism arises when a leader portrays themselves as the defender of traditional national values against perceived moral threats (Brubaker, 2017). Sovereignism revolves around the assertion of national sovereignty against external interference, particularly from foreign governments and global institutions (Ricci and Venturelli, 2023). Bolsonaro consistently reinforced this stance by identifying two primary enemies within an "us versus them" framework:

1. External threats to Brazil's sovereignty, including international organizations and foreign governments. 2. Internal threats challenging his vision of the nation, such as progressive social movements and minority advocacy groups.

His sovereignist stance became particularly evident during two major crises. During the COVID-19 pandemic, he criticized the World Health Organization (WHO), downplayed the virus, and discouraged vaccination, positioning himself against global health governance. Similarly, during the Amazon fires crisis, he rejected international interference, famously asserting, "We don't want to destroy the Amazon. We just want to say that the Amazon is ours" (Ricci and Venturelli, 2023). These episodes illustrate how Bolsonaro framed national sovereignty as a struggle against external constraints.

Bolsonaro's nationalism is also deeply intertwined with religion. Religious nationalism, as defined by Gorski and Türkmen-Dervişoğlu (2020, cited by Barbosa Jr and Casarões, 2022), occurs when a nation's identity is conceived in religious terms. Bolsonaro consistently linked Brazilian nationalism with Christian values, encapsulated in his campaign slogan, "Brazil above everything, God above everyone".

He positioned himself as a defender of traditional Christian values against perceived threats from globalism, gender ideology, and secularism Barbosa Jr and Casarões (2022). His rhetoric emphasized restoring Brazil's moral order through the triad of "God, nation, and family", merging nationalism with religious faith. He frequently referenced the Bible and declared, "The State is secular, but we are Christians, and we believe in God" (Ricci and Venturelli, 2023).

Bolsonaro's nationalist rhetoric closely mirrors that of Donald Trump, earning him the nickname "Trump of the Tropics" (Casarões and Barros Leal Farias, 2022). His emphasis on sovereignty, cultural identity, and religious nationalism aligns with global trends in radical right-wing politics, reinforcing the

populist strategy of framing national identity as under threat from both external and internal forces.

In summary, Bolsonaro's nationalism is a multifaceted construct, combining sovereignist resistance to international influence, civilisationist opposition to progressive social movements, and deep integration of religious identity into national politics. This ideological framework distinguishes him from other right-wing populist leaders while situating him within broader global populist trends.

A.2 Event Study Model for Parallel Trends Assumption

Dependent Variable:	market share annual growth
Variables	
Home_brand × time_to_treatment = -10	0.0522
	(0.1268)
Home_brand × time_to_treatment = -9	-0.1850
	(0.1296)
Home_brand × time_to_treatment = -8	-0.0090
	(0.1255)
Home_brand × time_to_treatment = -7	-0.1503
	(0.1245)
Home_brand × time_to_treatment = -6	-0.0095
	(0.1236)
Home_brand × time_to_treatment = -5	-0.0462
	(0.1253)
Home_brand × time_to_treatment = -4	0.0792
	(0.1223)
Home_brand × time_to_treatment = -3	-0.0259
	(0.1164)
Home_brand × time_to_treatment = -2	0.1377
	(0.1139)
Home_brand × time_to_treatment = -1	0.0836
	(0.1112)
Home_brand × time_to_treatment = 1	0.1774
	(0.1108)
Home_brand × time_to_treatment = 2	0.2077*
	(0.1163)
Home_brand × time_to_treatment = 3	0.3138**
	(0.1219)
Home_brand × time_to_treatment = 4	0.4431***
	(0.1204)
Home_brand × time_to_treatment = 5	0.1547
	(0.1252)
Home_brand × time_to_treatment = 6	0.0426
	(0.1247)
Home_brand × time_to_treatment = 7	0.0083
	(0.1249)
Home_brand × time_to_treatment = 8	0.1488
	(0.1249)
Home_brand × time_to_treatment = 9	0.1289
	(0.1291)
Controls	
Varieties (annual growth)	Yes
Volume Category	Yes
Price Category	Yes
Fixed-effects	
id	Yes
week	Yes
Fit statistics	
Observations	1,026,549
Weeks	20
Brands	1934

Clustered (Municipality) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

A.3 Robustness Tests

Table 4: Robustness Test

Dependent Variable:	market share annual growth		
Model:	(1)	(2)	(3)
Variables			
D	-0.2541	-0.1964	-0.1394
	(0.1645)	(0.1697)	(0.1806)
D × Vote Share for Bolsonaro	0.0067**	0.0070**	0.0061**
	(0.0028)	(0.0028)	(0.0030)
Controls			
Volume Category	Yes	Yes	Yes
Price Category	Yes	Yes	Yes
Varieties (annual growth)	Yes	Yes	Yes
Fixed-effects			
id	Yes	Yes	Yes
week	Yes	Yes	Yes
Fit statistics			
Observations	1,634,071	906,137	721,802
Weeks	20	20	15
Brands	3679	1895	2167

Clustered (Municipality) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

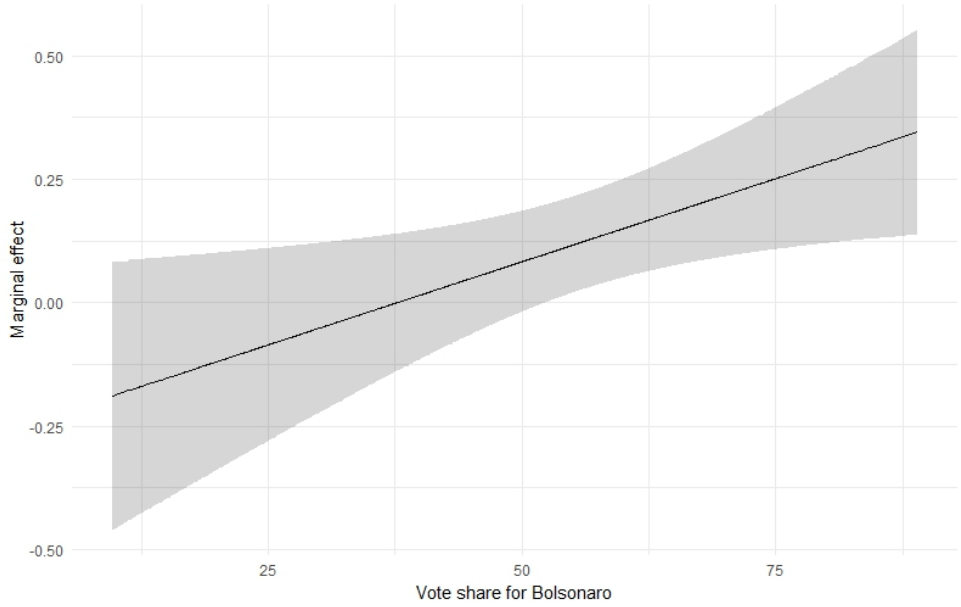

Figure 7: Heterogeneity of the Effect of Treatment on Home Brands for Robust Model Number 1.

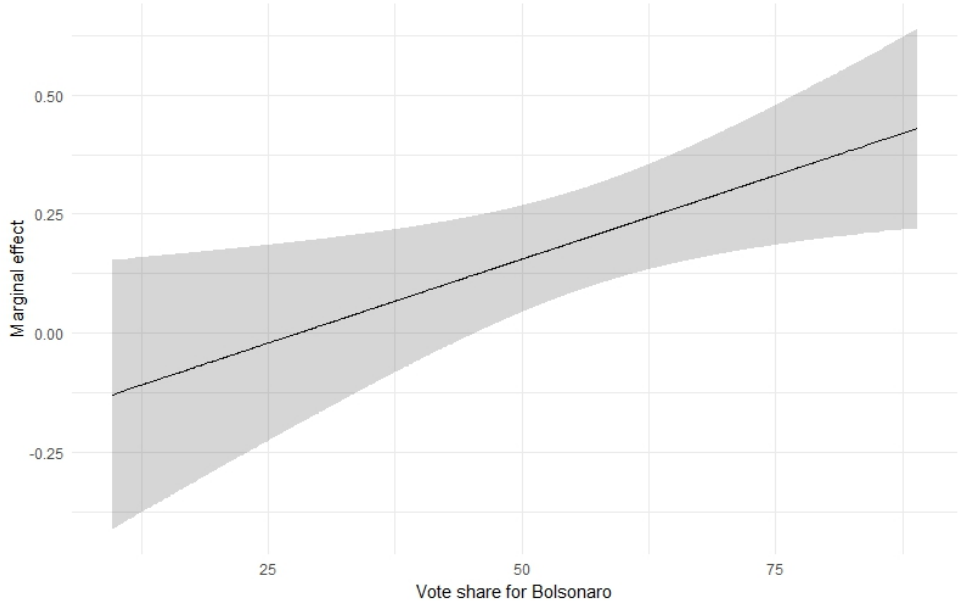

Figure 8: Heterogeneity of the Effect of Treatment on Home Brands for Robust Model Number 2.

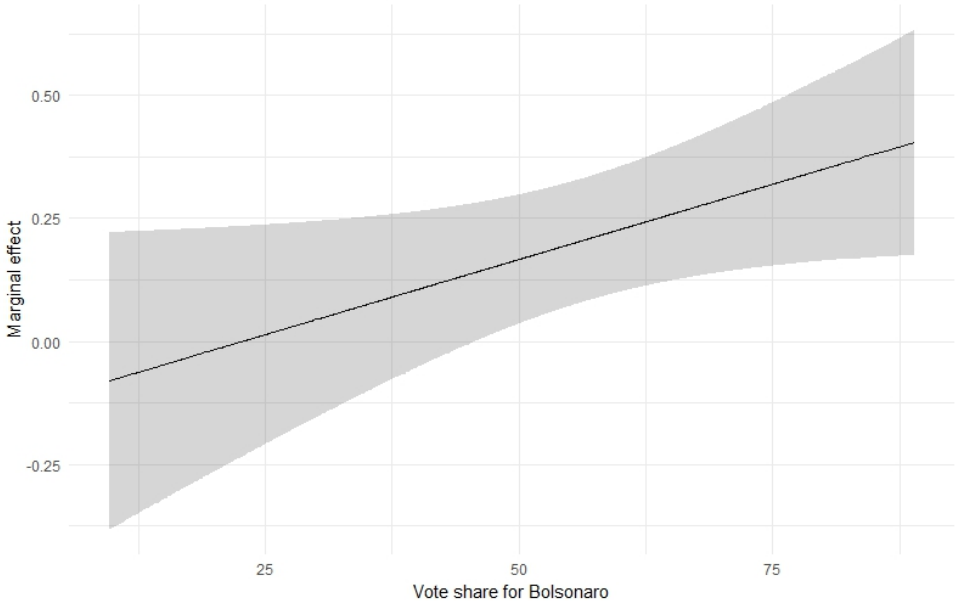

Figure 9: Heterogeneity of the Effect of Treatment on Home Brands for Robust Model Number 3.

Table 5: Robustness Test by Category

Dependent Variable:	market share annual growth			
Model:	(1)	(2)	(3)	(4)
Variables				
D	0.1653	-1.167	0.0785	-0.2934*
	(0.2836)	(0.7906)	(0.4857)	(0.1588)
D X Vote Share Bolsonaro	0.0037	0.0259*	-0.0002	0.0051**
	(0.0048)	(0.0132)	(0.0085)	(0.0024)
Controls				
Volume Category	Yes	Yes	Yes	Yes
Price Category	Yes	Yes	Yes	Yes
Varieties (annual growth)	Yes	Yes	Yes	Yes
Fixed-effects				
id	Yes	Yes	Yes	Yes
week	Yes	Yes	Yes	Yes
Fit statistics				
Observations	297,236	167,963	190,761	370,589
Weeks	20	20	20	20
Brands	876	358	267	666

Clustered (Municipality) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

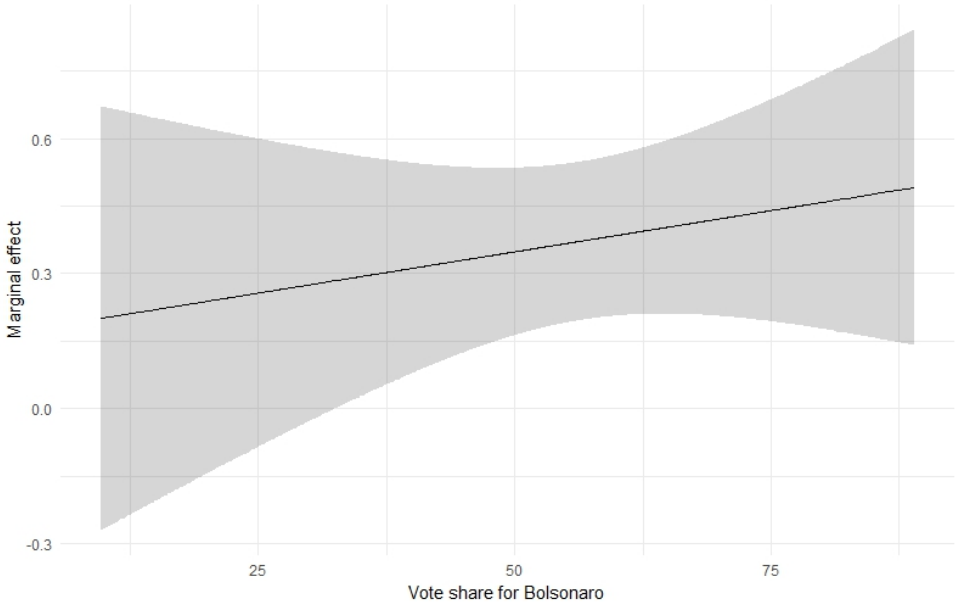

Figure 10: Heterogeneity of the Effect of Treatment on Home Brands for Rice.

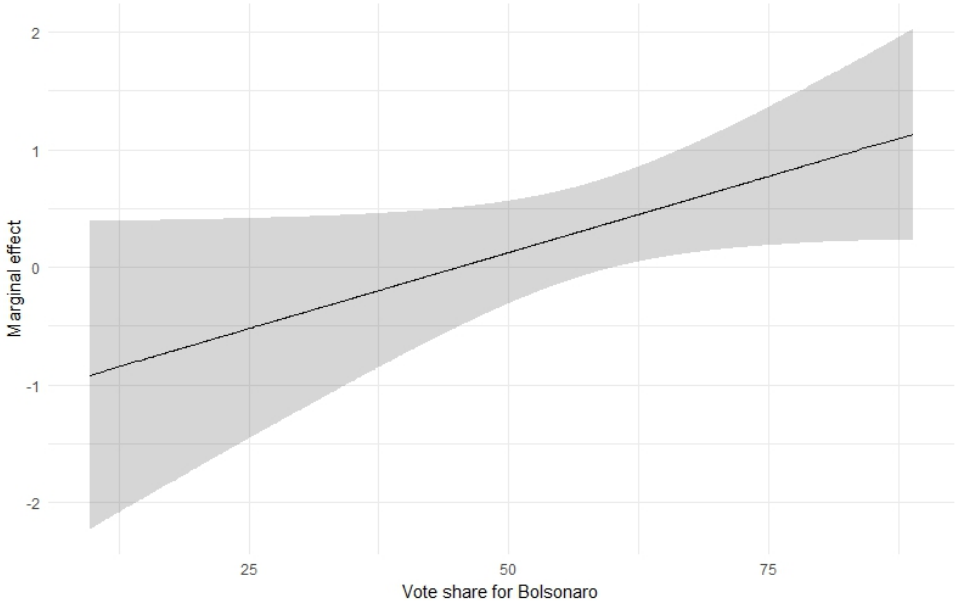

Figure 11: Heterogeneity of the Effect of Treatment on Home Brands for Sugar.

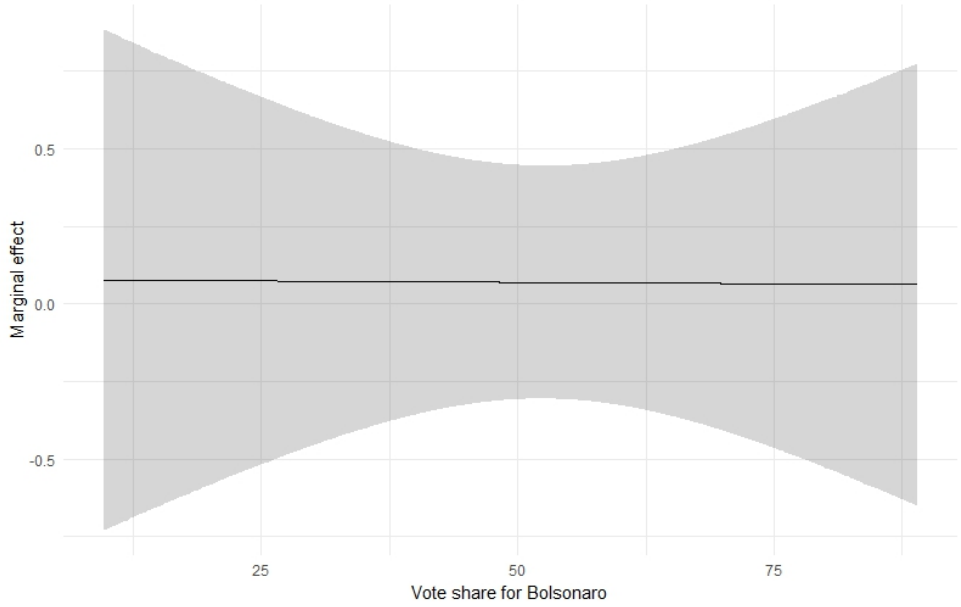

Figure 12: Heterogeneity of the Effect of Treatment on Home Brands for Oil.

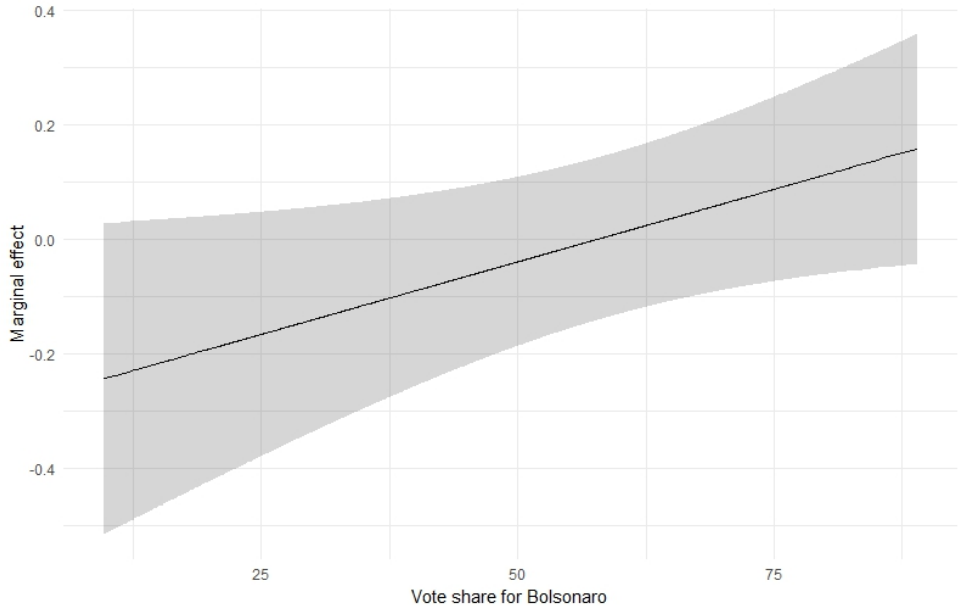

Figure 13: Heterogeneity of the Effect of Treatment on Home Brands for Ground Coffee.