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NEGATIVE CAMPAIGNING IN A NON-LIBERAL DEMOCRACY

(Comparative Analysis of the 2021 and 2024 Iranian Presidential Elections)

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Abstract

Negativity has emerged as a defining feature of political campaigns across liberal democracies over the past two decades. The type of political system (presidential or parliamentary), the number of parties, and the nature of elections—such as presidential versus parliamentary or national versus local—shape the strategies, intensity, and forms of negative campaigning. Nevertheless, negativity remains a crucial campaign element across Western democracies. Grounded in the theory of negativity bias, which posits that negative information has a stronger psychological impact than positive messaging, politicians increasingly adopt negative strategies to engage voters, while media outlets amplify this negativity to attract audiences. Although numerous theories have been proposed on why and how campaign strategists use negativity (e.g., Harrington & Hess, 1996; Theilmann & Wilhite, 1998; Hansen & Pedersen, 2008; Mattes & Redlawsk, 2014; Trent et al., 2016), and how voters process such messages (e.g., Surlin & Gordon, 1977; Taber & Lodge, 2006; Redlawsk, 2006; Meffert et al., 2006; Mutz & Reeves, 2005), consensus on public responses remains elusive. This research gap is particularly pronounced in non-liberal democracies, where empirical studies on negativity are virtually non-existent.

This study provides the first systematic examination of negative campaigning in Iran's presidential elections, focusing on the 2021 and 2024 contests to generate empirical evidence from a non-liberal democracy. It addresses key research questions: How do patterns of negative campaigning differ in non-liberal democracies compared to Western contexts? How do institutional constraints shape negative messaging? And how do Iranian citizens process and respond to political negativity? Using a supply-and-demand framework, it examines both candidates' strategic deployment of negative messages and public responses to such content. Data sources include (1) historical election data, (2) 2,665,084 tweets posted by 126,596 unique users during the 2021 election, and (3) over 7,200 tweets from politicians and 327,000 public interactions from both the 2021 and 2024 elections. Advanced data science techniques, including sentiment analysis, network analysis, and machine learning models specifically adapted for Persian political discourse, were employed alongside manual tweet coding for accuracy. The findings reveal distinctive patterns in Iran's hybrid regime: government-affiliated targeting remained consistent across elections, demonstrating accountability mechanisms similar to Western systems but operating within system-defined boundaries. Factional solidarity patterns evolved strategically between elections, with principlist attacks showing stronger coordination in 2024. While negativity increased from 28% in 2021 to 39% in 2024, it primarily manifested through policy-focused criticism rather than personal attacks (4% in 2021, 6% in 2024). The boomerang effect—where negative messages trigger negative responses—intensified between elections, indicating strong normative sanctions against negativity. Network analysis revealed clear factional clustering in political discourse, with limited cross-community engagement, explaining why negative messaging primarily reinforced existing factional identities rather than persuading across boundaries.

This research contributes a novel theoretical framework of “bounded contestation” for understanding how negative campaigning functions in hybrid regimes, where criticism operates within carefully calibrated parameters that permit meaningful differentiation between candidates while reinforcing rather than challenging fundamental system legitimacy. By comparing a normal election (2021) with an extraordinary election following President Raisi's death (2024), the study distinguishes universal psychological mechanisms from contextually dependent patterns, extending theories of electoral authoritarianism by documenting how criticism simultaneously provides accountability mechanisms while reinforcing system stability. The findings bridge significant empirical, analytical, and methodological gaps in understanding negative campaigning beyond Western liberal democratic contexts.

Keywords: Negativity Bias, Negative Campaigning, Political Campaign, Iran Presidential Election

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Introduction

Political campaigning has undergone significant transformation in recent decades, evolving from traditional methods of direct constituent engagement to sophisticated strategic communication across multiple platforms. This evolution has positioned professional advertising, focus groups, and public opinion polling as crucial components of any political campaign (Hansen & Pedersen, 2008). Within this ecosystem of political communication, negative campaigning has emerged as a universal and often contentious strategy. Defined broadly as the act of attacking or criticizing opponents rather than promoting one's own agenda, this phenomenon has attracted significant scholarly attention across democratic contexts (Mayer, 1996; Kleinnijenhuis, 2008; Bobba et al., 2013; Gerstlé & Nai, 2019; Hansen & Dolan, 2022; Walter & Vliegenthart, 2010).

Empirical evidence underscores the prevalence of negativity in political campaigns globally. In the United States, approximately 80% of news stories related to presidential elections focus on negative advertisements (Geer, 2012), while over 75% of advertisements in congressional races and 87% in presidential contests explicitly employ negative messaging (Motta & Fowler, 2016). Similarly, in Canada, 78% of press releases from political parties during the 2015 federal election contained at least one attack against rival candidates or parties (Arash, 2019). The omnipresence of negative campaigning across Western democracies suggests its perceived effectiveness as a political strategy, yet questions remain about how voters process and respond to such messaging.

Research Problem

Despite the expansive literature on negative campaigning in Western democracies, three critical gaps limit our understanding of this phenomenon in global perspective: First, scholarly work has overwhelmingly concentrated on Western liberal democracies, particularly the United States and Western European nations. This geographic and institutional bias creates a significant knowledge gap regarding negative campaigning in non-Western contexts with different political, cultural, and religious traditions. As Valli and Nai (2020) argue, the dynamics of negative campaigning are significantly shaped by socio-political contexts, implying that findings derived from Western democracies may not be readily transferable to other political systems. This perspective is reinforced by comparative research emphasizing the contextual dependency of negative campaign strategies (Garzia & da Silva, 2024). Second, existing research tends to treat negative campaigning as a single, unified phenomenon without sufficiently accounting for significant contextual differences in how negativity functions across political systems. As Walter and Vliegenthart (2010) argue, the dynamics of negative campaigning are heavily shaped by the media context and the degree of message control, which influence both the content and the targets of attack ads. This perspective aligns with broader research emphasizing the need for context-sensitive analysis in understanding political communication (Walter & Van der Brug, 2014; Haselmayer et al., 2019).

Third, methodological limitations have restricted our understanding of how voters actually process and respond to negative messaging across different cultural contexts. While laboratory experiments and surveys provide valuable insights into immediate reactions to negative content, they often fail to capture the complex interactions between pre-existing

political attitudes, cultural values, and responses to negativity in real electoral environments (Meffert et al., 2006).

This thesis addresses this gap by examining how negativity operates in non-liberal electoral settings through a single, theoretically rich case study: the Islamic Republic of Iran. Iran's electoral system represents a particularly valuable case for this investigation. As a hybrid regime combining elements of democratic procedure with significant religious oversight, Iran presents a distinct institutional environment whose study can help determine which aspects of negative campaigning reflect universal patterns and which are contingent on specific political arrangements. The country's unique combination of regular elections, religious authority structures, candidate vetting processes, and media controls creates conditions unlike those found in either Western democracies or purely authoritarian systems.

It is not claimed that Iran is representative of all non-liberal democracies. Rather, the justification for case selection follows a critical case logic (George & Bennett, 2005; Gerring, 2007). Iran constitutes a hybrid regime with a complex institutional structure: while elections are not fully free or fair by liberal standards, they are meaningful, competitive (within constrained boundaries), and consequential for policy direction. Since 1997—particularly during the Khatami, Ahmadinejad, and Rouhani periods—Iranian elections have functioned as venues for elite contestation and mass participation, often expressing public frustration and occasionally altering governance priorities.

In contrast to authoritarian contexts like Russia, Turkey, or Venezuela, where presidents consolidate power and orchestrate electoral outcomes to secure re-election, Iran has seen alternating factions gain power through relatively competitive elections (e.g., reformists, centrists, hardliners). And unlike the hereditary monarchies of the Gulf, where elections are

either absent or entirely symbolic, Iranian elections have—despite vetting and oversight by unelected bodies—served as real mechanisms of elite turnover and partial accountability. This positions Iran as a unique hybrid case, offering insight into how negativity is deployed and received when actors must balance real electoral incentives with regime constraints. Thus, Iran does not claim to typify all non-liberal democracies, but rather functions as a deviant case, capable of testing and verifying well-established assumptions from liberal democracies and also generating insights into how negativity functions under constrained pluralism.

This research examines negative campaigning in Iran’s 2021 and 2024 presidential elections. The comparison is particularly valuable as it captures two distinct electoral moments: the 2021 election occurring under relatively normal circumstances following the completion of President Rouhani’s second term, and the 2024 election taking place following the unexpected death of incumbent President Ebrahim Raisi in a helicopter crash, necessitating an unplanned electoral contest. These distinct contexts—occurring within the same institutional framework—enable analysis of which negative campaigning patterns represent stable features of Iran’s political system versus those that demonstrate contextual adaptation. By examining negative campaigning across these two elections within Iran’s unique electoral environment, this study contributes to a more globally comprehensive understanding of political communication strategies while illuminating the specific dynamics of Iranian politics.

Accordingly, the comparative framing is analytical, not empirical. The thesis does not conduct a multi-country comparison but tests the external applicability of theoretical expectations derived from liberal democracies in a substantively different setting. The objective, then, is not to generalize to ‘all non-liberal democracies,’ but to open a theoretically informed window onto how negativity functions in regimes beyond the liberal democratic template. The

comparative aspect of the research lies not in a dataset of multiple countries, but in its analytical framing, which juxtaposes established findings from liberal contexts with patterns identified in Iran.

Moreover, while the field has expanded since 2010, and recent comparative studies—particularly those involving expert-coded datasets—have advanced our understanding of negativity across systems. However, most of these works focus either on macro-level elite behavior or on structural determinants and rarely combine detailed analysis of both the supply side (candidate messaging) and the demand side (citizen response). This gap is particularly pronounced in non-liberal electoral contexts, where integrated analysis of both dimensions remains rare in the existing literature.

Research Objectives

This study examines negative campaigning through both supply-side and demand-side lenses. The supply-side analysis (Chapters 4 and 7) investigates which candidates use negative messaging, against whom, and under what conditions, testing hypotheses about government targeting, factional coordination, and strategic positioning. The demand-side analysis (Chapters 5 and 8) examines how citizens process and respond to negative messages, testing how negativity bias, selective exposure, and ideological proximity manifest in the Iranian context. By analyzing both candidate strategies and citizen responses across two elections, the study reveals which patterns reflect universal psychological mechanisms versus contextual adaptation.

Research Questions

This study is guided by the following central research question:

How do patterns of negative campaigning and citizen responses in Iran's hybrid regime compare to established findings from Western liberal democratic contexts?

This overarching question is explored through several specific research questions:

1. What is the nature and extent of negative campaigning in Iran's presidential elections, and how does this compare to established patterns in Western democracies?
2. How do institutional constraints, particularly candidate vetting and media controls, shape the supply of negative messages in Iranian elections?
3. How do Iranian citizens process and respond to negative political information, and how does this vary according to their political orientations and demographic characteristics?
4. How did negative campaigning strategies and their reception evolve between the 2021 and 2024 elections?

This research makes several significant contributions to scholarly understanding of political communication and electoral processes:

Theoretical Contributions

This study makes several significant theoretical contributions to our understanding of negative campaigning beyond Western contexts. First, it challenges the implicit universalism in much negative campaigning research by examining how institutional constraints fundamentally

reshape both the strategic deployment and public reception of negativity. The study tests whether theories developed in liberal democratic contexts require modification when applied to hybrid regimes, where the boundaries of acceptable criticism are institutionally enforced rather than merely normatively constrained.

Second, the research advances our understanding of how religious and cultural factors interact with psychological mechanisms in shaping responses to negative campaigning. While existing literature acknowledges cultural variation, this study provides empirical evidence of how religious norms regarding appropriate discourse create distinctive patterns of response to political attacks in Iran's context.

Third, this study contributes to theoretical debates about the relationship between regime type and campaign communication by examining hybrid regimes as a distinctive category. Rather than existing on a simple continuum between democracy and authoritarianism, hybrid regimes may demonstrate unique communication dynamics that cannot be adequately explained by extrapolating from either extreme.

Fourth, the research develops a more nuanced understanding of factional versus partisan political organization and its implications for negative campaigning. Existing theories, developed primarily in contexts with institutionalized party systems, may inadequately account for the fluid, personality-centered nature of factional politics. This study examines how factional systems create distinctive patterns of attack targeting, message circulation, and audience segmentation.

Empirical Contributions

This research provides the first systematic empirical study of negative campaigning in Iranian presidential elections, addressing a significant gap in our understanding of political communication in this important regional power. By documenting patterns of negativity across

two electoral cycles, it establishes an empirical foundation for future research on Iranian political communication. The comparative analysis of the 2021 and 2024 elections offers unique insights into how different electoral contexts shape negative campaigning strategies and their reception. Specifically, comparing a regular end-of-term election (2021) with an election called unexpectedly following an incumbent's death (2024) provides valuable data on the contextual determinants of political communication strategies within the same institutional framework.

Methodological Contributions

The study demonstrates innovative methodological approaches to studying political communication in environments with controlled traditional media. By leveraging social media data, particularly from Twitter(X) (X), and employing advanced computational methods including sentiment analysis and network analysis, it provides a model for examining political discourse in contexts where traditional media content may be heavily regulated. The mixed-methods approach offers three specific methodological innovations for studying political communication in non-Western contexts: First, the research develops computational tools specifically adapted for Persian political discourse. While existing sentiment analysis tools have been predominantly developed for Western languages and political contexts, this study creates specialized deep learning models trained on Persian political language to detect negativity, character attacks, and political attacks with greater accuracy for Iran's unique linguistic and political context. These tools, including the ParsBERT model for negative content classification, achieve macro F1-scores of 70% for negativity detection, 69% for character attack detection, and 66% for political attack detection. Second, the research pioneers network analytical approaches specifically designed for factional rather than party-based political systems. The methodology employs community detection algorithms to identify and visualize emergent communication

clusters in social media networks, revealing how information flows through Iran's distinctive factional landscape. This approach uses correspondence analysis techniques to estimate political orientation in contexts lacking formal party affiliations, creating continuous ideological positioning measures that better capture the fluid factional nature of Iranian politics than binary partisan measures used in Western contexts. Third, the study systematically integrates computational pattern detection with contextual interpretation, using the quantitative findings to inform a deeper qualitative understanding of Iran's political communication environment. The research employs a triangulation approach where statistical relationships identified through computational methods (such as the relationship between government affiliation and criticism targeting) are interpreted within Iran's specific institutional and cultural context. This integration enables the identification of both statistical patterns and their contextual significance, moving beyond the limitations of either purely computational or purely interpretive approaches. These methodological innovations offer a template for researchers studying political communication across different hybrid regimes where neither Western quantitative models nor purely qualitative approaches adequately capture communication dynamics.

Practical Significance

Beyond its scholarly contributions, this research has practical significance for several audiences: For political campaigns and communication strategists, it provides insights into the effectiveness of different negative messaging approaches in contexts with significant religious and cultural constraints on political discourse. For media organizations covering elections in hybrid regimes, it offers a framework for understanding and contextualizing negative campaign tactics within their specific institutional environments. For civil society organizations promoting

democratic values, it illuminates how citizens in hybrid regimes engage with and process political information, potentially informing media literacy initiatives. For international observers and policymakers, it contributes to a more nuanced understanding of electoral processes in Iran, moving beyond simplistic narratives of either complete authoritarianism or genuine democracy to capture the complex reality of political competition in this hybrid system. Specifically, the research documents how genuine electoral contestation occurs within defined parameters, where candidates engage in substantive policy debate and face accountability pressure through criticism of their records, even as the system maintains fundamental constraints through candidate vetting and media controls. By empirically demonstrating both the extent and limitations of electoral competition in Iran's 2021 and 2024 presidential elections, this study provides international observers with concrete evidence of how negative campaigning functions as both an accountability mechanism and a system-reinforcing process. The findings reveal specific patterns of factional competition, the dominance of economic criticism across ideological lines, and the persistence of meaningful candidate differentiation despite restricted ideological range—insights that can inform more effective international engagement with Iran's complex political reality.

Chapter 1: Political and Electoral Systems in Iran

This chapter provides a comprehensive overview of Iran's political and electoral systems, establishing the institutional context essential for understanding negative campaigning in the 2021 and 2024 presidential elections. Rather than merely describing formal structures, the chapter analyzes how Iran's distinctive hybrid regime combines democratic procedures with religious oversight mechanisms to create a unique environment for political competition. By examining the constitutional framework, key institutions, factional dynamics, media landscape, and electoral history, this chapter demonstrates how Iran's political system shapes both the supply of negative messages by candidates and the demand for such content among voters. The analysis pays particular attention to the tension between republican and theocratic elements within Iran's governance system, showing how this institutional hybridity creates distinctive parameters for political discourse that differ significantly from those in Western liberal democracies. This foundational understanding of Iran's political landscape will inform subsequent analysis of how negative campaigning functions within this specific context, allowing for more nuanced interpretation of the empirical findings presented in later chapters.

1.1 Iran's Hybrid Political System

The Islamic Republic of Iran represents a distinctive hybrid political system that integrates theocratic and republican elements through a complex network of institutions. Understanding this system is essential for analyzing how negative campaigning functions in Iranian presidential elections, as it introduces specific constraints and opportunities within the broader landscape of political communication. As Arjomand (2009: 5) notes, Iran's 1979 Constitution establishes "two distinct sets of governmental organs: one set republican,

comprising the presidency and the parliament, and the other theocratic,” centered on the Supreme Leader and institutions under religious supervision.

The revolutionary ideology underpinning this structure supports a system that, while allowing institutional plurality, maintains ideological boundaries enforced by the state. Brumberg (2001) discusses how Iran exhibits characteristics of a hybrid regime that blends mechanisms of pluralism—such as elections and policy debate—with overarching ideological control. Although he does not use the term “competitive authoritarianism,” his analysis aligns with later frameworks, such as that of Levitsky and Way (2010), which describe regimes where electoral processes exist alongside systemic constraints aimed at preserving elite dominance. These institutional features give rise to unique dynamics in political communication, including in how candidates navigate adversarial discourse and negative messaging. Iran’s political legitimacy is rooted in the doctrine of *velayat-e faqih* (guardianship of the Islamic jurist), as introduced by Ayatollah Ayatollah Khomeini. This doctrine grants ultimate authority to a qualified religious jurist during the occultation of the Twelfth Imam. Article 5 of the Constitution reflects this by stating that “the governance and leadership of the nation devolve upon the just and pious faqih who is acquainted with the circumstances of his age, courageous, resourceful, and possessed of administrative ability” (Constitution of the Islamic Republic of Iran, 1979). This foundational concept distinguishes Iran’s system from both secular democracies and typical authoritarian models.

Alongside this theocratic core, the Constitution incorporates democratic mechanisms, such as elections and institutional separation of powers. Article 6 states that “the affairs of the country must be administered on the basis of public opinion expressed by means of elections” for

the presidency, parliament, and local councils (Constitution of the Islamic Republic of Iran, 1979). These provisions reflect the revolutionary emphasis on popular participation, though exercised within boundaries defined by religious oversight. Following Ayatollah Khomeini's death, the 1989 constitutional amendments refined this system by eliminating the post of prime minister, expanding presidential authority, and modifying the religious qualifications required of the Supreme Leader—changes that, as Axworthy (2013) notes, facilitated Ali Ayatollah Khamenei's succession. As Moslem (2002: 72) observes, these constitutional revisions restructured institutional relationships without altering the hybrid nature of the system. Similarly, Tezcür (2012) characterizes Iran as a regime in which democratic procedures—such as elections and political campaigning—exist alongside authoritarian controls that circumscribe the boundaries of political contestation. This dual structure influences how presidential candidates communicate and compete, shaping the form and scope of negative campaigning within Iran's political context.

1.2 Legal and Constitutional Structures

The Constitution of the Islamic Republic of Iran, adopted in 1979 and revised in 1989, establishes the fundamental legal framework for Iran's political system. Comprising 14 chapters and 177 articles, it creates a complex institutional architecture that distributes authority across multiple bodies while establishing the principle of *velayat-e faqih* (guardianship of the jurist) as the system's foundation. The Constitution's drafting process itself reflected the revolutionary context from which Iran's current system emerged. Following the success of the Islamic Revolution in February 1979, the preliminary draft underwent review by various individuals and groups. On August 3, 1979, elections were held for the Assembly of Experts tasked with drafting the Constitution, with the elected members beginning their work on August 19. Their work

concluded on November 15, 1979, and a referendum on December 2 approved the Constitution with 99.5% support (Schirazi, 1997).

The Constitution establishes three branches of government—legislative, executive, and judiciary—while placing them under the supervision of the Supreme Leader (*velayat-e motlaqeh-ye faqih*). Article 57 references these governing branches as operating “under the supervision of the leader,” yet also establishes their independence from one another. This configuration results in a political system characterized by overlapping authorities and multiple centers of power, as analyzed by Amanat (2017). Beyond the three traditional branches, the Constitution also establishes additional independent institutions not subsumed under those branches. These include:

1. Councils, which constitute decision-making and administrative bodies for national affairs (Article 7).
2. Islamic Republic of Iran Broadcasting (IRIB), whose head is appointed by the Supreme Leader and overseen by representatives of the three branches of government (Article 175).
3. The Supreme National Security Council (SNSC), established to safeguard national interests, defend the Islamic Revolution, and preserve territorial integrity (Article 176).
4. The Expediency Discernment Council of the System (EDCS), formed to resolve conflicts between Parliament and the Guardian Council and advise the Leader (Article 112).

This constitutional structure results in a complex arrangement of institutions with overlapping jurisdictions and competing claims to legitimacy, as analyzed by Schirazi (1997). This institutional complexity significantly shapes electoral politics by creating multiple power

centers that candidates must navigate when formulating campaign strategies, including negative messaging approaches.

1.2.1 The Supreme Leadership (Velayat-e-Faqih)

The doctrine of velayat-e-faqih (guardianship of the jurist) represents the cornerstone of Iran's political system, providing its primary source of religious legitimacy. This concept, developed by Ayatollah Ruhollah Ayatollah Khomeini, establishes the authority of a qualified Islamic jurist to exercise guardianship over the political system during the occultation of the Twelfth Imam in Twelve Shia Islam. Although Ayatollah Khomeini initially positioned clerics primarily as advisors rather than direct rulers before the revolution, the concept of velayat-e-faqih became central to the Islamic Republic's institutional design after the revolutionary victory. Article 5 of the Constitution established this principle as fundamental to Iran's governance system:

“During the Occultation of the Twelfth Imam (may God hasten his reappearance), in the Islamic Republic of Iran, the governance and leadership of the Ummah rest with the just, pious, contemporary-aware, courageous, resourceful, and capable jurist, recognized and accepted by the majority of the people as their leader.”

The 1989 constitutional revision modified this article by removing the phrase “recognized and accepted by the majority of the people as their leader,” thereby strengthening the doctrinal basis of the Supreme Leader's authority while reducing its popular legitimacy component. As Abrahamian (2008) discusses, the 1989 constitutional revisions enhanced the Supreme Leader's authority by removing the requirement for popular recognition, thereby emphasizing divine legitimacy over popular sovereignty.

Article 110 grants the Supreme Leader extensive powers across Iran's political system, including:

1. Determining general policies after consulting with the Expediency Council
2. Supervising proper implementation of those policies
3. Commanding the armed forces
4. Declaring war and peace
5. Appointing, dismissing, and accepting resignations of key officials
6. Resolving disputes among branches of government
7. Addressing system-wide obstacles
8. Signing the President's appointment letter following election
9. Dismissing the President after parliamentary impeachment or Supreme Court finding of constitutional violations
10. Pardoning or reducing sentences of convicted persons

These expansive powers make the Supreme Leader what Sadjadpour (2008: 7) characterizes as "the ultimate decision-maker in all matters of foreign and domestic policy." This concentration of authority creates a distinctive environment for presidential elections, where candidates must navigate both competitive electoral dynamics and the Leader's supervisory authority. Since Ayatollah Khamenei's appointment in 1989, the position has evolved to exercise increasingly direct political intervention, particularly during periods of political conflict. Ganji (2013) argues that Ayatollah Khamenei has extended the Supreme Leader's influence beyond constitutional boundaries through a combination of formal directives and informal mechanisms. Beyond formal constitutional powers, the Supreme Leader plays a crucial role in defining

political discourse, particularly for principlist factions. Ayatollah Khamenei has enumerated the intellectual foundations of principlist discourse as: “special attention to Islamic and revolutionary values and principles and making them the axis in decision-making; justice-orientation and elimination of deprivation and discrimination and fair distribution of the country’s resources and laying the foundation for a justice-oriented economy; serving without expectation and kindness in the field of foreign policy; making principles and revolutionary values the axis, securing national interests and not giving in to the excessive demands of great powers” (Khamenei, 2006, June 19). He has further asserted that “anyone and any current that is interested in and committed to the foundations of the revolution and has any name is among the principlists.” This framing directly shapes how principlist candidates position themselves in elections and determines which forms of negative messaging are considered legitimate within system boundaries. During both the 2021 and 2024 elections, principlist candidates consistently aligned their criticism with these Leader-defined parameters.

This expansion has significant implications for presidential politics, including negative campaigning, as candidates must calibrate their messages to avoid crossing lines that might trigger Leader intervention. The Supreme Leader’s role in presidential elections is both formal and informal. Formally, the Leader must approve the President’s appointment letter following election and holds authority to dismiss the President under certain conditions. Informally, the Leader’s statements, signals, and known preferences significantly influence the electoral landscape, particularly for principlist candidates closely aligned with his authority. As Farhi (2012) argues, the Supreme Leader’s preferences and priorities implicitly shape the boundaries of political discourse during electoral periods, particularly by influencing the strategies of candidates aligned with regime institutions.

1.2.2 The Executive Branch

The presidency constitutes the core institution within Iran's executive branch, particularly after the 1989 constitutional amendments that abolished the office of the prime minister. As the second-ranking official after the Supreme Leader, the President holds executive powers across a broad range of national functions, though certain prerogatives remain under the exclusive authority of the Leader. Iran's executive structure blends aspects of both presidential and parliamentary systems. Article 114 establishes that the President is elected by direct popular vote, reflecting a presidential principle. However, as outlined in Article 133, cabinet ministers nominated by the President must receive parliamentary approval, introducing a parliamentary feature into the system. This hybrid configuration has prompted scholars such as Schirazi (1997) to describe Iran's executive structure as one that contains features of both semi-presidential and semi-parliamentary models, contributing to a distinct set of checks and balances in the distribution of executive power. Within this framework, the President possesses formal responsibility for implementing the Constitution and overseeing national administration, as per Article 113. Still, as Moslem (2002) notes, this authority is moderated by the presence of multiple overlapping institutions and supervisory mechanisms, which constrain the President's ability to act independently and make unilateral decisions. The presidency carries significant responsibilities including:

1. Leading the Council of Ministers and managing national planning and budgeting
2. Signing legislation and results of referendums
3. Appointing ministers (subject to parliamentary approval)
4. Signing the credentials of ambassadors
5. Presiding over the Supreme National Security Council

6. Representing Iran in international forums

These responsibilities make the presidency an influential yet institutionally limited office. As Amanat (2017) explains, while the Iranian president possesses considerable formal authority within the executive branch, that authority is constrained by parallel centers of power—particularly the office of the Supreme Leader and oversight bodies. This balance of power shapes both the incentives and the limitations faced by presidential contenders. The Council of Ministers serves as the President’s cabinet, with nominees requiring confirmation by Parliament. The cabinet is tasked with drafting legislation, issuing executive regulations, preparing the national budget, and enforcing laws. These functions expose presidential administrations to retrospective scrutiny. Consequently, prior performance in these roles often becomes a focal point for criticism in future election campaigns, as candidates engage in negative messaging that targets predecessors’ records.

1.2.3 The Legislative Branch

The legislative branch of the Islamic Republic stems from popular election (Article 6) and exercises significant formal authority within Iran’s political system. Originally designated as the “National Consultative Assembly” in the 1979 Constitution, it was renamed the “Islamic Consultative Assembly” (Majles-e Shora-ye Eslami) in 1989 amid post-revolutionary ideological consolidation. Under Article 57, legislative authority is exclusively exercised through the Islamic Consultative Assembly, whose members are representatives elected by the people (Article 62). Thus, Iran effectively has a unicameral legislature with the Majles as the sole legislative body. However, the Guardian Council’s oversight creates what some scholars have characterized as a “functional bicameralism” despite the formally unicameral structure.

The Majles holds numerous powers including:

1. Enacting laws on all matters within constitutional limits (Article 71)
2. Interpreting ordinary laws
3. Approving the annual budget
4. Ratifying international treaties
5. Investigating national affairs
6. Approving cabinet ministers
7. Impeaching ministers or the President

The Iranian Majles (parliament) functions as a meaningful space for political deliberation and policy engagement. As Bakhtiari (1996) notes, despite operating within clearly defined institutional boundaries, it allows for genuine debate and legislative activism. The Majles often serves as a launchpad for presidential hopefuls, offering politicians a national platform to build public reputations and establish legislative records. Nonetheless, its legislative autonomy is constrained by supervisory institutions—most notably the Guardian Council. Articles 91 through 99 of the Constitution empower the Guardian Council to review all legislation for consistency with Islamic principles and constitutional requirements. This institutional check, as Arjomand (2009) explains, reflects the hybrid nature of Iran’s political structure, where republican institutions function under the oversight of theocratic authorities.

To manage conflicts between the Majles and the Guardian Council, the Expediency Discernment Council was introduced during the 1989 constitutional revisions. When legislative disagreements persist and no compromise is reached, the Expediency Council arbitrates and finalizes contested bills. According to Moslem (2002), this arrangement introduces an additional

tier of executive-aligned oversight, further complicating the legislative process and reinforcing the state's multi-layered power dynamics.

1.2.4 The Judiciary

Iran's judiciary functions as an independent authority responsible for safeguarding individual and social rights and administering justice (Article 156). The judiciary head is appointed by the Supreme Leader for a renewable five-year term and must be a just, qualified Islamic jurist experienced in legal affairs and competent in administration (Article 157). The Constitution includes numerous provisions guaranteeing judicial independence:

1. The judiciary chief's appointment by the Supreme Leader rather than executive or legislative authorities
2. Freedom from parliamentary questioning or impeachment
3. Authority to investigate executive branch officials who commit offenses
4. Autonomous case management
5. Independent hiring processes

These provisions establish what Schirazi (1997) describes as formal judicial independence within a framework of religious oversight and Leader accountability. This distinctive arrangement shapes the judiciary's role in Iran's political system, including electoral processes. The judiciary serves several key objectives:

1. Protection of public rights as stipulated in the Constitution
2. Expansion of legitimate freedoms
3. Supervision of law implementation

4. Prevention of crime and rehabilitation of offenders

The head of Iran's judiciary holds significant powers, including establishing judicial infrastructure, drafting legal bills, appointing judges, and overseeing the Court of Administrative Justice. These responsibilities extend beyond traditional judicial functions to include nominating six legal experts for the Guardian Council, participating in leadership succession procedures, and reviewing the assets of high officials before and after their terms, as stipulated in Article 142 of the Constitution. The judiciary plays an important role in electoral politics through several mechanisms. Its oversight of campaign-related legal complaints provides enforcement authority for electoral regulations. The judiciary head's nomination of six legal experts for Guardian Council membership indirectly influences candidate vetting processes. Additionally, corruption investigations by the judiciary frequently become fodder for negative campaigning, with candidates attacking opponents based on judicial findings or ongoing investigations. As Tezcür (2012) observes, the judiciary's selective enforcement capacities create both vulnerabilities and opportunities for political contenders in electoral contests.

1.2.5 Constitutional Oversight and Advisory Bodies

Although the Guardian Council is not addressed in a standalone chapter of Iran's Constitution, it stands as one of the country's most powerful institutions, particularly in relation to electoral matters. Articles 91 through 99 define the Council's composition and duties. As Bakhtiari (1996) argues, the Council institutionalizes the supervisory role of the clerical establishment over elected bodies, thereby reinforcing the authority of unelected elites within Iran's political system. Structurally, the Council consists of twelve members: six Islamic jurists appointed directly by the Supreme Leader and six legal experts nominated by the judiciary head

and approved by Parliament. This configuration, combining religious and legal authorities, illustrates what Amanat (2017) describes as a fusion point between theological principles and constitutional governance—an arrangement emblematic of Iran’s hybrid political structure. The Guardian Council’s electoral responsibilities include:

1. Vetting candidates for presidential elections
2. Verifying presidential election results
3. Supervising parliamentary elections
4. Overseeing Assembly of Experts elections
5. Monitoring referendums

The Guardian Council holds a pivotal role in Iran’s political system, significantly influencing who is permitted to run for office. As Arjomand (2009) discusses, the Council functions as a central authority in determining electoral participation, effectively controlling access to candidacy. Over time, the Council’s interpretation of constitutional qualifications has become increasingly stringent. Boroumand (2018) notes that this trend has progressively narrowed the field of political competition, limiting the diversity of candidates and perspectives within the electoral process.

Beyond electoral oversight, the Guardian Council holds additional authorities including:

1. Reviewing legislation for conformity with Islamic law and the Constitution
2. Interpreting the Constitution
3. Determining whether government regulations comply with religious principles

These combined powers render the Guardian Council a central oversight body in Iran's political system, performing both constitutional and religious supervisory functions. As Moslem (2002) notes, the Council's dual role allows it to operate simultaneously as a constitutional authority and as an institution that enforces compliance with Islamic law. This integration of legal and religious oversight exemplifies the hybrid nature of Iran's political framework, where republican institutions coexist with theocratic controls.

The Guardian Council's influence is particularly evident in presidential elections, where its authority to vet candidates has a decisive impact on electoral dynamics. Article 115 of the Constitution stipulates that presidential candidates must be individuals with recognized religious and political qualifications (*rejal-e mazhabi va siyasi*), including Iranian nationality, administrative competence, integrity, and adherence to the principles of the Islamic Republic. Through its interpretation of these criteria, the Guardian Council plays a crucial role in shaping the field of candidates, a process that Tezcür (2012) describes as establishing clear boundaries around electoral competition—where participation is permitted only within limits deemed acceptable by dominant power structures in the regime.

The Expediency Discernment Council of the System (EDCS) was formally incorporated into Iran's constitutional structure through the 1989 revisions, though Ayatollah Ayatollah Khomeini had initially established it in February 1988 to resolve conflicts between Parliament and the Guardian Council. Article 112 of the revised Constitution formalized its status and responsibilities. The EDCS serves several important functions within Iran's political system:

1. Resolving disputes between Parliament and the Guardian Council when they reach an impasse

2. Advising the Supreme Leader on matters referred to it
3. Participating in leadership succession arrangements under Article 111
4. Contributing to constitutional revision processes under Article 177

The Expediency Discernment Council of the System (EDCS) plays an important role in bridging institutional divides within the Islamic Republic. As described by Arjomand (2009), it functions as a key forum where senior elites from both elected and appointed bodies negotiate and resolve differences, promoting systemic consensus. Its members—appointed by the Supreme Leader—typically include influential political and religious figures across Iran’s factional spectrum, thereby institutionalizing elite dialogue and conflict resolution. Over time, the EDCS has expanded its original mission of resolving legislative disputes to encompass broader advisory functions, particularly in the area of long-term policy development. According to Moslem (2002), this evolution has elevated the Council’s role in shaping the direction of economic, social, and political strategies, effectively making it a significant policymaking body within Iran’s complex governance structure. Although the EDCS does not directly administer elections, it nonetheless wields notable influence in the political arena. Its members often include or become prominent electoral contenders, and the visibility and authority conferred by Council membership can translate into enhanced public profiles and political capital, as noted by Bakhtiari (1996). Furthermore, the policy positions articulated or endorsed by the EDCS help delineate the boundaries of acceptable reform discourse during presidential campaigns, indirectly shaping the messaging strategies of candidates.

The Supreme National Security Council (SNSC) represents another significant institution within Iran’s political system, particularly regarding foreign policy and security matters.

Introduced through the 1989 constitutional revision, the SNSC replaced the Supreme Defense Council established under the original 1979 Constitution. Article 176 establishes the SNSC's primary purposes:

1. Safeguarding national interests
2. Protecting the Islamic Revolution
3. Preserving territorial integrity
4. Defending national sovereignty

The SNSC's specific responsibilities include:

1. Determining defense and security policies
2. Coordinating political, intelligence, social, cultural, and economic activities with defense and security policies
3. Utilizing national resources to address internal and external threats

The Council's composition includes the heads of the three branches of government, the chief of the General Staff of the Armed Forces, the country's top planning and budget official, two representatives appointed by the Supreme Leader, and the ministers of foreign affairs, interior, and intelligence. This composition makes the SNSC what Rakel (2008) describes as a key nexus between the elected executive, appointed military and security officials, and the Supreme Leader's office. The SNSC convenes under the presidency of the President, but its resolutions only take effect after the Supreme Leader's approval. This arrangement reflects the hybrid nature of Iran's political system, combining elected executive authority with ultimate religious oversight. As Saikal (2019) discusses, the SNSC embodies the distinctive division of labor

between elected and appointed authorities in Iran's strategic decision-making. The SNSC's role in electoral politics stems primarily from the prominence of national security and foreign policy issues in presidential campaigns. Experience on the Council often becomes a campaign credential, with candidates highlighting their SNSC service as evidence of national security expertise. Simultaneously, candidates frequently criticize predecessors' security and foreign policy decisions, using SNSC policies as targets for negative campaigning. As Farhi (2012) notes, national security decision-making provides both credential-building opportunities and vulnerability-creating records for presidential contenders.

1.3 Role of Religion and Ideology in Iranian Elections

Religion and ideology play foundational roles in shaping electoral politics in Iran. These forces create distinctive norms and constraints that influence both the nature of political competition and the form that negative campaigning can take. Iran's constitutional structure embeds religious principles directly into state governance, blending theological doctrine with revolutionary ideals. As Schirazi (1997) outlines, this system fuses legitimizing frameworks with regulatory mechanisms, making religious and ideological conformity essential for political legitimacy. Understanding these elements is crucial for analyzing how Iranian candidates engage in electoral communication, particularly when it comes to criticism and opposition.

1.3.1 Religious Foundations and Normative Constraints

Iran's elections derive their legitimacy from a dual source: divine authority and popular participation. Article 56 of the Constitution recognizes God as the ultimate sovereign while entrusting governance to human representatives under divine supervision. Moslem (2002) explains that this religious framework positions voter participation not as an expression of

unrestricted public will, but as a religiously sanctioned act of collective governance. The doctrine of *velayat-e faqih* (guardianship of the jurist) is central to this system. It delegates supervisory power to qualified Islamic jurists during the occultation of the Twelfth Imam, institutionalizing a hierarchical model in which religious authority supervises public political activity. Arjomand (2009) describes this model as one that combines religious endorsement with electoral validation, forming a uniquely hybrid system of legitimacy.

Candidate eligibility reflects this fusion. Article 115 requires presidential candidates to meet religious, political, and administrative standards. Over time, the Guardian Council has adopted an increasingly strict interpretation of these requirements, with Boroumand (2000) noting that assessments of religious fidelity have effectively narrowed the field of viable contenders. Religious authorities, particularly the Supreme Leader, often offer guidance during campaign periods, emphasizing themes like moral conduct, truthfulness, and unity—norms that carry particular weight among candidates aligned with the establishment. Religious and revolutionary values impose distinct ethical limits on campaign behavior, shaping the use and scope of negative messaging. Islamic norms forbid slander, backbiting, and unfounded accusations, all of which are frequently cited by clerics and officials during election seasons. Candidates must tread carefully, especially those closely associated with the clerical establishment, to avoid accusations of religious impropriety. These doctrinal norms work alongside legal frameworks to regulate negative campaigning. However, the normative reality of Iranian elections often diverges significantly from these religious ideals. As noted in analyses of Iranian electoral politics, “what has actually happened is completely different from these words and slogans, and it has been observed that the election arena in the Islamic Republic of Iran has often turned into a scene of heavy competition and hostility between candidates and various

factions and discourses” (Babaei et al., 2018, p. 37). This tension between religious principles discouraging negative campaigning and the practical reality of intense electoral competition creates a distinctive dynamic in Iranian political communication. The reality that “negative campaigning methods and candidate attacks have increased in recent presidential elections” (Babaei et al., 2018, p. 37). demonstrates how strategic electoral imperatives often outweigh normative constraints, creating a complex messaging environment where candidates must navigate both competitive necessities and ethical boundaries.

The Supreme Leader’s electoral guidance significantly affects candidate behavior. For instance, before the 2021 presidential election, Ayatollah Khamenei warned against personal attacks and rumor-spreading (Ayatollah Khamenei.ir, 2021). His statements are influential, especially among principlist candidates. In addition, revolutionary ideals stress unity and cohesion. The concept of *vahdat-e kalame* (unity of expression) reinforces the idea that political disputes must not endanger the Islamic Republic’s internal harmony. Candidates whose criticism is perceived as divisive or aligned with foreign narratives often face strong pushback from state media and conservative circles.

Cultural expectations also shape communication strategies. Concepts like *adab* (etiquette) and *ehteram* (respect) guide public discourse norms, discouraging direct personal attacks, particularly against religious figures. Rakel (2008) notes that these expectations vary across demographics, with younger, urban voters more accepting of direct criticism than older, traditional constituencies. Candidates must therefore tailor their tone to their audiences. Lessons from past elections, such as the backlash against attacks on Mohammad Khatami in 1997 (Menashri, 2001), have made campaigns cautious about being overly negative, due to the risk of

triggering sympathy for the target. As a result, candidates often favor more nuanced or indirect criticism over outright attacks. These overlapping religious, revolutionary, and cultural influences create a uniquely constrained landscape for negative campaigning in Iran. While critical messaging is not absent, its tone, targets, and reach are all shaped by these layered norms—distinguishing Iran’s political discourse from that of liberal democracies where adversarial rhetoric is more tolerated.

1.3.2 Revolutionary Ideology and Electoral Competition

In addition to religious doctrine, revolutionary ideology plays a defining role in structuring electoral politics. The foundational principles of the Islamic Revolution—anti-imperialism, Islamic governance, social justice, and cultural authenticity—constitute what Axworthy (2013) describes as a core ideological framework that all candidates must engage with, even when offering varying interpretations of policy. This ideological consistency constrains the scope of criticism and shapes the tone of political communication. A central qualification for presidential candidates is their demonstrated commitment to the Islamic Republic (*eltezam be nezam*). This encompasses not only adherence to the system’s principles but also revolutionary credentials, public record, and alignment with acceptable political factions. As Bakhtiari (1996) notes, this requirement limits criticism to policy disagreements and excludes challenges to the system’s legitimacy.

Anti-imperialism is a dominant feature of the ideological landscape, particularly in relation to the United States and Israel. Candidates may vary in their proposed foreign policy strategies, but all must affirm their opposition to foreign domination. Rakel (2008) explains that this ideological commitment narrows the range of debate, resulting in a foreign policy space

where tactical differences exist but fundamental anti-imperialist positions are assumed. Social justice is another key pillar of the revolutionary ethos. Grounded in Islamic teachings and revolutionary ideals, this concept obliges candidates to address inequality, corruption, and wealth distribution. Gheissari and Nasr (2006) argue that both reformists and principlists incorporate these ideals into their platforms, albeit with different policy prescriptions and rhetorical styles.

Cultural authenticity and Islamic values, particularly concerning gender roles, family life, and public morality, also form a key ideological dimension of campaign discourse. All candidates are expected to support these values to some extent, though they may differ in how strictly or flexibly they propose to enforce them. As Farhi (2012) explains, electoral competition often takes place within a constrained cultural field, where candidates must affirm core Islamic values while subtly signaling their preferred approach to policy implementation. This ideological constraint defines the limits of cultural criticism permissible in campaign rhetoric.

1.4 Political Factions and Electoral Coalitions

Iran's political landscape is organized around factional alignments rather than formal political parties. Understanding these factional divisions and coalition patterns is essential for analyzing negative campaigning dynamics in presidential elections, as these alignments significantly shape both message targeting and reception.

1.4.1 Major Political Factions and Competition Dynamics

Iran's primary factional division separates principlist (*osulgara*) from reformist (*eslahtalab*) political orientations, with pragmatists (*e'tedālgara*) often occupying an intermediate position. These factional identities blend ideological, policy-based, and personal loyalties, forming the basic framework for political competition, particularly in presidential

elections. The principlist faction represents the conservative axis of Iranian politics, characterized by adherence to revolutionary ideals, support for religious governance, and resistance to Western influence. Principlists typically emphasize economic independence, cultural conservatism, and assertive foreign policies—particularly in relation to the United States and Israel (Rakel, 2008). According to Saikal (2019), this faction emphasizes loyalty to the founding values of the 1979 Islamic Revolution, which shapes its self-identification and policy orientation. Despite their broad alignment, principlists are internally divided into sub-factions that compete for influence. These internal sub-factions include traditional conservatives linked to the clerical and merchant classes, security-oriented conservatives associated with the Revolutionary Guard and intelligence networks, and hardline populists who blend ideological rigor with populist economic appeals aimed at working-class and rural voters. These groups often engage in intense internal competition during primary phases but tend to consolidate behind a single candidate in general elections.

The reformist faction emerged in the 1990s, advocating political openness, expanded civil liberties, and engagement with the global community, while remaining committed to the broader Islamic Republic framework. Reformists generally support reducing the religious establishment's role in politics, promoting economic liberalization, and pursuing diplomatic normalization with the West (Gheissari & Nasr, 2006). Arjomand (2009) explains that reformists seek to harmonize Islamic principles with democratic governance through gradual institutional reform rather than abrupt transformation. This faction also contains varied sub-groups: religious reformists grounded in Islamic justification for pluralism, technocratic reformists focused on governance and efficiency, and youth-driven reformers advocating deeper cultural and political change (Gheissari & Nasr, 2006). These differences often make it difficult for reformists to rally

behind a unified presidential candidate. The reformist discourse explicitly positioned itself as champion of the ‘republicanism’ wing of the political system, emphasizing freedom and popular participation. Under President Khatami, “civil society, political parties, and non-governmental organizations were strengthened unprecedentedly, and for the first time, city and village council elections were held. Additionally, numerous newspapers and magazines with relatively high circulations and critical approaches were licensed” (Darabi, 2009, p. 262). This discourse asserted that ‘the Islamic nature of the system stems from its republican nature,’ arguing that the legitimacy of velayat-e faqih arises from the constitution and popular vote rather than exclusively divine appointment. This framing directly challenged the principlist understanding of authority and created a fundamental tension that continues to shape electoral politics, including negative campaigning strategies.

Pragmatists constitute a third orientation, prioritizing practical governance and economic development over ideological doctrine. Emerging from post-war reconstruction under Akbar Hashemi Rafsanjani, pragmatists emphasize expertise, policy efficiency, and national stability (Saikal, 2019). Depending on political conditions, they have allied with both reformists and moderate principlists. Their relatively flexible positioning allows them to play a decisive role in shaping electoral coalitions. Presidential candidate selection is typically determined through informal negotiation rather than institutionalized primaries. As Bakhtiari (1996) describes, selection occurs through factional councils made up of key political, clerical, and organizational figures. These groups consider ideological loyalty, electability, and compatibility with powerful regime institutions—especially the office of the Supreme Leader. In Iran’s non-party system, personal networks and elite bargaining often influence candidacy as much as formal criteria. Although the Supreme Leader rarely issues explicit endorsements, his signals—through speeches

or appointments—play a significant role in shaping factional alignment. Sadjadpour (2008) notes that these implicit cues can help elevate certain candidates while sidelining others, especially among principlists, who tend to respond more closely to perceived preferences of the Leader. Nonetheless, these influences do not completely negate electoral competition, which retains strategic importance within the system.

Coalition-building is vital in Iran's two-round presidential election system. Because a candidate must win an outright majority to avoid a runoff, various factions often coalesce behind strong contenders as the race progresses (Tezcür, 2012). These coalition negotiations shape the tone and targets of negative campaigning, as candidates must balance criticism of rivals with the need for eventual alliance-building. Unequal access to campaign resources also shapes factional competition. Principlists often benefit from state-aligned institutions such as religious foundations, government media, and military-affiliated networks (Rakel, 2008). In contrast, reformist campaigns rely more on civil society, online mobilization, and diaspora outreach, which can affect both message strategy and campaign scope. These differences also shape how negative messages are produced and disseminated, with better-resourced factions more capable of organizing coordinated attacks. Factional realignment is a common feature of Iranian politics. As Keshavarzian (2005) explains, shifting political alliances, personal rivalries, and evolving ideological positions frequently lead to reconfiguration of factional loyalties. This fluidity adds complexity to negative campaigning, as intra-factional attacks can damage future coalition prospects, forcing candidates to calculate when and how to criticize their rivals without undermining broader strategic goals.

1.4.2 Factional Support Bases and Electoral Geography

Factional competition in presidential elections reflects distinctive constituency patterns and regional variations that significantly influence campaign strategies, including negative messaging approaches. Principlist support typically concentrates among several key constituencies. Religious conservatives, particularly in smaller cities and rural areas, provide a reliable voting base motivated by cultural and religious values. Security-oriented voters concerned with national defense and international pressure typically align with principlist candidates promising strength and resistance. Traditional merchants (bazaaris) and religious foundation networks often support principlist candidates who protect their economic interests and cultural values (Rakel, 2008). Recent elections have seen principlists increasingly adopting populist economic messaging to expand support among working-class and rural voters through promises of economic justice and expanded welfare programs. Reformist support bases present a different constituency profile. Urban middle and upper-middle classes, particularly in Tehran and major provincial capitals, typically form the core reformist constituency, motivated by cultural liberalization and economic opportunity. University students and educated youth have traditionally supported reformist candidates promising social freedoms and reduced moral policing. Ethnic minorities, particularly in border provinces, often support reformist candidates perceived as more tolerant of cultural and linguistic diversity (Gheissari & Nasr, 2006). These constituency patterns create distinctive geographical support distributions, with reformists typically strongest in major urban centers and ethnic minority regions. These factional identities are not merely demographic or interest-based groupings, but are constituted through discursive practices that actively construct political meaning. As Firahi explains, "Political discourses attempt to establish their identity by highlighting "self" and marginalizing or eliminating "other."

In fact, highlighting and marginalization is the common mechanism governing all discursive behaviors and practices of political discourses” (Firahi, 2010, p. 119). This process is evident in how the principlist interpretation of key concepts like “supervision” aligns with their central signifier of “velayat” (guardianship), promoting a top-down vision of legitimacy that shapes their entire approach to governance. The way factions define themselves against each other creates the discursive foundation for negative campaigning, as criticism of opponents becomes a means of reinforcing factional identity boundaries.

It is important to note that in the Islamic Republic of Iran, true partisanship has not fully developed, and electoral processes often operate outside conventional party frameworks. As noted in analytical work on Iranian elections, “In Iran, due to historical reasons and weak party structures, election campaigns center more on candidates’ personalities and their attributed characteristics rather than party platforms” (Seyedamami, 2009, p. 85). This personalization of politics has significant implications for how negative campaigning manifests in Iranian elections. Without strong party identities to guide messaging, campaigns frequently target individual attributes and personal histories rather than consistent ideological platforms. Furthermore, “negative advertising in Iran is mostly indirect and occurs through rumor-mongering and unofficial media” (Seyedamami, 2009, p. 80), reflecting both the personalized nature of political competition and the system’s formal constraints on direct criticism.

Pragmatist support typically draws from technocratic, business, and middle-class constituencies prioritizing economic development and international engagement over ideological concerns. Depending on specific candidates and electoral contexts, pragmatists may align with either reformist or moderate principlist coalitions, making their constituency support patterns

more variable than other factional orientations (Saikal, 2019). This swing constituency often proves decisive in presidential contests, particularly in runoff situations where broader coalition formation becomes essential for victory. Regional variations in factional support create distinctive electoral geographies. Tehran and other major urban centers typically demonstrate stronger reformist support, particularly in northern urban districts with higher socioeconomic profiles. Smaller cities and rural areas, particularly in central and eastern provinces, typically favor principlist candidates. Border provinces with significant ethnic minority populations (Kurdistan, Sistan-Baluchistan, Azerbaijan) often demonstrate distinctive voting patterns influenced by ethno-linguistic considerations alongside factional politics (Alem, 2011). These geographical patterns shape campaign resource allocation and messaging strategies, including negative campaigning targets and approaches.

Turnout disparities across different constituencies significantly influence electoral outcomes and campaign calculations. Principlist supporters typically demonstrate more consistent electoral participation, providing a stable voting base even in low-turnout conditions. Reformist supporters show more variable participation, with turnout significantly influenced by perceived competitiveness and candidate credibility (Tezcür, 2012). This turnout differential creates distinctive strategic imperatives for different factions, with reformists particularly focused on mobilization and principlists on securing their base. These imperatives shape negative campaigning approaches, with reformists typically needing to generate enthusiasm among marginal supporters while principlists focus on demobilizing opposition without alienating their base.

1.5 Media Environment and Campaign Communications

Iran's media and communications environment create distinctive conditions for campaign messaging, including negative campaigning. Understanding this environment's structural characteristics, regulatory framework, and evolving digital dimensions is essential for analyzing how negative messaging functions in presidential elections. Iran's traditional media landscape blends state control with factional variation. The state broadcasting monopoly, Islamic Republic of Iran Broadcasting (IRIB), dominates television and radio communication nationwide. Supervised directly by the Supreme Leader's office, IRIB operates several national TV channels, radio stations, and digital platforms (Michaelsen, 2016). Although officially non-partisan, its coverage typically favors principlist candidates, limiting access for reformists and pragmatists. This asymmetry significantly influences campaign strategies, particularly in managing negative messaging.

The print media scene is more diverse, representing various factional perspectives. Prominent newspapers range from conservative outlets like *Kayhan* and *Resalat* to reformist papers such as *Shargh* and *Etemad* (Michaelsen, 2016). These platforms offer different factions a means to engage their constituencies, especially during elections. However, periodic suspensions and legal actions disproportionately affect reformist outlets, contributing to unequal communication capacity across the political spectrum. These disparities shape the form and frequency of negative campaigning in traditional media. Media regulation imposes both formal and informal controls on campaign communication. The Press Supervisory Board, overseen by the Ministry of Culture and Islamic Guidance, licenses print publications and can suspend them for violating standards related to religion, national security, or defamation (Michaelsen, 2016). Additionally, the Supreme National Security Council periodically restricts coverage of sensitive

issues, and informal pressures — such as financial access, content directives, or threats of closure — further constrain editorial independence.

Campaign advertising is subject to detailed regulation under the Presidential Election Law. Articles 56 to 69 govern timing, content, and format of advertisements, restricting the use of “insulting language,” “defamation,” or “divisive statements” (Presidential Election Law). Although these terms are vaguely defined, they are enforced by IRIB, which must remove such content from recorded broadcasts and offer rebuttal opportunities when aired live (Boroumand, 2018). Televised debates have become the principal forum for direct candidate interaction, yet they are highly structured, which limits open confrontation and spontaneity. Iran’s official campaign once the period is brief, beginning Guardian Council finalizes candidate approvals and ending 24 hours before election day. Article 56 mandates that all campaigning — including digital efforts — occur within this window. This short timeframe compresses political messaging into a highly concentrated period, often intensifying pressure on candidates while limiting strategic flexibility. Scholars note that such condensed campaigning increases the stakes for all messaging — including negative campaigning — which must be both efficient and carefully calibrated to avoid regulatory or reputational backlash.

Article 64 of the Election Law forbids offensive campaigning, including insults or defamation. Government venues such as Friday Prayer pulpits and state facilities are off-limits for campaign activity, as is the involvement of civil servants during official hours (Article 68). These restrictions aim to preserve electoral integrity and reduce incumbency advantage by drawing clear lines between state functions and political activity. Oversight bodies such as the Central Election Supervisory Board and provincial committees monitor compliance, while the judiciary can impose fines, disqualification, or imprisonment for violations (Boroumand, 2018).

These enforcement mechanisms play a central role in determining the tone of campaign messaging, particularly when it comes to criticism of opponents.

In theory, these regulations apply equally to all candidates. In practice, however, implementation often varies depending on political alignment. As Tezcür (2012) notes, enforcement has historically shown greater leniency toward principlist criticism of reformists than the reverse, contributing to an uneven playing field. These inconsistencies create strategic challenges, especially for reformist candidates, who must weigh the risks of regulatory retaliation when crafting negative messages. The resulting environment requires careful message design, with reformist and pragmatist candidates typically relying more on indirect criticism, while principlists often operate with more latitude. Digital media has significantly transformed Iran's political communication landscape, offering alternative channels that partially bypass the limitations of traditional media. By 2020, internet penetration had expanded to approximately 70–75% of the population, with especially high usage among urban youth (World Bank, 2021; DataReportal, 2021). This digital connectivity has created new political communication possibilities while presenting novel regulatory challenges for authorities. Despite formal restrictions, social media platforms play a central role in electoral communications. Global platforms like Twitter(X), Facebook, and YouTube are officially blocked, but widespread use of virtual private networks (VPNs) enables substantial public access (Michaelsen, 2016). Among these, Twitter(X) has emerged as a key platform for political elites, journalists, and engaged citizens. It facilitates direct political discourse that often exceeds the boundaries of what is permitted in traditional state-regulated media. While Twitter(X) users represent only a fraction of the broader population—roughly 10–15% of Iranian adults—the platform is highly influential in setting political agendas and amplifying elite discourse.

Instagram and Telegram have become especially important tools in electoral communication. Unlike consistently blocked platforms, these services have had variable accessibility over time, and they provide space for direct interaction between candidates and voters, dissemination of campaign content, and lateral communication among supporters. As Akhavan (2013) notes, these platforms allow for political engagement that is less constrained by traditional regulatory oversight, opening space for more assertive messaging—including negative campaigning strategies that would face limitations in broadcast media. Domestic platforms such as Bale, Eitaa, Soroush, Gap, and iGap—developed with government support—also play a role in political communication. These applications offer officially sanctioned alternatives to global platforms but operate under closer state oversight (Golkar, 2021). Although they exhibit more stringent content restrictions, they are still used by campaigns aiming to reach broader or more conservative audiences. The fragmented nature of Iran’s digital ecosystem, divided between domestic and international services, compels campaigns to tailor their messaging across platforms based on their audience, control level, and content flexibility.

Digital regulation in Iran includes technical filtering, legal restrictions, and coercive enforcement. The Supreme Council of Cyberspace determines national internet policy, while the Committee for Determining Instances of Criminal Content implements specific filtering decisions (Michaelsen, 2016). Enforcement is carried out by the Cyber Police (FATA), which investigates violations of content laws—especially posts deemed defamatory, slanderous, or threatening to national security. These constraints are unevenly implemented, creating pockets of expressive opportunity that campaigns have learned to exploit before content is censored or removed. The 2021 presidential election marked a turning point in digital campaigning. Despite access limitations, candidates developed extensive social media strategies, with active profiles,

supporter engagement, and influencer collaborations across multiple platforms (Golkar, 2021). This digital activity reshaped both the reach and tone of campaigning—particularly the use of negative messaging, which increasingly occurred in online settings rather than state-controlled media. These dynamics also raised new concerns regarding content verification, echo chambers, and accountability, reinforcing the dual-edged nature of digital political communication in Iran’s constrained electoral environment.

1.6 Trends in Voter Behavior and Media Use

A comprehensive understanding of Iranian voter participation and media consumption is essential for analyzing the dynamics of negative campaigning during presidential elections. These factors define the communicative and psychological context within which political messages—especially critical ones—are developed and received. Historically, voter turnout in Iranian presidential elections has been relatively high when compared to global standards, although fluctuations exist between different election cycles. Scholars note that presidential contests in Iran tend to attract more voters than parliamentary ones, likely due to the symbolic and political weight attributed to the presidency, even with its institutional limitations (Tezcür, 2012). These patterns necessitate tailored mobilization strategies, particularly when campaigns rely on negative messaging to energize their support bases without discouraging participation. The decline in voter turnout—evident in the 2021 election, which recorded under 50% participation—illustrates growing disillusionment linked to economic grievances, limitations in candidate diversity, and organized calls for election boycotts.

Youth participation is another crucial variable. Younger voters have shown lower and more volatile engagement levels compared to older generations. This disparity necessitates outreach strategies that address younger voters’ skepticism and alienation, particularly via digital

communication platforms (Farhi, 2017). Urban-rural divides and regional disparities further complicate turnout patterns; rural voters often exhibit higher turnout rates, which influences how and where campaigns allocate resources. In addition, competitive dynamics—perceptions that an election offers genuine political alternatives—correlate strongly with increased participation, as seen in the elections of 1997, 2005, and 2009 (Tezcür, 2012). Media consumption in Iran spans both traditional and digital formats, shaping the channels and tone of electoral communication. State-run television (IRIB) continues to be the most widely accessed medium, reaching over 90% of Iranian households (Michaelsen, 2016). Despite the growing influence of digital platforms, television remains crucial, especially during debates and formal campaign events. Newspaper readership skews toward urban, educated demographics and exhibits clear ideological segmentation, with conservative and reformist papers targeting distinct constituencies. The rise of digital media has significantly diversified the information ecosystem. Over two-thirds of Iranians use the internet, and over one-third engage with social media, although usage varies by age, education, and location (DataReportal, 2021). Instagram and Telegram are among the most widely used platforms, while Twitter(X), though less popular in terms of user numbers, plays a key role in elite political discourse. Campaigns must therefore implement multi-platform strategies, adjusting tone and content to fit the norms and expectations of each medium (Akhavan, 2013).

Trust in media is highly polarized. People tend to place more confidence in outlets aligned with their ideological leanings, creating segmented “information bubbles” that limit the cross-cutting effects of negative campaign messages (Michaelsen, 2016). This dynamic encourages campaigns to rely on faction-aligned media for disseminating criticism, as neutral or opposition outlets often fail to persuade skeptical audiences. International Persian-language

media such as BBC Persian, Voice of America Persian, Iran International, and Manoto TV play a substantial role among more urban, youthful, and educated audiences. While domestic campaigns cannot control these platforms, their reporting can strongly influence public debate, especially on contentious issues that local outlets may avoid.

Finally, Iranian voters weigh a complex mix of factors in their electoral decisions, including economic policy, identity alignment, religious and cultural values, international policy stances, and candidate personality. Economic dissatisfaction often outweighs ideological loyalty, prompting voters to shift allegiances during downturns (Tezcür, 2012). Meanwhile, voters with traditional and religious leanings are more responsive to appeals grounded in cultural authenticity and revolutionary values (Rakel, 2008). Foreign policy stances, especially regarding engagement with or resistance to the West, have become increasingly salient in recent years (Saikal, 2019). The personal appeal of candidates—based on perceived integrity and competence—also carries weight, particularly in a system where political parties are weak and personalized leadership dominates (Farhi, 2017).

1.7 Historical Evolution of Presidential Elections

Having examined the institutional framework, religious dimensions, factional dynamics, media environment, and voter behavior patterns that characterize Iran's political system, it is essential to understand how these elements have interacted throughout the historical development of presidential elections since the 1979 revolution. This historical perspective provides crucial context for understanding the evolution of electoral politics in Iran, demonstrating how the theoretical structures previously described have functioned in practice across different political eras. The following analysis traces this development from the early

revolutionary period through successive presidential administrations, highlighting key transitions and continuities in Iran's electoral landscape.

1.7.1 Early Revolutionary Period (1979-1989)

The first government established under the Islamic Republic was the interim administration formed by Ayatollah Khomeini's order, with Mehdi Bazargan as Prime Minister. Bazargan was introduced to Ayatollah Khomeini by the Revolutionary Council and confirmed as premier on February 4, 1979. This transitional government faced the immense challenge of establishing governance structures following revolutionary upheaval. Several factors influenced Bazargan's selection, including:

1. Limited executive management experience among the clergy
2. Reluctance among religious leaders to assume direct executive power
3. Bazargan's combined political and religious credentials
4. His connections to Ayatollah Khomeini's associates

Bazargan's administration emerged from a nationalist orientation, combining secular nationalists with Islamic-leaning figures represented by the Freedom Movement of Iran. As Abrahamian (2008: 162) observes, "Bazargan's government represented a transitional arrangement bridging pre-revolutionary political forces and the emerging revolutionary institutions." This transitional character created inherent tensions that ultimately limited the government's effectiveness and longevity. Although short-lived, the interim government played a crucial role in transferring power to an elected president. However, revolutionary forces simultaneously built parallel governance structures outside the interim administration's purview. According to Amanat (2017: 147), as the revolution consolidated, newly formed ideological

institutions gradually took on autonomous authority, developing parallel structures that increasingly eclipsed the formal powers of the interim government. These competing power centers created governance challenges that contributed to Bazargan's resignation after nine months. The U.S. Embassy seizure in November 1979 by students loyal to Ayatollah Khomeini—opposed by Bazargan's government—precipitated his resignation. This incident established anti-American sentiment as a powerful political force within the Islamic Republic's early development, creating patterns that would influence subsequent electoral politics. Axworthy (2013: 172) argues that the U.S. Embassy seizure became a formative political moment, elevating anti-Americanism into a core element of revolutionary legitimacy that would influence the political credentials of candidates in subsequent elections.

In February 1980, a few months after the embassy crisis began, Abolhassan Bani-Sadr was elected as Iran's first president with 76% of the vote. His presidency unfolded amid extraordinary challenges including the hostage crisis, Iraq's invasion, and intensifying factional struggles with religious conservatives in the Islamic Republican Party. Upon assuming office, Bani-Sadr found himself in conflict with the clerical faction of the Islamic Republican Party, who sought to limit his authority to ceremonial functions. These power struggles significantly shaped his presidency, creating what Axworthy (2013: 183) describes as a defining conflict between secular-nationalist and religious-revolutionary visions for Iran's future. This conflict established patterns of factional competition that would influence subsequent electoral politics.

Bani-Sadr failed in efforts to control revolutionary institutions including the Revolutionary Courts, the Islamic Revolutionary Guard Corps (IRGC), and the judiciary. Ayatollah Khomeini personally appointed Sayyed Mohammad Beheshti as Chief of the Supreme Court and Mousavi Ardabili as Prosecutor General—both senior members of the Islamic

Republican Party—further constraining Bani-Sadr’s authority. As Moslem (2002) outlines, while the presidency retained formal constitutional power, actual authority increasingly shifted to clerical figures, who consolidated influence over revolutionary institutions, thereby marginalizing the president’s role.

The Cultural Revolution of 1980, initially backed by Bani-Sadr but ultimately controlled by Ayatollah Khomeini supporters, further demonstrated the president’s limited influence. His inability to control even initiatives he nominally supported revealed the structural constraints on presidential authority within the emerging system. As Abrahamian (2008) observes, the Cultural Revolution demonstrated the limited scope for independent presidential action against clerical-revolutionary priorities.

Parliament, dominated by the Islamic Republican Party, refused to confirm Bani-Sadr’s prime ministerial nominees for months. Eventually, he reluctantly appointed Mohammad-Ali Rajai as prime minister under parliamentary pressure, establishing patterns of executive-legislative conflict that would recur in subsequent administrations. Bakhtiari (1996: 78) notes that Parliament’s role in approving cabinet appointments gave it significant leverage over the presidency, often limiting the executive’s autonomy in forming a cooperative administration. The outbreak of the Iran-Iraq War in September 1980 further complicated Bani-Sadr’s presidency. His military policy differences with the Islamic Republican Party created additional conflict dimensions beyond ideological and institutional disputes. Axworthy (2013: 187) observes that the outbreak of war with Iraq heightened existing political rivalries, adding national security urgency to the factional disputes already destabilizing Iran’s new political system.

In March 1981, Bani-Sadr delivered a controversial speech at the University of Tehran, revealing the existence of torture in Iranian prisons. This speech provoked significant

controversy and demonstrated the political risks of criticizing revolutionary institutions, establishing boundaries for acceptable public discourse that would influence subsequent electoral rhetoric. As Ganji (2013) asserts, Bani-Sadr's public exposure of abuses in Iranian prisons illustrated the dangers of criticizing core revolutionary structures from an official position, shaping the boundaries of acceptable discourse in Iran's political sphere. After Ayatollah Khomeini dismissed Bani-Sadr from his position as Commander-in-Chief of the Armed Forces, the president allied with the Mojahedin-e Khalq Organization (MEK). Following street protests, Parliament impeached Bani-Sadr on June 21, 1981, ending his sixteen-month presidency. Abrahamian (2008: 181) contends that Bani-Sadr's dismissal set an important institutional precedent: it demonstrated that even the highest elected office could be curtailed or removed if it came into direct conflict with dominant clerical power, revealing the limitations of republican institutions within a system governed by religious authority.

Mohammad-Ali Rajai, initially a political activist under the Shah, began his revolutionary political career through collaboration with militant clerics and the Islamic Coalition (Motalefeh) group. After serving as Minister of Education for nine months, he won parliamentary election and subsequently received parliamentary approval as prime minister on August 11, 1980. As prime minister, Rajai maintained close consultation with revolutionary figures and the pro-Ayatollah Khomeini faction. As Moslem (2002) notes, his governance emphasized ideological conformity with revolutionary leadership over autonomous executive management. This contrasted with Bani-Sadr's more independent approach, creating divergent executive styles that influenced the trajectory of presidential authority in the Islamic Republic.

Rajai's administration began amid extraordinary challenges, including the Iraqi invasion, the ongoing hostage crisis, and mounting American pressure. His government implemented

rationing policies, distributing essential goods through coupons to ensure equitable access during wartime shortages. These economic strategies under crisis conditions prefigured approaches later adopted during Mir-Hossein Mousavi's administration. Following Bani-Sadr's impeachment, an interim presidential council—comprising Prime Minister Rajai, Chief Justice Beheshti, and Parliament Speaker Hashemi Rafsanjani—temporarily assumed presidential functions. The Guardian Council approved four candidates out of seventy-one applicants for the July 24, 1981, presidential elections. According to Bakhtiari (1996), this marked the Islamic Republic's first highly regulated presidential contest, setting a precedent for systematic candidate vetting in future elections.

Rajai received overwhelming support from revolutionary institutions such as the Islamic Republican Party, the Qom Seminary Teachers' Association, the Combatant Clergy Association, and other influential groups. Amanat (2017) observes that this broad factional support behind a single candidate exemplified a model of consensus politics that would recur in future electoral cycles. Rajai won over 13 million votes—about 88% of ballots cast—reflecting strong public backing. His presidency, however, lasted only 28 days before he was assassinated with Prime Minister Mohammad-Javad Bahonar in a bombing at the Prime Minister's Office on August 30, 1981. Axworthy (2013) explains that this assassination created a leadership void, which hastened the consolidation of clerical dominance in the executive sphere.

In the wake of Rajai's assassination, the interim presidential council appointed Mohammad-Reza Mahdavi Kani, former Interior Minister under Bahonar, as acting prime minister. On September 2, 1981, Mahdavi Kani formed a provisional cabinet, largely composed of Rajai-era ministers. This transitional government managed the executive until Ali Ayatollah Khamenei's election on October 29, 1981. According to Moslem (2002), the ability to establish a

second interim administration so quickly illustrated the Islamic Republic's institutional adaptability and continuity amid leadership disruptions.

Ayatollah Khamenei's rise to the presidency marked a further consolidation of clerical power. Of 46 potential candidates, 42 were disqualified. Abrahamian (2008) characterizes this process as the state's increasingly assertive control over electoral competition. Ayatollah Khamenei won with 95% of the vote on a 75% turnout. In the 1985 presidential election, Freedom Movement candidates such as Bazargan, Yazdi, and Sadr Haj Seyyed Javadi were again disqualified, and Ayatollah Khamenei secured re-election with 85% of votes cast. Bakhtiari (1996) explains that the Guardian Council's confidence in exercising its vetting authority increased during this period, establishing practices that would shape the future of electoral management in Iran. During both of his presidential terms, Ayatollah Khamenei appointed Mir-Hossein Mousavi as prime minister. Mousavi's cabinet was confirmed by Parliament, forming an executive arrangement that balanced symbolic religious leadership with practical administrative governance. Rakel (2008) explains that this Ayatollah Khamenei-Mousavi partnership exemplified a functional division of labor between the presidency and premiership, allowing for long-term policy planning during wartime.

Mousavi's economic program responded to wartime pressures with contractionary measures and a coupon-based distribution system for basic goods. As Moslem (2002) notes, this reflected the ascendancy of leftist political currents advocating state-led economic intervention and redistribution. These policy orientations not only shaped governance but also contributed to the crystallization of ideological identities within the Islamic Republic. The most pivotal event during Ayatollah Khamenei's presidency was Iran's decision in July 1988 to accept UN Security Council Resolution 598, ending the protracted Iran-Iraq War. Axworthy (2013) argues that this

reluctant ceasefire, approved by Ayatollah Khomeini, demonstrated a shift toward pragmatic statecraft even within a revolutionary framework. The ideological opening created by this decision would later be expanded under Rafsanjani's leadership.

Following Ayatollah Khomeini's death in June 1989, the Assembly of Experts selected Ayatollah Khamenei as Supreme Leader, with more than 72% of the vote. Although Ayatollah Khamenei reportedly favored other candidates and was initially hesitant, he accepted the position. Ganji (2013) describes this transition as a defining institutional moment, showing the Islamic Republic's ability to maintain structural continuity even after the death of its founding figure. Combined with the 1989 constitutional amendments abolishing the prime minister's role, this leadership shift fundamentally transformed the state's power architecture for the post-Ayatollah Khomeini era.

1.7.2 Post-War Reconstruction and Reform (1989-2005)

Following the 1989 constitutional revision that eliminated the position of prime minister and expanded presidential authority, Akbar Hashemi Rafsanjani served two consecutive terms as president from August 1989 to August 1997. This period, often referred to as the "Era of Reconstruction," marked a strategic shift away from the revolutionary and wartime orientation of the 1980s toward a more pragmatic and development-oriented form of governance. The Rafsanjani administration-initiated Iran's first Five-Year Economic Development Plan since the Revolution, liberalized parts of the economy, and introduced legal frameworks to combat monopolistic practices. As Moslem (2002) argues, this presidency symbolized a departure from ideological governance and an embrace of technocratic management, establishing patterns that would shape subsequent administrations regardless of their ideological leanings. Reconstruction after eight years of war presented an enormous institutional and infrastructural challenge.

Rafsanjani appointed policy-oriented technocrats to lead major economic ministries and significantly increased national development expenditures. Amanat (2017) explains that this orientation prioritized technical expertise over revolutionary credentials, which provoked growing discomfort within segments of the conservative clerical establishment and intensified internal factional friction throughout his presidency.

To mitigate these internal tensions, Rafsanjani adopted a balancing strategy in cabinet appointments. He selected figures from across the political spectrum, including Mohammad Khatami—aligned with the left-leaning “pro-Imam” current—as Minister of Culture and Islamic Guidance, and Ali-Akbar Velayati, a conservative stalwart, as Foreign Minister. However, this effort to accommodate divergent factions failed to achieve lasting cohesion. Arjomand (2009) notes that such attempts to reconcile ideological blocs only underscored the depth of polarization in Iran’s post-revolutionary political order, a challenge that would persist across subsequent administrations. Despite institutional innovation, Rafsanjani’s administration encountered mounting economic pressures, including a substantial budget deficit during his first term. These financial difficulties increasingly became a target for opposition forces, elevating economic performance to a primary standard by which presidential leadership was judged. As Tezcür (2012) notes, this shift made economic management—rather than ideological fidelity—a key metric of presidential effectiveness. In the 1993 presidential election, Rafsanjani faced a serious challenge from conservative candidate Ahmad Tavakkoli, whose campaign accused the incumbent of fostering inequality and tolerating corruption. Although Rafsanjani was re-elected, the millions of votes garnered by Tavakkoli reflected a growing demand for governmental accountability. According to Moslem (2002), this election marked the emergence of a new

dynamic in Iranian politics in which revolutionary credentials no longer guaranteed uncritical support, and electoral competitiveness began to increase.

Rafsanjani's dual legacy was both to stabilize the postwar political system and, paradoxically, to create space for pluralistic demands that his administration was unwilling or unable to fully accommodate. Axworthy (2013) notes that while his economic and political liberalization efforts brought needed institutional stability, they also sowed the seeds of the reform movement that would rise in his wake. The May 1997 presidential election dramatically reshaped Iran's political landscape. Reformist cleric Mohammad Khatami, unexpectedly nominated by the Combatant Clergy Association, decisively defeated the establishment-backed Speaker of Parliament, Ali-Akbar Nateq Nouri. Khatami secured nearly 70% of the vote with an exceptionally high turnout exceeding 79%. As Gheissari and Nasr (2006) observe, this result signaled a profound rejection of conservative dominance and a clear mandate for reform, ushering in a new model of electoral mobilization and signaling popular appetite for political change.

The Guardian Council had approved only four candidates—Khatami, Nateq Nouri, Mohammad Mohammadi Reyshahri, and Reza Zavare'i—while disqualifying prominent reformist and moderate figures such as Ezzatollah Sahabi, Ali-Akbar Mo'infar, and Ebrahim Yazdi. Tezcür (2012) characterizes this electoral paradox as a hallmark of Iran's hybrid system, where meaningful contestation can still occur within a tightly controlled candidate pool. Khatami's nomination surprised many observers, including himself. His background combined religious training in Qom with academic study in philosophy, leadership roles in cultural and diplomatic institutions, and two ministerial terms during Rafsanjani's presidency—until hardline opposition forced his resignation in 1992. Khatami's campaign rapidly gained momentum,

fueled by support from a broad alliance including the Assembly of Combatant Clerics, the Office for Strengthening Unity, the Executives of Construction, parliamentary minority factions, the Islamic Association of Teachers, and the Mojahedin of the Islamic Revolution Organization. Abrahamian (2008) highlights that this coalition—uniting pragmatic technocrats, progressive intellectuals, and moderate clerics—represented a new electoral force within the Islamic Republic. Khatami’s platform emphasized civil society, rule of law, political development, and freedom—messages that resonated deeply with Iran’s youth and female voters. As Gheissari and Nasr (2006) argue, this emerging coalition of previously underrepresented demographics transformed Iran’s political base and altered factional strategy in subsequent elections.

The seventh presidential election in 1997 marked a significant evolution in negative campaigning strategies. Khatami’s campaign spread rumors about potential election fraud with the slogan “We write Khatami, they read Nateq”, implying authorities would manipulate results. His supporters also portrayed Nateq-Nouri’s backers as extremists comparable to the Taliban, particularly at university gatherings (Mehriar, 1998, p. 55). Nateq-Nouri later lamented: “The psychological warfare against me was very intense... The biggest accusations were made against me... for example, that if I were elected, I would act like the Taliban. My daughters faced enormous propaganda pressure in high school... their nerves were frayed” (Mirdar, 2005). Nateq-Nouri’s campaign responded with its own negative tactics, using publications like *Shalamchek* and *Yalasarat* to attack Khatami, portraying him as a potential ‘second Bani-Sadr’ who would endanger Islam.

In the June 2001 presidential election, Khatami ran for a second term against nine approved candidates from a pool of 817 registrants. Although the ballot was crowded, the main contest centered again on Khatami and Ahmad Tavakkoli. Khatami was re-elected with 77% of

the vote and a voter turnout of approximately 68%. His re-election occurred amidst a politically volatile backdrop: U.S. interventions in Iraq and Afghanistan, the “Chain Murders” of Iranian intellectuals, the Tehran University dormitory protests, the attempted assassination of his advisor Saeed Hajjarian, and domestic violence involving the Mojahedin-e Khalq Organization. As Arjomand (2009) explains, these developments deepened ideological polarization and shaped the tone of both electoral campaigning and governance during Khatami’s second term. Some reformist circles, frustrated with the pace of change, promoted the slogan “Going Beyond Khatami,” expressing growing dissatisfaction with the administration’s concessions and constraints. Gheissari and Nasr (2006) note that internal critiques from Khatami’s base pointed to a widening gap between electoral victories and policy implementation, a pattern that would haunt later reformist efforts. Khatami’s public demeanor during his campaign registration—reportedly emotional—was interpreted by supporters as a reaffirmation of his bond with the electorate. Reformist groups framed the 2001 election as a referendum on presidential powers, highlighting the structural limitations that prevented full implementation of reform. Moslem (2002) explains that this reframing allowed Khatami to retain popular legitimacy despite growing critiques of administrative ineffectiveness. Meanwhile, Ahmad Tavakkoli’s campaign pivoted from ideological slogans to an economic message, calling for government decentralization, reduction of inequality, and the fight against corruption and privilege. Rakel (2008) identifies this strategy as a shift in conservative electoral tactics, acknowledging public demand for economic reform and signaling a broader transformation in principlist rhetoric that would influence future campaigns.

1.7.3 Conservative Resurgence and Crisis (2005-2013)

The ninth presidential election, held on June 17, 2005, featured seven Guardian Council-approved candidates: Mahmoud Ahmadinejad, Ali-Akbar Hashemi Rafsanjani, Mehdi Karroubi, Mohammad-Baqer Qalibaf, Ali Larijani, Mostafa Moeen, and Mohsen Mehralizadeh. According to Axworthy (2013), the inclusion of Moeen and Mehralizadeh—initially disqualified but reinstated following Supreme Leader Khamenei’s intervention—reflected a rare instance of loosened vetting standards. For the first time in the Islamic Republic’s history, no candidate achieved a first-round majority, resulting in a runoff between the top two candidates. Rafsanjani led the first round with 6.2 million votes (21%), followed by Ahmadinejad with 5.7 million (19%) and Karroubi with 5 million (17%). As Gheissari and Nasr (2006) explain, the dispersal of votes among multiple figures within both reformist and principlist camps demonstrated the fragmentation of Iran’s political blocs, introducing a more competitive and unpredictable electoral landscape. The second-round outcome defied expectations: Ahmadinejad surged ahead with 17.2 million votes (62%), defeating Rafsanjani, who garnered 10 million (36%). Naji (2008) interprets this as a popular repudiation of the political elite, fueled by Ahmadinejad’s grassroots messaging against corruption and inequality. His campaign bypassed traditional power structures, relying instead on simple language, nationalist rhetoric, and promises to deliver oil wealth to the people. Ahmadinejad’s campaign deployed distinctive negative messaging, claiming he had “entered the forbidden realm of power” and was being attacked for it. His campaign portrayed Rafsanjani as a symbol of wealth accumulation and himself as an advocate for justice, famously promising to bring “oil money to people’s dinner tables” (Baghian Zarchi, 2009, p. 155).

Ahmadinejad's rise was atypical. His résumé included a degree in civil engineering, participation in early revolutionary activism, service as a provincial governor, and his tenure as mayor of Tehran from 2003. Arjomand (2009) notes that this career path exemplified a shift in political ascension—from religious or revolutionary credentials toward executive experience in local governance. Ahmadinejad's messaging emphasized Islamic values, wealth redistribution, minimal bureaucracy, and independence from factionalism. His promise of a "70-million-strong cabinet" and rejection of elite networks reflected, in Naji's (2008) view, an effective fusion of populist economic appeal with revolutionary ideals. This narrative mobilized both disenfranchised working-class voters and ideological hardliners, forming a new political constituency.

With Ahmadinejad's victory, reformist dominance of the presidency—established during the Khatami years—came to an end. Rakel (2008) suggests that the principlist resurgence was less about doctrinal revival and more about addressing the economic frustrations of ordinary citizens, making economic justice a central theme across factions in future elections. The tenth presidential election, held on June 12, 2009, saw the highest voter turnout in the Islamic Republic's history, with over 85% participation. Dabashi (2011) argues that this unprecedented turnout reflected widespread belief that the election would significantly shape Iran's political trajectory. The Guardian Council approved four candidates: incumbent Ahmadinejad and Mohsen Rezaei from principlist factions, and Mir-Hossein Mousavi and Mehdi Karroubi representing reformist interests.

The televised debates became forums for unprecedented negative campaigning. Ahmadinejad claimed it wasn't just Mousavi opposing him but "three consecutive administrations" [Mousavi, Hashemi, Khatami], attempting to create a stark polarization. In one

debate, Ahmadinejad directly attacked Hashemi Rafsanjani, accusing him of “undermining the government,” “economic corruption,” and maintaining “illegal and secret contact” with “the king of a neighboring Arab country” (Aftabnews, 2009). He also questioned Zahra Rahnavard’s educational credentials, claiming she obtained degrees improperly. Mousavi countered by accusing Ahmadinejad of lying and engaging in occult practices, characterizing his management as based on “adventurism and instability, theatrical behaviors, fantasy and superstition, secrecy, self-centeredness, lawlessness, superficiality, and extremism” (Borna News Agency, 2011, June 13). This negative rhetoric extended to campaign media, with Ahmadinejad symbolically uprooting “weeds” in a garden during a campaign video, implying opponents were harmful elements masquerading as beneficial plants (Bashir & Taheri, 2015).

The Interior Ministry announced that Ahmadinejad had won re-election with 24.5 million votes (63%) to Mousavi’s 13 million (34%). The opposition rejected these results, alleging widespread fraud, and initiated mass demonstrations under the slogan “Where Is My Vote?” The protests that followed—eventually known as the Green Movement—lasted several months and escalated from peaceful rallies to intense street confrontations. Arjomand (2009) considers this period the gravest political crisis faced by the Islamic Republic since its revolutionary founding. Although the Guardian Council upheld the election results, the social and political rupture was profound. Televised debates were a defining feature of the 2009 campaign. In one particularly watched exchange, Ahmadinejad portrayed himself as battling not just Mousavi, but the collective legacies of Rafsanjani, Nateq Nouri, and others. He accused them of corruption and foreign collusion, alleging that their children had amassed vast wealth through privileged connections. Dabashi (2011) argues that these accusations marked a turning point in Iranian

electoral discourse, shattering previous norms of civility and setting new standards for negative campaigning.

The election also saw unusually hostile rhetoric between candidates. Mousavi's campaign accused Ahmadinejad of authoritarianism, deception, and mismanagement. Axworthy (2013) describes the mutual vilification as a new level of political antagonism, reshaping the tone of electoral contests. The polarization extended beyond the candidates and seeped into society, intensifying the already deep ideological and generational divides. As Tezcür (2012) notes, the aftermath of the 2009 election produced lasting institutional changes: tighter restrictions on candidate eligibility and campaign practices were introduced, while at the same time, underlying social divisions grew sharper. This contradiction—between heightened political control and growing societal unrest—would characterize Iranian politics in subsequent electoral cycles.

1.7.4 Nuclear Diplomacy and Its Aftermath (2013-2021)

The eleventh presidential election, held on June 14, 2013, featured eight candidates approved by the Guardian Council from a pool of 686 registrants. These included Saeed Jalili, Gholam-Ali Haddad-Adel, Mohsen Rezaei, Hassan Rouhani, Mohammad-Reza Aref, Seyyed Mohammad Gharazi, Mohammad-Baqer Qalibaf, and Ali-Akbar Velayati. Prior to election day, Haddad-Adel and Aref withdrew, narrowing the field to six. Notably, the Guardian Council's rejection of Esfandiar Rahim Mashaei—closely associated with former president Mahmoud Ahmadinejad—signaled the political establishment's unwillingness to allow perceived personalist extensions of power beyond accepted institutional boundaries (Saikal, 2019).

Hassan Rouhani won with 18,613,329 votes (50.7%), narrowly crossing the first-round threshold, with a voter turnout of 72.7%. His main challengers were Mohammad-Baqer Qalibaf (16.56%), Saeed Jalili (11.36%), and Mohsen Rezaei (10.59%). This result revealed notable

fragmentation among principlist candidates, while reformists appeared increasingly unified in their support for a single figure (Farhi, 2017). Rouhani—a veteran of Iranian political life, with service as a parliamentarian, head of the Center for Strategic Research, secretary of the Supreme National Security Council, and member of the Expediency Council—announced his candidacy on April 11, 2013, under the slogan “Prudence and Hope.” His prospects gained traction following the Guardian Council’s disqualification of former president Rafsanjani on May 21. This event prompted the reformist-moderate alliance to rally behind Rouhani, showcasing their strategic flexibility in adapting to institutional constraints (Saikal, 2019).

Running on a centrist and pragmatic platform, Rouhani used purple campaign branding and a symbolic key to convey a message focused on resolving the nuclear impasse and achieving sanctions relief. This strategy reflected a shift in reformist messaging toward securing economic stability through international diplomacy, rather than revolutionary defiance (Farhi, 2017). In the 2017 election cycle, which began with 1,636 registrations between April 11 and 15, the Guardian Council approved six candidates: incumbent President Rouhani, Vice President Eshaq Jahangiri, Ayatollah Ebrahim Raeisi, Tehran Mayor Mohammad-Baqer Qalibaf, Mostafa Mirsalim, and Mostafa Hashemi-Taba. Jahangiri and Qalibaf later withdrew in support of Rouhani and Raeisi respectively, resulting in a highly polarized two-man race—mirroring patterns of reformist-principlist electoral consolidation that had emerged in previous contests.

With over 41 million votes cast out of approximately 57 million eligible voters (a 72% turnout), Rouhani was re-elected with 23,636,652 votes (57%), defeating Raeisi, who secured 15,835,794 votes (38%). The outcome suggested that a majority of voters favored continued diplomatic engagement and gradual reform over ideological resistance or doctrinal rigidity (Saikal, 2019). Rouhani’s first term had centered on foreign policy, particularly nuclear

negotiations with the P5+1 nations, culminating in the Joint Comprehensive Plan of Action (JCPOA). These negotiations were met with fierce domestic resistance and led to sharp factional divides. According to Farhi (2017), this period introduced a new level of political polarization focused on international engagement, which reshaped the dynamics of electoral politics and public discourse. During the 2017 campaign, Rouhani framed himself as the defender of the JCPOA and presented the election as a referendum on the country's international posture. At a final rally in Mashhad, he publicly criticized his opponents for undermining the nuclear talks, indicating the high stakes of electoral alignment with either engagement or resistance. His campaign slogans—“Iran Again,” “We Will Not Go Back,” and “Freedom, Security, Calm, and Progress”—resonated across a broad reformist-moderate base. Endorsements came from key reformist organizations including the Council for Coordinating the Reforms Front, the Assembly of Combatant Clerics, and the Party of Moderation and Development. These alliances reflected the growing consolidation of pro-engagement factions seeking to counter a revived principlist movement (Saikal, 2019).

Ebrahim Raeisi's campaign emphasized economic populism, promising expanded cash subsidies for the poorest citizens, job creation, and anti-corruption initiatives. As Farhi (2017) notes, his platform adopted economic themes proven successful by Ahmadinejad but steered clear of Ahmadinejad's more confrontational and disruptive political tactics. This approach reinforced a strategic recalibration within principlist circles, aiming to capitalize on widespread economic grievances while avoiding reputational liabilities associated with prior leadership styles. These two electoral cycles, and the political narratives surrounding them, firmly entrenched reformist-principlist competition as the central organizing framework of Iranian presidential politics. Thematic divides increasingly revolved around economic management,

foreign policy posture, and cultural openness—elements that continued to define electoral discourse in 2021 and 2024, albeit shaped by evolving domestic and international pressures.

1.8 Conclusion: Iran’s Political and Electoral System in Comparative Perspective

Iran’s political and electoral system exemplifies a hybrid regime that merges elements of democratic competition with authoritarian constraints, grounded within the legal and ideological framework of the Islamic Republic. This configuration generates a unique set of incentives and limitations for political participation, markedly different from those found in liberal democracies. Scholars such as Brumberg (2001) have described Iran’s institutional design as one that allows for competitive elections within boundaries carefully maintained by state institutions to ensure the regime’s ideological continuity. While genuine electoral contests occur, the scope of such competition is calibrated to reinforce systemic stability rather than enable transformative change. As shown across presidential election cycles, this hybrid structure creates a dynamic in which political actors must navigate both opportunities for public mobilization and structural boundaries rooted in religious authority.

Over time, this institutional framework has evolved but retained core features. Successive administrations, from the revolutionary period through to contemporary presidencies, have had to reconcile the dual pressures of responsiveness to electoral constituencies and conformity with the overarching ideological structure. The resulting electoral terrain remains highly dynamic but constrained—producing recurring tensions between republican elements and theocratic oversight. One of the most defining characteristics of this system is the candidate vetting process managed by the Guardian Council. This body screens presidential hopefuls based on ideological loyalty and political acceptability, thereby restricting access to the ballot to those who meet certain regime-defined criteria. As Boroumand (2000) emphasizes, this pre-selection process

limits ideological pluralism within the political system, reframing elections as contests among candidates broadly aligned with regime values, rather than as opportunities to challenge the system itself. As a result, Iranian electoral politics are shaped more by debates over policy execution, personality, and administrative capability than by ideological opposition.

Factional politics in Iran, typically categorized into reformist, principlist, and pragmatist currents, operate outside the institutionalized party systems common in liberal democracies. These groupings lack rigid boundaries and are often marked by shifting alliances and internal fragmentation. Keshavarzian (2005) points out that factional relationships are fluid and context-dependent, with political allies in one cycle potentially turning into opponents in another. This instability complicates coalition-building and electoral strategy, contributing to the unpredictability and personalization of campaign dynamics. Beyond institutional features, cultural and normative constraints also play a pivotal role in shaping Iran's electoral discourse. Political speech is governed not only by legal restrictions but also by religious values, cultural norms of respect, and revolutionary ideals emphasizing national unity and moral conduct. These norms discourage overt personal attacks or direct confrontations with foundational ideological tenets. Instead, political messaging tends to focus on critiques of performance, implicit contrasts in moral character, and calls for administrative reform, rather than outright challenges to systemic principles. This contrasts sharply with the more confrontational tone often found in liberal democratic elections.

The Iranian media environment further contributes to the asymmetry of political participation. With state-controlled broadcasting, uneven press freedoms, and digital censorship, the communication space favors incumbent power structures while marginalizing opposition narratives. Michaelsen (2016) notes that these disparities result in an imbalanced communicative

environment where established factions enjoy greater visibility and narrative control. These media dynamics have historically shaped not only campaign strategy but also voter perceptions of legitimacy and trust. Despite these divergences, some behavioral patterns within Iranian elections mirror those observed in other democratic systems. For example, the psychological tendency for voters to respond more strongly to negative information than to positive messages—commonly known as negativity bias—also appears to influence campaign discourse and media framing in Iran. This suggests that while institutional and cultural conditions may differ, underlying cognitive mechanisms guiding voter behavior may be shared across political regimes.

In conclusion, Iran’s hybrid electoral system provides a valuable case study for understanding how negative campaigning functions in hybrid regimes that combine competitive elections with institutional constraints. The institutional structure, candidate filtering process, fluid factional politics, religious and cultural discourse norms, and asymmetric media conditions all interact to produce a distinctive model of managed electoral competition. As the following chapters will explore through empirical analysis of the 2021 and 2024 presidential elections, these structural characteristics continue to shape elite strategy and citizen engagement, offering critical insights into the mechanics of constrained democratic participation in ideologically governed systems.

Chapter 2: The Context of the 2021 and 2024 Iranian Presidential Elections

This chapter provides a comparative analysis of the political contexts surrounding the 2021 and 2024 Iranian presidential elections, establishing the essential background for understanding how negative campaigning manifested in each contest. The chapter examines both elections as distinctive political moments within the same institutional framework—the 2021 election occurring as a scheduled end-of-term transition, and the 2024 election taking place following President Raisi’s unexpected death in a helicopter crash. By analyzing the pre-election landscapes, candidate selection processes, campaign dynamics, media environments, and electoral outcomes of both elections, the chapter identifies both consistent institutional patterns and distinctive contextual variations that shaped campaign communication strategies. This comparative approach provides valuable analytical leverage for subsequent chapters, enabling assessment of which aspects of negative campaigning reflect enduring features of Iran’s political system versus those that demonstrate contextual adaptation. The chapter demonstrates that while both elections operated within the same constitutional framework, their different circumstances created unique conditions for political communication that significantly influenced how candidates deployed negative messaging and how citizens responded to such content.

2.1 The 2021 Presidential Election: Continuity and Constraints

The 2021 election emerged within a political landscape characterized by several key factors that significantly shaped campaign communication strategies. After eight years of the Rouhani administration, Iran faced substantial economic challenges following the U.S. withdrawal from the Joint Comprehensive Plan of Action (JCPOA) in 2018. This withdrawal triggered intensified economic sanctions, currency devaluation, and rising inflation that reached approximately 41.2% by early 2021 (International Monetary Fund, 2021). As Golkar (2021)

argues, the 2021 election occurred under economic conditions that heightened public sensitivity to government performance, especially in areas such as inflation, employment, and purchasing power—making economic governance a dominant theme in campaign narratives across political factions. The COVID-19 pandemic further complicated the pre-election landscape, with Iran experiencing one of the region’s most severe outbreaks. By election time, official figures reported over 3 million cases and 83,000 deaths, though independent estimates suggested significantly higher numbers (Johns Hopkins University & Medicine, 2021). Pandemic management controversies, including vaccine acquisition delays and inconsistent public health measures, provided additional targets for government criticism.

Factional dynamics played a crucial role in shaping the electoral landscape. Following disappointing performance in the 2020 parliamentary elections, reformist factions faced internal divisions regarding electoral strategy. Some advocated participation despite constraints while others favored boycott approaches. Simultaneously, principlist factions demonstrated unprecedented coordination through the Council of Coalition Forces, enhancing their organizational capacity for the presidential contest. This asymmetric factional preparation created distinctive campaign conditions that would influence negative messaging strategies. The international context added further complexity, particularly regarding potential nuclear negotiation resumption with the Biden administration. The transition from Trump to Biden in the United States generated uncertainty about the future of international sanctions and diplomatic engagement, creating complex positioning challenges for candidates regarding Iran’s foreign policy direction.

2.1.1 The Historical Evolution of the State-Society Divide in Iran

To fully understand the context of the 2021 and 2024 presidential elections, it is essential to examine the historical development of what scholars have termed the “state-society divide” in Iran. This fundamental cleavage has profoundly shaped Iran’s political landscape and electoral dynamics, particularly regarding negative campaigning. Homayoun Katouzian, a prominent Iranian theorist, has argued that unlike European societies where states emerged from and represented dominant social classes, the Iranian state has historically operated with substantial autonomy from society (Katouzian, 2003). In pre-modern Iran, power was concentrated in an autocratic state that stood above rather than representing social forces. This created what Katouzian terms a “state-society dichotomy” where the government and people viewed each other with mutual suspicion rather than as parts of an integrated whole (Katouzian, 2003).

While the 1979 Revolution promised to bridge this divide through popular Islamic governance, this historical pattern has gradually reasserted itself during the Islamic Republic era. In the early revolutionary period (1979-1989), strong charismatic leadership under Ayatollah Khomeini, external threats from Iraq, and revolutionary fervor created a sense of unity between state and society. However, as these extraordinary conditions faded, the traditional divide between government (*ḥākīmīyat*) and people (*millat*) reemerged and progressively widened. The 1997 presidential election represented a watershed moment when this divide became explicitly politicized. Mohammad Khatami’s unexpected victory over establishment candidate Ali Akbar Nateq-Nouri—who was widely perceived as the Supreme Leader’s preferred choice—reflected growing public desire for reform. As Khatami himself reportedly acknowledged, he sensed that “5-6 million people who were dissatisfied with the system” would vote for him. Ayatollah Montazeri, the former designated successor to Ayatollah Khomeini, went further, suggesting that

Khatami's 22 million votes represented a rejection of the system's prevailing orientation. This election established a pattern where presidential contests would function partly as referendums on the system itself, with opposition candidates implicitly representing societal demands for change against establishment resistance.

This divide intensified during Mahmoud Ahmadinejad's presidency (2005-2013). Though initially perceived as an anti-establishment figure challenging elite corruption, Ahmadinejad's 2009 re-election amid allegations of fraud triggered unprecedented protests under the "Green Movement" banner. What began as electoral contestation quickly evolved into broader questioning of the system's legitimacy, with protesters advancing from "Where is my vote?" to more fundamental challenges to the regime's authority structure. The violent suppression of these protests deepened the state-society divide, establishing a pattern of periodic eruptions of public discontent followed by intensified control measures. The Rouhani presidency (2013-2021) represented an attempt to bridge this divide through promised reforms and improved international relations. However, the US withdrawal from the JCPOA in 2018, economic deterioration, and continued social restrictions maintained the underlying tension. Periodic protests—notably in December 2017, November 2019, and September 2022—demonstrated the persistence and intensification of the state-society divide despite changes in presidential administration.

2.1.2 Public Trust and Social Capital in Contemporary Iran

The context for the 2021 and 2024 elections was significantly shaped by declining public trust in government institutions. Multiple national surveys document this trend. The fourth wave of the "National Survey of Iranian Values and Attitudes" conducted in October 2023 found that 81% of respondents expressed general distrust, while distrust of government institutions ranged

between 50-60% (Research Institute of Culture, Art, & Communications, 2023; Iran International, 2024; Maleki, 2024). Notably, politicians ranked lowest in public trust among all occupational groups, with 70% of respondents expressing low or very low trust (Maleki, 2024; OECD, 2024). This represents a significant deterioration from earlier periods. Comparing data from 2015 to 2023, distrust in parliament increased from 36% to 63%, distrust in the judiciary rose from 38% to 53%, and distrust in the executive branch grew from 35% to 57% (Iran Data Portal, 2023; OECD, 2024; Maleki, 2024). Similar patterns appear across other institutions, including municipal governments and religious authorities, with 56% of respondents expressing low or very low trust in the clergy (Iran Data Portal, 2023). These trends reflect what sociologists term a “crisis of social capital” in contemporary Iran (Maleki, 2024). The widespread perception that government institutions are unresponsive to public needs has contributed to political cynicism and withdrawal from formal participation. This is evidenced by declining electoral turnout—from 85% in the contested 2009 election to 73% in 2013, 73% in 2017, 48.8% in 2021, and 39.9% in 2024—suggesting progressive disenchantment with elections as mechanisms for meaningful change.

The erosion of trust has been particularly pronounced following periodic protests and their suppression. The protests of December 2017 saw unprecedented slogans like “Reformists, Principalists—the game is over,” suggesting rejection of the entire factional structure of the Islamic Republic. The November 2019 protests triggered by fuel price increases were met with severe repression, resulting in hundreds of deaths and thousands of arrests according to international organizations. Most significantly, the “Woman, Life, Freedom” movement following Mahsa Amini’s death in September 2022 represented the most sustained challenge to the system’s legitimacy, with protests lasting over two months across 160 cities. This historical

context of deteriorating trust and periodic unrest created distinctive conditions for the 2021 and 2024 elections. Candidates faced an electorate increasingly skeptical about electoral politics as a meaningful avenue for change, yet still potentially mobilizable through appeals that acknowledged the state-society divide. This environment significantly shaped campaign strategies, particularly regarding negative messaging, as candidates navigated between appealing to popular discontent and maintaining acceptable boundaries of critique.

2.1.3 Electoral Politics as a Site of State-Society Contestation

The state-society divide has transformed Iranian presidential elections into complex sites of contestation where more is at stake than simply which candidate will occupy office. Since 1997, presidential elections have functioned partly as opportunities for the public to express approval or disapproval of the broader system, with candidates strategically positioning themselves within this larger struggle. This dynamic has created distinctive patterns in Iranian electoral politics that provide essential context for understanding the 2021 and 2024 elections. Candidates perceived as representing societal demands against the system consistently adopt more critical rhetoric and focus on issues like civil liberties, international engagement, and economic reform. Conversely, candidates aligned with establishment forces emphasize revolutionary values, resistance to Western influence, and security concerns. The Guardian Council's candidate vetting process has become increasingly significant in managing this contest. By determining which candidates may participate, the Council shapes the parameters of electoral competition and, by extension, the scope of negative campaigning. This was particularly evident in the 2021 election, when prominent figures like Ali Larijani who might have presented credible alternatives to the establishment candidate were disqualified, leaving limited options for voters seeking change.

The disqualification of prominent moderate and reformist candidates in 2021 was widely interpreted as attempting to prevent a repeat of previous elections where candidates leveraging the state-society divide had achieved unexpected victories. This strategy proved partially successful, with record-low turnout (48.8%) and unprecedented invalid ballots (12.9% of votes cast) suggesting that many citizens viewed the election as insufficiently competitive to merit participation. Despite these constraints, the state-society divide remained evident in how remaining candidates positioned themselves. Abdolnaser Hemmati, despite his technocratic background and limited political base, adopted increasingly critical rhetoric throughout the campaign, positioning himself as representing “the people” against “the system.” His debate performances featured unusually direct criticism of economic policies, international isolation, and security-oriented governance—implicitly challenging not just Raisi but aspects of the broader power structure.

The 2024 election, despite occurring in the somber context following President Raisi’s death, featured similar dynamics. The Guardian Council’s unexpected approval of reformist candidate Masoud Pezeshkian created space for renewed mobilization around the state-society divide. Pezeshkian’s campaign slogan “For Iran” implicitly positioned him as representing national interests against factional ones, while his policy positions on foreign relations, social freedoms, and economic management signaled alignment with public demands for change. The context of declining trust and periodic unrest between the two elections—particularly the “Woman, Life, Freedom” movement—intensified the significance of the state-society divide in the 2024 election. Despite the compressed timeframe following Raisi’s death, the election quickly evolved into another referendum on the system, with Pezeshkian’s unexpected first-round performance and eventual victory representing what analysts termed a “negative vote”

against establishment candidate Saeed Jalili rather than enthusiastic endorsement of Pezeshkian himself. This historical evolution of elections as sites of state-society contestation provides essential context for understanding negative campaigning in the 2021 and 2024 elections. Candidates' negative messaging strategies cannot be understood merely as tactical choices to undermine opponents but must be interpreted within this larger struggle over the relationship between government and people in contemporary Iran.

2.2 Candidate Selection, Campaign Dynamics, and Electoral Outcomes in 2021

The Guardian Council's candidate vetting for the 2021 election proved particularly consequential, creating an unusually restricted competitive field. From 592 initial registrants, only seven candidates received approval to contest the election—a 1.2% approval rate representing the most restrictive vetting in presidential election history (Iran Ministry of Interior, 2021). Most notably, the Council disqualified several high-profile candidates who might have presented significant challenges to frontrunner Ebrahim Raisi: Former parliament speaker Ali Larijani, representing pragmatic conservative positions, faced unexpected rejection despite his long-standing system service; Former president Mahmoud Ahmadinejad, who maintained significant populist appeal, saw his candidacy rejected; Prominent reformist candidates including Mostafa Tajzadeh and Masoud Pezeshkian also faced disqualification, leaving reformist factions with minimal representation. The seven approved candidates represented a field heavily skewed toward principlist representation:

1. Ebrahim Raisi – Chief Justice, representing the main principlist faction, emerged as the clear frontrunner, enjoying support from traditional conservatives, security-oriented factions, and religious hardliners

2. Saeed Jalili – Former nuclear negotiator and National Security Council secretary, representing hardline principlists
3. Alireza Zakani – Conservative former parliamentarian
4. Mohsen Rezaei – Former Revolutionary Guards commander, representing security-oriented principlists positioned as a pragmatic security-oriented principlist
5. Amir-Hossein Ghazizadeh Hashemi – Conservative parliamentarian who appealed to younger principlist constituencies with populist messaging
6. Mohsen Mehralizadeh – Moderate reformist and former provincial governor
7. Abdolnaser Hemmati – Central Bank governor under Rouhani, representing pragmatic technocrats, emerged as the sole centrist alternative after reformist disqualifications

The restricted candidate field created unique conditions for negative campaigning. With multiple principlist candidates competing for the same office, differentiation pressure generated distinctive intra-factional criticism not typical of previous elections. Simultaneously, the limited ideological range among viable candidates constrained the scope of policy-based attacks, potentially increasing emphasis on personal characteristics and competence claims rather than fundamental ideological differences. The official campaign period ran from May 25 to June 18, 2021, with voting scheduled for June 18. This compressed timeframe—typical of Iranian presidential elections—created pressure for rapid message development and dissemination. Three televised debates (June 5, 8, and 12) represented crucial campaign moments, providing rare opportunities for direct candidate interaction under structured conditions. These debates received substantial viewership and generated significant social media response.

Candidate withdrawals significantly reshaped the electoral landscape in the campaign's final days. Mehralizadeh withdrew on June 16, ostensibly to consolidate reformist support behind Hemmati. More consequentially, principlist candidates Zakani and Ghazizadeh Hashemi withdrew on June 16 to support frontrunner Raisi, followed by Jalili on June 17 (Iran Ministry of Interior, 2021). As Golkar (2021: 4) observed, these withdrawals "consolidated the principlist vote behind Raisi while doing little to meaningfully strengthen Hemmati's position," further reinforcing Raisi's frontrunner status. These withdrawals, which left just four candidates on the ballot, created challenges for campaign messaging adaptation. Supreme Leader Ayatollah Khamenei's pre-election statements established important parameters for campaign conduct. His June 4 address specifically warned candidates against "destroying rivals" or engaging in "mudslinging," urging them to focus on "presenting solutions" rather than attacks (Ayatollah Khamenei.ir, 2021). These admonitions established normative constraints on negative campaigning that candidates needed to consider in their messaging strategies, particularly those aligned with principlist factions emphasizing loyalty to leadership guidance.

The 2021 campaign unfolded across a complex media ecosystem that significantly shaped negative campaigning patterns. State broadcaster IRIB maintained its central television and radio role but provided asymmetric coverage across the factional spectrum. While officially neutral, IRIB coverage demonstrated observable bias in candidate presentation, with principlist candidates—particularly frontrunner Raisi—receiving more extensive and favorable coverage than reform-oriented alternatives (Reporters Without Borders, 2021). Digital platforms played unprecedented roles despite access restrictions. Twitter(X), though officially blocked in Iran, served as an important venue for political discourse among elites and engaged citizens. Instagram and Telegram also emerged as crucial electoral communication channels, with more

variable access restrictions than consistently blocked platforms like Twitter(X). These platforms enabled direct candidate-voter interaction, campaign content dissemination, and horizontal communication among supporters, creating new dimensions for both positive and negative campaigning. The digital campaign dimension appeared particularly consequential given mainstream media access disparities. Approximately 60% of urban voters under 40 cited social media as their primary information source during the 2021 campaign period (Maleki, 2021; ISPA, 2021).

The negative campaigning in the 2021 presidential election can be systematically analyzed along four distinct dimensions: first, the campaign of non-participation or election boycott (using slogans like “I will not vote”); second, attacks on Raisi and his perceived “cover candidates” by Hemmati, Mehralizadeh and their supporters; third, criticism of the Rouhani administration by principlist candidates; and fourth, the notable absence of negative competition among ideologically aligned candidates (E'temad Newspaper, 2021, June 13). This final dimension distinguishes Iranian electoral politics from Western models like the United States, where intra-party competition generates significant negative campaigning during primary phases. In Iran’s factional system, internal competition was largely suppressed in favor of unified opposition to ideological opponents.

The 2021 presidential election culminated in Ebrahim Raisi’s decisive victory, securing 62% of votes cast (17.9 million votes) in a single round with no runoff required. His nearest competitor, Mohsen Rezaei, secured second place with only 11.8% (3.4 million), while Abdolnaser Hemmati received 8.4% of votes (2.4 million), creating one of the largest victory margins in Iranian presidential election history (Iran Ministry of Interior, 2021). Most striking was the unprecedented number of invalid ballots—3.7 million, representing 12.9% of all votes

cast. This historically high number of invalid votes suggested significant protest voting or dissatisfaction with the available candidates. The election was marked by historically low turnout (48.8%)—the lowest in any Iranian presidential election since the 1979 revolution. In fact, the 3,726,870 invalid votes (12.88% of all votes cast) effectively made protest ballots Raisi’s most serious competitor, ranking second in the overall election results (IRNA, 2021). This unprecedented level of rejected ballots represented a form of political expression that circumvented both participation in and complete boycott of the electoral process, illustrating the complexity of citizen responses to perceived limitations on meaningful electoral choice. This participation decline reflected multiple factors, including pandemic conditions, economic dissatisfaction, and the restricted candidate field following the Guardian Council’s extensive disqualifications. Raisi’s victory, combined with principlist control of parliament established in the 2020 elections, created unprecedented institutional alignment across elected and unelected power centers. This alignment reduced the factional heterogeneity that had characterized previous administrative periods, created more streamlined policy implementation potential while reduced internal checks through factional competition.

Two years after the election, Hassan Rouhani provided a revealing retrospective critique of the 2021 electoral process. Speaking at a ceremony commemorating Hashemi Rafsanjani’s death in January 2024, Rouhani harshly characterized it as a “minimal election” and observed: “Do we want to do something again where the first rival of the nation’s first elected candidate would be invalid votes?! In 2021, the rival of the person who was elected was nothing but invalid votes! About 4 million people went to cast blank and invalid votes! Why did we do this?! Well, we could have approved another person so that a competitive election would take place” (Rouhani, 2023). This criticism from a former president highlights how limitations in the 2021

electoral process were acknowledged even within the political establishment, providing important context for understanding both the election's outcome and the political environment preceding the unexpected 2024 election.

2.3 The 2024 Presidential Election: Crisis and Compressed Competition

The 2024 election unfolded under extraordinary circumstances following the unexpected death of incumbent President Ebrahim Raisi in a helicopter crash on May 19, 2024, just ten months before his term would have ended in August 2025. This shocking event created a sudden leadership vacuum and necessitated an unplanned electoral contest under Article 131 of the Constitution, which requires new presidential elections within fifty days of a president's death. Following the helicopter crash in East Azerbaijan Province, First Vice President Mohammad Mokhber assumed the administration with the Supreme Leader's approval, as stipulated by constitutional requirements. An early presidential election was scheduled for June 29, 2024, rather than the originally planned June 2025 date. The compressed timeline created distinctive campaign conditions unlike typical electoral cycles. With just 35 days between Raisi's death and the first-round vote, candidates had limited time for message development, strategic positioning, and response calibration. This temporal constraint influenced both the volume and character of negative campaigning, potentially reducing sophisticated message testing while increasing improvised tactical negativity.

The economic context that shaped the election was characterized by continued challenges under the Raisi administration. Iran's economy had experienced inflation averaging approximately 35% annually, currency depreciation, and limited sanctions relief despite diplomatic engagement efforts (Central Bank of Iran, 2024). These economic difficulties created vulnerability for candidates associated with the Raisi administration while providing opportunity

for those promising new economic approaches. The international context added further complexity to the electoral landscape. Ongoing nuclear negotiations, regional conflicts including Gaza tensions, and the upcoming United States presidential campaign created significant external factors influencing campaign positioning. Candidates needed to navigate these international dimensions while addressing domestic economic concerns, creating multi-dimensional positioning challenges within a compressed timeframe.

2.4 Candidate Selection, Campaign Phases, and Electoral Outcomes in 2024

The Guardian Council’s candidate vetting for the 2024 election reflected both continuity and adaptation to the extraordinary circumstances. New registration restrictions reduced applicant numbers compared to previous cycles, with the Guardian Council reviewing approximately 80 prospective candidates—55 Principlists, 15 Reformists, and 10 Independents. From 81 registrants, the Council approved six candidates for the first-round competition—a 7.4% approval rate slightly higher than 2021 but still creating a restricted competitive field (Iran Ministry of Interior, 2024). The approved candidates represented both factional balance and continuity concerns:

1. Saeed Jalili – Former nuclear negotiator, representing hardline principlists
2. Mohammad Bagher Ghalibaf – Parliament speaker and Tehran’s former mayor
3. Alireza Zakani – Tehran’s mayor and conservative former parliamentarian
4. Mostafa Pourmohammadi – Former Interior and Justice Minister
5. Amir-Hossein Ghazizadeh Hashemi-Head of Foundation of Martyrs and Veterans Affairs
6. Masoud Pezeshkian – Moderate reformist physician and parliamentarian

Several prominent figures faced disqualification, including former president Mahmoud Ahmadinejad, former parliament speaker Ali Larijani, Eshaq Jahangiri, Abbas Akhoundi, Mohammad-Mehdi Esmacili, and Abdolnasser Hemmati. These disqualifications continued patterns from the 2021 election, constraining the competitive field while still allowing greater factional diversity than the previous contest. Before election day, both Qazizadeh Hashemi and Zakani withdrew from the race, further shaping the final electoral landscape. The candidate composition created distinctive dynamics for negative campaigning. With five principlist candidates competing for similar constituencies, differentiation pressures generated more intra-factional criticism than observed in 2021. Simultaneously, Pezeshkian's isolated position as the sole reformist-aligned candidate created asymmetric attack patterns, with multiple principlist candidates targeting him while he faced strategic choices about distributing criticism across numerous opponents.

The official campaign period ran from May 31 to June 28, 2024, for the first round, with voting on June 28. Following no candidate achieving an absolute majority, a runoff between top finishers Masoud Pezeshkian and Saeed Jalili occurred on July 5, creating distinct campaign phases with evolving negative messaging dynamics. Five televised debates for the first round (June 17, 20, 21, 24, and 25) represented crucial campaign moments generating significant negative messaging. These debates received substantial viewership—estimated at 55-65% of the adult population across various viewing platforms—and produced distinctive negative campaigning patterns (IRIB, 2024). Supreme Leader Ayatollah Khamenei's statements established important parameters for campaign conduct. His June 12 address specifically urged candidates to focus on “solutions rather than accusations” and to maintain “Islamic brotherhood despite political differences” (Ayatollah Khamenei.ir, 2024). While not legally binding, these

admonitions established normative constraints on negative campaigning that candidates needed to consider, particularly given the extraordinary circumstances following Raisi's unexpected death.

The symbolic positioning of candidates also evolved between elections. Pezeshkian campaigned with the slogan "For Iran" ('برای ایران'), which evoked the protest song "For..." ('برای') that became widely popular during the 2022 "Woman, Life, Freedom" movement following Mahsa Amini's death (ISNA, 2024, June 20). This subtle reference allowed Pezeshkian to signal sympathy with reform sentiments while maintaining plausible deniability regarding direct support for protest movements. Simultaneously, he balanced this positioning with explicit affirmations of system loyalty, stating that "anything not aligned with the Leader's general policies is a red line" (ISNA, 2024, June 20). The 2024 election also demonstrated how personal attacks could be deployed to neutralize specific candidates. The most severe negative campaign targeted Mohammad Baqer Qalibaf, focusing on alleged corruption and lifestyle issues. These included rumors about his daughter's lavish wedding (allegedly using Tehran Municipality resources during his mayoral tenure), the "baby supply gate" (سیسمونی گیت) scandal, alleged "astronomical property" acquisitions, revelations about his sons' efforts to obtain a Canadian visa and doing business in Germany, and his senior advisor's extravagant spending. Qalibaf himself lamented that "no one in the Islamic Republic has been subjected to as much accusation, lies, and destruction as I have" (Ghalibaf, 2024, June 13). Notably, this negative campaign was driven not only by reformist opponents but also by supporters of Jalili, demonstrating how intra-factional competition can sometimes generate more intense negative messaging than cross-factional attacks.

The first round on June 29, 2024, saw only 39.92% turnout (24.5 million voters)—even lower than 2021’s record low participation. Masoud Pezeshkian received 10,415,991 votes (44.36%), followed by Saeed Jalili with 9,473,298 votes (40.35%), Mohammad Bagher Ghalibaf with 3,363,340 votes (14.34%), and Mostafa Pourmohammadi with 206,397 votes (0.88%). The total number of valid votes cast was approximately 23.48 million, with an additional 1.06 million ballots deemed invalid. As no candidate received an absolute majority, a runoff was scheduled for July 5 between Pezeshkian and Jalili. The eliminated candidates’ endorsement patterns—with all principlist candidates supporting Jalili—reinforced factional cohesion while creating clear ideological contrast for the runoff campaign. This binary choice environment fundamentally altered negative campaigning dynamics, shifting from multi-directional first-round attacks to focused binary contrast during the runoff period.

The second round witnessed increased participation at 49.8% (30.5 million voters), reflecting heightened polarization. This “negative vote” phenomenon demonstrated what political analysts have termed “fear-based mobilization,” where voters participate primarily to prevent an undesired candidate’s victory rather than enthusiastically supporting their preferred option. Masoud Pezeshkian, who had served as Deputy Health Minister under Khatami and represented Tabriz in five consecutive parliaments, campaigned on reviving the JCPOA, normalizing international relations, ratifying FATF, reducing internet censorship, opposing the “morality police” approach toward women, while consistently affirming loyalty to the Islamic Republic and the Supreme Leader. Saeed Jalili, his primary challenger, adopted the campaign motto “One World of Opportunity, One Iran of Breakthrough,” while taking conservative positions on social media censorship, hijab enforcement, NGOs, foreign policy, and the JCPOA. His campaign reflected what Saikal (2019: 163) characterizes as “traditional principlist priorities

emphasizing revolutionary values, resistance policies, and cultural conservatism,” creating clear differentiation from Pezeshkian’s more moderate approach.

The 2024 campaign unfolded across an evolving media ecosystem that shaped negative campaigning patterns in distinctive ways. State broadcaster IRIB maintained its central television and radio role but faced increasing competition from digital alternatives. Digital platforms played unprecedented roles despite access constraints, with Instagram and Telegram serving as primary channels despite periodic blocking attempts. All candidates maintained comprehensive social media presences managed by professional digital teams, representing significant professionalization compared to previous electoral cycles. The digital campaign dimension appeared particularly consequential given mainstream media access disparities, with Pezeshkian relying heavily on social media to circumvent traditional media limitations. Demographic analysis revealed gender distributions similar to the 2021 election, with 78% of users identified as male and 22% as female during the first round. This persistent gender imbalance suggests structural patterns in digital political participation that transcend specific electoral circumstances.

This increased turnout in the second round reflected what analysts termed a ‘negative vote’ phenomenon. The polarization of the runoff election created fear among some previous non-voters, prompting them to participate specifically to prevent their least-preferred candidate from winning rather than out of enthusiasm for their chosen candidate. This negative voting pattern was particularly pronounced among Jalili’s opponents, which explains why Pezeshkian’s vote total increased more substantially between rounds (Tasnim News Agency, 2024, July 5). This fear-based mobilization demonstrates how negative sentiments can paradoxically increase participation when elections become highly polarized, even in contexts of general political disillusionment.

Masoud Pezeshkian ultimately won the runoff election, marking the first reformist presidential victory since Mohammad Khatami and introducing a potentially significant shift in Iran's political landscape after the brief period of principlist consolidation under Raisi's administration. This election's dynamics—held amid continuing economic challenges, international tensions, and public disillusionment following Raisi's short-lived administration—created distinctive conditions for negative campaigning. The unexpected election timing, factional polarization, and condensed campaign period intensified negative messaging while constraining its strategic sophistication.

2.5 Comparative Analysis: Contextual Similarities and Differences

The examination of the 2021 and 2024 presidential elections reveals several important comparative dimensions that shaped negative campaigning strategies in each context. The most striking difference between the two elections was their timing and catalyst. The 2021 election followed the normal constitutional schedule, with Rouhani completing his second term and ineligible for re-election. This predictable timeline allowed for extended factional preparation, strategic candidate selection, and more deliberate campaign planning despite the compressed official campaign period. In contrast, the 2024 election was triggered by the unexpected death of President Raisi, creating a crisis-driven electoral process with significantly compressed preparation time. This extraordinary context likely influenced campaign rhetoric, with the national mourning period potentially moderating negative messaging, particularly regarding Raisi's legacy and the policies of his administration. The timing difference created distinct campaign phases. In 2021, pre-campaign positioning extended for months before the official campaign period, allowing for gradual narrative development and strategic positioning. The 2024

election condensed these processes into weeks, potentially intensifying messaging pressure while reducing opportunity for sophisticated strategic calibration.

Both elections featured asymmetric factional representation due to Guardian Council vetting, but with different competitive dynamics. The 2021 field was heavily dominated by principlist candidates (5 of 7 approved candidates), with limited reformist representation through moderate technocrat Hemmati. This created a fragmented principlist field competing for similar constituencies alongside minimal reformist alternatives. The 2024 field maintained principlist dominance (5 of 6 approved candidates) but featured a more prominent reformist presence through Pezeshkian, whose parliamentary credentials and physician background provided stronger reformist representation than was available in 2021. This created clearer factional differentiation despite the continued numerical imbalance. The runoff system played different roles in each election. In 2021, Raisi's first-round victory eliminated the need for a runoff, creating a single-phase campaign. The 2024 election proceeded to a runoff between Pezeshkian and Jalili, creating a two-phase campaign with distinctive dynamics in each phase.

The media environment demonstrated both continuity and evolution between elections. Traditional media maintained similar structural patterns, with IRIB dominance and asymmetric coverage favoring principlist candidates in both elections. However, digital platforms showed increasing importance and professionalization between 2021 and 2024, with more sophisticated campaign operations across factional lines. Network analysis revealed similar community formation patterns in both elections, with distinct clusters forming around candidates with limited cross-community engagement. However, the 2024 election demonstrated clearer factional polarization, particularly in the runoff phase where political discourse clearly separated

into two dominant communities. This suggests intensification of factional sorting in digital discourse between elections.

Both elections featured historically low turnout, reflecting broader trends of declining participation in Iranian elections. The 2021 election recorded 48.8% turnout—the lowest in the Islamic Republic’s history until that point. The 2024 election continued this downward trend with 39.93% turnout in the first round, establishing a new historical low. The second round saw slightly increased participation at 49.8%, still relatively low by historical standards. This continuing decline suggests structural rather than merely contextual factors affecting electoral participation. The elections produced different factional outcomes. The 2021 election resulted in Raisi’s decisive victory, completing principlist consolidation across government branches following their 2020 parliamentary victory. The 2024 election interrupted this consolidation through Pezeshkian’s victory, introducing factional divergence between the presidency and parliament. This difference likely reflects both the stronger reformist candidate in 2024 and the backlash against economic conditions under principlist governance.

2.6 Conclusion: Contextual Implications for Negative Campaigning

The distinct contexts of the 2021 and 2024 presidential elections provide valuable analytical leverage for understanding negative campaigning in Iran’s hybrid regime. While occurring within the same institutional framework, these elections featured significantly different circumstances that potentially shaped how negative messaging manifested and functioned. The 2021 election’s predictable timing, restricted reformist representation, and clear frontrunner status for Raisi created conditions favoring specific negative campaigning patterns. Multiple principlist candidates faced pressure to differentiate themselves from ideologically similar competitors, while Hemmati needed to establish credibility as the primary non-principlist

alternative. These conditions created distinctive targeting incentives and constraints that shaped negative messaging strategies. The 2024 election's crisis-driven timing, stronger reformist representation, and more competitive field created different conditions for negative campaigning. The compressed campaign timeline, emotional context following Raisi's death, and eventual runoff between factionally distinct candidates potentially altered both the volume and character of negative messaging compared to 2021. The two-phase structure of the 2024 election provided particularly valuable analytical opportunities for examining how electoral format influences negative campaigning within the same political system.

These contextual variations, occurring within the consistent institutional framework examined in Chapter 1, create natural conditions for analyzing which aspects of negative campaigning reflect universal patterns versus those that demonstrate contextual adaptation. By comparing negative campaigning across these distinct electoral contexts, we can identify which elements represent fundamental features of Iran's hybrid system and which demonstrate evolution or contextual responsiveness. These comparative insights will inform subsequent chapters examining specific negative campaigning patterns across both elections.

Chapter 3: Literature Review on Negative Campaigning

This chapter provides a comprehensive review of the theoretical foundations, empirical findings, and methodological approaches that have shaped our understanding of negative campaigning across diverse political contexts. Moving beyond mere description, the review critically evaluates how existing theories might apply to—or require modification within—Iran’s distinctive political environment. The chapter begins by examining core definitions and conceptual frameworks of negative campaigning, exploring how these might manifest in Iran’s presidential elections where religious norms, factional rather than party competition, and hybrid regime characteristics create unique conditions for political discourse. It then analyzes the strategic functions and psychological mechanisms underlying negative campaigning, considering how these might operate differently in Iran’s religious-influenced political culture compared to Western liberal democracies. The review pays particular attention to contextual factors that moderate negative campaigning effects, examining how Iran’s institutional arrangements, cultural values, and media environment might shape both the supply of negative messages by candidates and the demand for such content among voters. By systematically identifying research gaps in existing literature, particularly regarding non-Western and hybrid regime contexts, this chapter establishes the foundation that guides the subsequent empirical investigation of negative campaigning in Iran’s 2021 and 2024 presidential elections.

3.1 Conceptualizing Negative Campaigning: Definitions and Theoretical Foundations

Negative campaigning represents a multifaceted phenomenon in political communication that has attracted extensive scholarly attention across diverse electoral contexts. At its most fundamental level, negative campaigning is distinguished from positive campaigning by its focus

on opponents rather than on the sponsor of the message. As Lau and Rovner (2009, p. 285) articulate, while positive campaigns “focus on their sponsors” by emphasizing their qualities, policies, or achievements, negative campaigning targets a candidate’s or party’s opponent. This directional conception of negativity—focusing outward on rivals rather than inward on oneself—provides the basic foundation for understanding negative campaigning as a distinct political communication strategy. Early definitions often employed terms like “mudslinging” or “attacking” messages (Stewart, 1975), emphasizing the adversarial nature of this communication strategy. Mayer (1996, pp. 440-441) elaborated on this adversarial dimension, describing negative campaigning as highlighting “the weaknesses and faults of the opposition: the mistakes they have made, the flaws in their character or performance, [and] the bad policies they would pursue.” Similarly, Surlin and Gordon (1977, p. 93) defined negative campaigning as involving a candidate or party attacking “the other candidate personally... the issues for which the other candidate stands... [or] the party of the other candidate.”

Contemporary scholarship has refined these definitions to account for the evolving nature of political communication. Geer (2006, p. 23) offers a broad and directional definition of negative messages as “any criticism leveled by one candidate against another during a campaign.” This definition, which has gained widespread acceptance in the literature (Krupnikov, 2011; Lipsitz, 2011; Sides et al., 2009), makes no distinction between policy-based attacks and criticisms of personal traits, encompassing all forms of negativity. For this research, I adopt Geer’s definition as it provides sufficient flexibility to capture various manifestations of negativity in Iran’s unique political context while maintaining continuity with the broader literature. Negative campaigning encompasses a diverse range of messaging strategies, with perhaps the most fundamental distinction being between issue-based attacks, which criticize

policies or stances, and character-based attacks, which target personal traits or moral integrity (Benoit, 1999; Nai & Maier, 2021; Samkharadze, 2021; Van der Velden & Rebasso, 2021).

Issue-based attacks focus on policy positions, voting records, governance performance, and other substantive aspects of a candidate's public role. For example, during the 2020 U.S. presidential campaign, Joe Biden frequently criticized Donald Trump's handling of the COVID-19 pandemic, citing specific policy decisions and their consequences. Character-based attacks, conversely, target personal attributes, including integrity, competence, empathy, and other traits perceived as relevant to leadership capacity. An example would be Trump's attacks on Biden's mental acuity and age-related fitness for office.

This distinction matters because these different types of attacks may trigger distinct psychological and emotional responses among voters. Research by Brooks and Geer (2007) suggests that issue-based attacks are generally perceived as more legitimate and substantive than character attacks. Voters tend to view policy criticism as an essential part of democratic discourse, helping them make informed electoral choices by clarifying differences between candidates. A concrete example is how voters responded more positively to critiques of healthcare policy proposals than to accusations about personal conduct in their experimental study. Within character-based attacks, Fridkin and Kenney (2011) differentiate between attacks on competence (questioning a candidate's ability to perform effectively), integrity (challenging honesty or moral character), empathy (attacking understanding of ordinary citizens' concerns), and leadership (questioning capacity to inspire and direct). These distinctions matter because attacks on different character dimensions may resonate differently with various voter segments. For instance, in the 2016 U.S. presidential election, critiques of Hillary Clinton's trustworthiness

proved particularly damaging because they reinforced existing public concerns about her integrity.

The intensity or harshness of negative messages represents another important dimension for classification. Kahn and Kenney (1999) distinguish between “legitimate criticism” and “mudslinging,” with the former involving substantive, measured critiques and the latter characterized by exaggerated, sensationalistic, or unfair attacks. For example, pointing out inconsistencies in an opponent’s voting record would constitute legitimate criticism, while unfounded personal attacks about family matters would typically be considered mudslinging. This distinction has implications for how messages are received, with research suggesting that excessively harsh attacks can generate backlash against the sponsor while legitimate criticism is more likely to achieve its intended persuasive effect. Negativity can also be categorized based on its emotional appeals. Brader (2006) distinguishes between fear-based appeals, which emphasize threats and dangers associated with an opponent’s election, and anger-based appeals, which focus on attributing blame for negative conditions. For instance, fear-based appeals might highlight potential economic collapse if an opponent wins, while anger-based appeals might blame an incumbent for current economic hardships. These emotional dimensions can significantly influence how voters process and respond to negative information, with fear promoting risk-averse information seeking and anger encouraging more partisan, motivated reasoning (Valentino et al., 2011). In non-Western contexts, additional categories may be necessary to capture culturally specific forms of negativity. Religious and cultural norms may constrain certain types of attacks while enabling others. For instance, in Iran’s Islamic framework, questioning an opponent’s religious credentials or commitment to revolutionary values represents a culturally specific form of character attack with particular resonance.

Understanding these culturally specific dimensions is essential for analyzing negative campaigning across diverse political contexts. In Iran's presidential elections, negative campaigning manifests through distinctive patterns that both reflect and diverge from Western models. The 2021 and 2024 elections featured substantial criticism among candidates, but within parameters shaped by religious norms and system boundaries. While candidates openly criticized government performance, economic policies, and diplomatic approaches, they typically avoided direct personal attacks that might violate Islamic ethical principles. The factional rather than party-based nature of Iranian politics also creates unique targeting patterns, with criticism often directed at broader factional orientations rather than specific party platforms. These distinctive characteristics highlight the importance of contextual adaptation when applying Western-derived negative campaigning frameworks to Iran's hybrid political system.

3.1.3 The Incivility Dimension: Conceptual Debates and Theoretical Implications

Recent scholarship has increasingly distinguished between negativity and incivility as potentially separate dimensions of political messaging, representing one of the most significant conceptual developments in contemporary research on political campaigns. While negativity refers to criticism directed at opponents regardless of tone or manner, incivility concerns specifically how that criticism is delivered—whether it employs respectful argumentation or violates norms of civil discourse (Brooks & Geer, 2007; Mutz, 2015). This distinction has become central to contemporary debate, with scholars questioning whether incivility represents merely a type of negative attack or constitutes a distinct rhetorical strategy that can appear in both positive and negative messaging (Nai & Maier, 2021; Gervais, 2021).

The conceptual foundations of incivility research emerged from concerns about deteriorating standards of political discourse. Mutz (2015) defines political incivility as

"communication that violates the norms of politeness for a given culture" (p. 6), emphasizing how televised political disagreement often breaches face-to-face social norms for expressing opposing views. Similarly, Brooks and Geer (2007, p. 5) characterize incivility as "claims that are inflammatory and superfluous," noting that the addition of "two strong, pointed words"—such as "cowardly" or "utterly"—can transform a civil negative message into an uncivil one. These definitions share the understanding that incivility involves norm violations, yet they differ in emphasis: Mutz focuses on violations of interpersonal politeness norms observable in mediated discourse, while Brooks and Geer highlight the explicit addition of contemptuous and defamatory language to political statements.

The incivility literature identifies several key markers of uncivil discourse that distinguish it from mere criticism. These include name-calling, character assassination, disrespectful language, norm-violating personal attacks, hyperbole, and inflammatory rhetoric (Jamieson, 1992; Mutz & Reeves, 2005; Gervais, 2015). Importantly, negative messages can be either civil (respectful policy criticism) or uncivil (disrespectful personal attacks), suggesting these represent intersecting rather than overlapping dimensions (Brooks & Geer, 2007). A candidate can attack an opponent's policy positions using civil, respectful language, or employ uncivil rhetoric in ostensibly positive self-promotion. This crosscutting relationship challenges earlier conceptualizations that treated incivility as synonymous with negative campaigning.

Scholars disagree fundamentally about whether incivility constitutes a separate rhetorical dimension or merely represents the harshest form of negative campaigning. One perspective, advanced by Jamieson (1992) and elaborated by subsequent researchers, argues for conceptual separation between "negative" and "dirty" campaigning. According to this view, negative campaigning involves critical, civil, and non-disrespectful forms of communication that

emphasize negative aspects of political opponents, while dirty campaigning encompasses impolite, disrespectful, and defamatory forms that operate "below-the-belt" (Haselmayer & Jenny, 2017; Nai et al., 2022). This distinction recognizes that criticism itself serves democratic functions by providing voters with comparative information, whereas incivility potentially undermines democratic discourse through norm violations regardless of substantive content.

An alternative perspective treats incivility as one dimension along which negative messages vary, rather than as a categorically distinct phenomenon. Lipsitz and Geer (2017) demonstrate that public perceptions of negativity depend significantly on tone and civility, with voters distinguishing between substantive policy critiques and uncivil personal attacks even when both technically constitute "negative" messaging. Their empirical work suggests that conceptual frameworks must account for varying intensities and forms of negativity rather than maintaining strict categorical boundaries. Similarly, Mattes and Redlawsk (2014) argue that the effects of negative campaigning depend critically on how attacks are delivered, with civil policy-focused criticism producing entirely different outcomes than uncivil character attacks.

The conceptual ambiguity surrounding incivility creates significant measurement challenges. Brooks and Geer's (2007) definition implies that incivility can be identified through specific linguistic markers—inflammatory adjectives and superfluous intensifiers that add no information but convey disrespect. However, operationalizing this approach at scale proves difficult, as determining which words are "superfluous" versus legitimately descriptive requires subjective judgment about appropriateness standards. Mutz's (2015) approach emphasizes violations of culturally-specific politeness norms, acknowledging that what counts as incivil varies across contexts. Her experimental work manipulates specific norm violations—interrupting, shouting, disrespectful language—to isolate incivility effects from negativity

effects. This approach offers analytical clarity but raises questions about ecological validity, as real political discourse combines multiple elements simultaneously.

Recent computational approaches have attempted to develop automated measures of incivility suitable for analyzing large corpora of political communication. However, these efforts face the challenge that incivility often depends on context and cultural norms rather than simple word choice (Gervais, 2017). A term considered acceptably direct in one political culture might constitute serious incivility in another, complicating cross-national research. Moreover, incivility in text-based communication employs different markers than televised incivility—including capitalization, punctuation, and emoticons—that require specialized detection methods (Gervais, 2015).

This conceptual refinement has significant implications for understanding campaign effects, as research demonstrates that uncivil negativity produces substantially stronger backlash than civil policy criticism. Mutz and Reeves (2005) found that televised political incivility reduced trust in government and political efficacy, effects not observed for civil disagreement. Their "new videomalaise" theory suggests that when viewers apply interpersonal politeness norms to mediated political discourse, incivility triggers particularly strong negative reactions. Subsequent research has confirmed these differential effects across multiple contexts. Brooks and Geer (2007) demonstrated experimentally that uncivil trait-based messages were perceived as less fair, less informative, and less important than civil negative messages, though uncivil attacks did not significantly depress turnout or engagement. Nai and Maier (2021) found that individual differences moderate responses to incivility, with conflict-avoidant individuals particularly deterred by uncivil messaging while those high in psychopathy responded more favorably.

The democratic implications of these findings remain contested. Some scholars argue that incivility fundamentally undermines democratic deliberation by reducing citizens' willingness to engage with opposing viewpoints and fostering partisan animosity (Mutz, 2015; Rossini, 2021). Gervais (2017, 2021) demonstrates that exposure to counter-attitudinal incivility induces anger and reduces satisfaction with political discourse, potentially creating a "spiral of incivility" as exposed individuals adopt uncivil tactics themselves. Conversely, others note that incivility can increase political engagement and arousal, potentially mobilizing otherwise disengaged citizens (Brooks & Geer, 2007). Mutz's (2015) comprehensive analysis reveals this paradox: incivility makes politics more physiologically arousing and entertaining, encouraging attention and recall, but simultaneously damages political trust and respect for opposition viewpoints.

The conceptualization of incivility necessarily varies across cultural contexts, as what constitutes norm violations depends on culturally-specific standards of appropriate political discourse. Political cultures demonstrating high tolerance for direct confrontation may accept rhetoric that other contexts consider uncivil (Elmelund-Præstekær, 2010). The United States, for instance, typically demonstrates higher tolerance for personal attacks than Northern European democracies, where policy-focused criticism predominates and character attacks face stronger normative sanctions. These cultural differences create challenges for comparative research, as incivility cannot be identified through universal markers but must be assessed relative to local standards of acceptable discourse.

Religious and cultural factors further condition these norms. Faith traditions emphasizing interpersonal respect and brotherly love may establish particularly high standards for civil discourse, amplifying backlash against perceived incivility. In collectivist cultures emphasizing group harmony and face-saving, attacks perceived as causing public humiliation may trigger

especially strong negative reactions (Kitayama et al., 2006). These cultural variations suggest that incivility research must attend carefully to context-specific norms rather than applying Western-derived categories universally.

This research must address how the incivility dimension relates to measurement of negative campaigning in Iran's presidential elections. The study operationalizes three forms of criticism: general negativity (opponent-focused messages), character attacks (personal versus policy-based criticism), and political attacks (government-related criticism). While character attacks overlap conceptually with incivility—both involve personal rather than substantive criticism—they are not identical. Character attacks can be delivered civilly ("my opponent lacks executive experience") or uncivilly ("my opponent is utterly incompetent"). The current study's classification scheme captures the target and focus of attacks but does not explicitly measure tone or norm violations that define incivility.

This limitation reflects both practical constraints of computational text analysis in Persian and theoretical considerations specific to Iran's context. Iranian political discourse operates under distinctive normative constraints shaped by Islamic principles regarding speech (*adab al-kalam*) and revolutionary ideology emphasizing unity among regime supporters. These religious and cultural norms establish standards for acceptable criticism that differ from Western conceptions of incivility. What Western frameworks might classify as moderate criticism could violate Iranian norms for dignified discourse, while rhetoric acceptable in U.S. campaigns might constitute serious incivility in Iran's context. Future research should develop culturally-sensitive measures that can distinguish civil from uncivil attacks within Iran's specific normative framework. This would enable more nuanced examination of whether the differential effects of

civil versus uncivil negativity documented in Western contexts apply similarly in Iran's hybrid regime, or whether distinctive cultural and institutional factors alter these dynamics.

3.2 Strategic Functions and Effects of Negative Campaigning

Negative campaigning serves multiple strategic functions in electoral competition, extending beyond the simple goal of diminishing support for opponents. Understanding these diverse functions provides insight into why negative messaging persists and often intensifies despite potential risks and ethical concerns. From a democratic theory perspective, negative campaigning serves important informational functions by highlighting potential weaknesses, contradictions, and risks associated with candidates. As Geer (2006) argues, "the practice of democracy requires negativity of candidates" because democratic discourse demands that both strengths and weaknesses of candidates and their policies be scrutinized. This scrutiny contributes to voter education by providing information about "qualifications, traits, and issue positions" (Jacobson, 2015, p. 39) that might otherwise remain unexamined.

Negative campaigning can enhance transparency by exposing deficiencies in candidates and their policies, thereby fostering accountability and honesty in campaigns. For example, during the 2008 U.S. presidential campaign, criticism of John McCain's admission that he didn't understand economic issues well helped voters assess his qualifications for office during an economic crisis. Candidates often have stronger incentives to provide specific, verifiable information when attacking opponents than when promoting themselves, as false accusations can trigger devastating backlash. This dynamic can produce more substantive policy discussions than purely positive messaging. From a campaign strategy perspective, negative messaging serves several distinct functions. Most fundamentally, it aims to reduce support for opponents by raising doubts about their qualifications, character, or policy positions. For example, in the 2012 U.S.

presidential election, the Obama campaign's attacks on Mitt Romney's business record at Bain Capital successfully raised questions about whether he prioritized corporate profits over worker welfare. Negative campaigning can be particularly effective for challenging candidates seeking to dislodge incumbents or frontrunners. By highlighting failures, unfulfilled promises, or problematic aspects of an opponent's record, challengers can undermine the advantages of incumbency and establish rationales for change (Lau & Pomper, 2004).

Another strategic function involves agenda-setting and issue ownership. By attacking opponents on specific issues, candidates can elevate those issues in public discourse and potentially frame the election around topics advantageous to their campaign (Petrocik, 1996). For instance, if a candidate with perceived strengths in economic management attacks opponents on economic issues, this strategy shifts campaign focus toward economic questions rather than topics like foreign policy or social issues where they might be weaker. Negative campaigning also serves mobilization functions, influencing both turnout and engagement patterns. Because negative information triggers stronger emotional responses than positive information—particularly anger—it can mobilize base supporters more effectively than purely positive appeals (Valentino et al., 2011). For example, during the 2016 Brexit referendum in the UK, fear-based messaging about immigration and sovereignty generated strong emotional engagement that motivated voters to participate. The mobilization effects of negativity operate through several psychological mechanisms. Negative messages often highlight threats to valued policies or principles, creating a sense of urgency that motivates political action (Marcus et al., 2000). Additionally, negative messaging frequently employs moral outrage and indignation, emotions that strongly predict collective action.

Beyond these campaign-level functions, negative campaigning serves broader structural functions within political systems. By highlighting corruption, incompetence, or policy failures, negative messaging can contribute to accountability mechanisms that constrain political actors and institutions. The anticipation of negative campaigning creates incentives for politicians to avoid behaviors that might become targets for future attacks, potentially improving governance (Gordon et al., 2007). For example, knowledge that opponents will scrutinize government contracts may deter officials from engaging in nepotism or corrupt practices. In transitional or fragile democracies, negative campaigning can serve democratic socialization functions by normalizing peaceful criticism of those in power. The ability to openly criticize incumbents without repression represents a fundamental aspect of democratic practice, and negative campaigning—despite its potential excesses—affirms this principle of open contestation (Schmitt-Beck & Farrell, 2002). However, excessive negativity can potentially undermine democratic legitimacy by heightening cynicism and eroding trust in political institutions (Ansolabehere & Iyengar, 1995). This tension between accountability and legitimacy functions represents a central paradox of negative campaigning in democratic systems. In non-Western contexts like Iran, negative campaigning may serve additional functions shaped by the specific institutional environment. Within a hybrid regime, negativity within approved boundaries can create an appearance of genuine competition while channeling dissent into controlled venues. Simultaneously, negative messaging that highlights corruption or inefficiency while affirming regime legitimacy can serve as a pressure valve for public frustration without challenging fundamental power structures.

The strategic functions of negative campaigning in Iran's presidential elections reflect both universal political calculations and system-specific adaptations. In both the 2021 and 2024

elections, candidates employed negative messaging to establish rationales for change, differentiate themselves from opponents, and mobilize base supporters. However, these strategic functions operated within distinctive parameters created by Iran's hybrid regime characteristics. Candidates needed to balance criticism of specific policies or individuals with affirmation of the system's fundamental legitimacy—a strategic calculation not required in Western democracies. This created what might be termed “bounded criticism,” where negative messaging simultaneously served accountability functions while reinforcing system stability. The 2024 election following President Raisi's unexpected death demonstrated this dynamic particularly clearly, with candidates criticizing specific government failures while carefully affirming regime continuity during a potentially destabilizing transition period.

3.3 Psychological Mechanisms Underlying Negative Campaigning Effects

Political communication research has identified several fundamental psychological mechanisms that underpin how voters process and respond to negative campaign information. These mechanisms—operating at cognitive, emotional, and social levels—help explain the complex and sometimes contradictory effects of negative campaigning observed across diverse electoral contexts.

3.3.1 Negativity Bias

The concept of negativity bias represents perhaps the most foundational psychological mechanism explaining why negative campaigning often proves effective. Extensive research demonstrates that negative information exerts disproportionate influence compared to equally extreme positive information (Anderson, 1965; Hamilton & Zanna, 1972; Kahneman & Tversky, 1979). This psychological tendency operates across diverse contexts, from impression formation

to risk assessment and political judgment. The scholarly recognition of negativity's disproportionate impact began with Jordan's (1965) observation of asymmetrical evaluation patterns, which was subsequently developed through experimental psychology (Anderson, 1965; Hamilton & Zanna, 1972) and prospect theory (Kahneman & Tversky, 1979). Political communication scholars initially applied this concept to explain campaign advertisement effects (Lang, 1991), later expanding to broader political information processing (Marcus et al., 2000). Kahneman (2011, pp. 300-301) explains negativity bias through evolutionary psychology, arguing that human and animal brains have evolved to prioritize negative information as a survival mechanism. This prioritization manifests as "loss aversion," whereby potential threats receive heightened attention and emotional response even when merely symbolic rather than actual dangers. Rozin and Royzman (2001, p. 297) characterize negative information as "more salient, potent, dominant... and efficacious" than positive information across diverse contexts. This evolutionary advantage helped our ancestors survive by paying special attention to potential threats—those who failed to notice and respond to dangers quickly faced greater survival risks. This heightened attentiveness to negative information has direct implications for political communication. Negative news generally attracts greater attention than positive information (Zillmann et al., 2001, 2004), with negative political news particularly effective at capturing audience engagement (Lengauer et al., 2012). For instance, news coverage of political scandals typically generates significantly higher viewership than reports of policy successes. Klein and O'Brien's (2016, p. 638) experimental study demonstrates that participants require significantly less negative information to form judgments compared to positive information, confirming negativity's cognitive efficiency advantage. This finding helps explain why brief negative attacks

can effectively shape voter perceptions, while positive messaging often requires more extensive exposure to achieve comparable impact.

Political campaign strategists recognize this attention advantage, understanding that capturing audience attention is the essential first step toward persuasion (Martin, 2004). Meffert et al. (2006, p. 22) note that “voters will predominantly select, process, and recall negative information independent of the candidate,” creating what Martin (2004, p. 548) describes as “higher arousal and higher attention levels” compared to positive messaging. In practical terms, this explains why negative advertisements often require fewer exposures to achieve recognition than comparable positive advertisements. Recent cross-cultural research confirms that negativity bias operates across diverse political contexts. Soroka et al. (2019, p. 18891) and Fournier et al. (2020, p. 781) found consistent psychological responses to negative political information across 17 countries spanning diverse cultural and political systems. This suggests that negativity bias represents a fundamental psychological mechanism rather than a culturally specific phenomenon, though its intensity may vary across contexts. For instance, their research documented negativity bias in countries as diverse as Canada, Japan, Israel, and South Korea, suggesting its operation transcends specific political systems or cultural backgrounds.

3.3.2 Selective Exposure and Confirmation Bias

While negativity bias suggests that all individuals pay more attention to negative information, selective exposure theory explains why this effect operates differently based on existing political preferences. Festinger’s (1957) cognitive dissonance theory established that individuals prefer information that aligns with their existing beliefs while avoiding challenges to those beliefs. D’Alessio and Allen’s (2002, p. 530) meta-analysis of post-decision selective exposure in controlled settings confirms this fundamental tendency. Recent research on online

political information consumption further demonstrates that people consistently favor “attitude-consistent” messages (Knobloch-Westerwick, 2015; Garrett et al., 2016). For example, studies of social media behavior show that conservatives and liberals exhibit strong preferences for news sources that align with their political orientation, even when given options to view diverse perspectives. This selective exposure creates what scholars term “echo chambers” or “filter bubbles” where individuals predominantly encounter information that reinforces existing beliefs (Pariser, 2011; Sunstein, 2017). Selective exposure theory further suggests that media consumption occurs predominantly through active selection rather than passive reception (Knobloch-Westerwick, 2015, p. 12). Individuals choose content that aligns with their preferences and values, effectively self-selecting their media environment to produce desired cognitive and emotional effects. In the context of negative campaigning, this means that voters often expose themselves primarily to criticism of candidates they already oppose, while avoiding or dismissing negative information about preferred candidates.

When combining confirmation bias and selective exposure theories with negativity bias, a more complex theoretical expectation emerges regarding political information processing. While negativity bias suggests general attentiveness to negative information, selective exposure and confirmation bias suggest this attentiveness will be moderated by existing political preferences. As Meffert et al. (2006, p. 28) explain, individuals not only selectively attend to political information but actively transform “raw” political messages based on their “motivations and pre-existing preferences.” While negativity bias attracts attention to negative information generally, confirmation bias leads individuals to “convert [any] incongruent negative information into support for a [their] pre-existing preference” (2006, p. 28). Recent research by Taber and Lodge (2016, p. 68) and Tappin et al. (2020, p. 83) confirms this interaction, finding that individuals

process negative information about preferred candidates differently than identical information about opposed candidates.

This interaction helps explain seemingly contradictory findings regarding negative campaigning effects. While negative messages may capture attention across ideological lines due to negativity bias, their persuasive impact is heavily moderated by existing political preferences through selective exposure and confirmation bias. This creates a scenario where negative messaging often reinforces existing political alignments rather than changing minds across political divides.

3.3.3 Boomerang Effects and Backlash Mechanisms

Despite the attention advantages that negativity provides, negative campaigning sometimes produces unintended consequences that harm the attacking candidate rather than the target. Political communication research has developed several theoretical frameworks explaining these “boomerang” or “backlash” effects. The “source credibility” model, developed from Hovland and Weiss’s (1951) persuasion research, suggests backlash occurs when message sources lack perceived expertise or trustworthiness. Applied to negative campaigning, this framework explains why attacks from candidates with questionable reputations often produce stronger backlash than identical content from more credible sources (Sigelman & Shiraev, 2002). For example, when a candidate with past ethical controversies attacks an opponent’s integrity, voters may perceive this as hypocritical, generating negative reactions toward the attacker rather than the target. The “norm violation” perspective, advanced by Mutz and Reeves (2005), argues that backlash reflects violations of civility norms. This model suggests that negative messages transgressing accepted discourse boundaries trigger social disapproval regardless of content accuracy. For instance, attacks perceived as excessively personal or inappropriate may violate

social norms regarding acceptable political discourse, creating negative impressions of the attacker rather than the target. The normative standards applied, however, vary significantly across political cultures, a particularly relevant consideration when examining negative campaigning in non-Western contexts with different discursive traditions.

The “psychological reactance” framework draws on Brehm’s (1966) theory that perceived threats to freedom trigger oppositional responses. In campaign contexts, reactance theory suggests that overly aggressive attacks appear manipulative, prompting resistance rather than persuasion (Brehm & Brehm, 1981). For example, when voters perceive a campaign advertisement as attempting to manipulate their views through excessive negativity, they may reject both the message and its source as a means of asserting autonomy. This reaction may be particularly pronounced in political cultures where religious or traditional values emphasize individual dignity and respect. These competing yet complementary models demonstrate the multi-causal nature of backlash effects, suggesting that negative campaigning’s consequences reflect complex interactions between message characteristics, source factors, normative contexts, and psychological processes. This theoretical complexity requires careful consideration when examining negative campaigning across different political systems and cultural environments. The risk of backlash creates what Mattes and Redlawsk (2014, p. 172) call “the negativity dilemma”—while negative messaging captures attention more effectively than positive information, certain types of negativity risk alienating voters through backlash effects.

While these psychological mechanisms provide valuable insights into how citizens process negative political information, their manifestation is significantly shaped by contextual factors that vary across different political systems. Understanding how cultural, institutional, and situational variables moderate these fundamental processes is essential for developing a more

globally comprehensive theory of negative campaigning. The next section examines these contextual factors in detail, with particular attention to how they might shape negative campaigning effects in Iran's distinctive political environment.

3.4 Contextual Moderation of Negative Campaigning

The effectiveness and manifestation of negative campaigning are not universal constants but rather vary significantly across different political, cultural, and media environments. This contextual sensitivity represents a critical dimension for understanding negative campaigning globally, yet remains undertheorized in political communication research. While psychological mechanisms like negativity bias may operate across diverse human populations, their expression in political behavior is profoundly shaped by institutional arrangements, cultural norms, historical experiences, and media systems. This section analyzes these contextual factors systematically, examining how they moderate negative campaigning's supply, content, and effects across different electoral environments. Understanding these contextual variations is particularly crucial for analyzing negative campaigning in non-Western settings like Iran, where distinctive institutional structures, religious influences, and media regulations create fundamentally different conditions for political communication compared to Western democracies. By identifying these moderating factors, we can develop more sophisticated models that account for both universal mechanisms and contextual adaptations in negative campaigning across diverse political systems.

3.4.1 Cross-Cultural and Institutional Variations

While negativity bias appears to operate across diverse cultural contexts, important variations exist in its magnitude and manifestation. Cross-cultural psychology has identified

significant differences in negativity sensitivity between individualist and collectivist societies (Kitayama et al., 2006). Collectivist cultures typically demonstrate greater concern with social harmony and face-saving, potentially intensifying negative responses to political attacks perceived as threatening group cohesion or personal dignity. Political communication research has begun examining cross-cultural variations in negativity bias. In a cross-national study, Soroka, Fournier, and Nir (2019) found consistent evidence of attentional and physiological sensitivity to negative political information across eight democratic countries. While the presence of negativity bias appeared universal, its intensity varied significantly across cultural contexts, suggesting that both biology and media systems shape political information processing. Recent comparative research has demonstrated that cultural dimensions such as power distance and uncertainty avoidance significantly moderate public receptivity to political negativity. For instance, in countries with high uncertainty avoidance, citizens show lower tolerance for negative campaigning due to aversion to confrontation and ambiguity. Conversely, in high power distance societies, hierarchical criticism by elites may be more socially accepted (Maleki & Hendriks, 2015; Arrese, 2024; Küçükkömürlü & Özkan, 2022).

Media system characteristics—including regulatory frameworks, ownership structures, and journalistic cultures—substantially influence opportunities for selective engagement with political information (Hallin & Mancini, 2004). In polarized pluralist systems with party-aligned media, selective exposure operates primarily through outlet selection (Goldman & Mutz, 2011). In liberal commercial systems, selective exposure increasingly operates through algorithm-driven personalization that may intensify partisan segregation (Bakshy et al., 2015).

These institutional variations are particularly relevant for understanding political communication in hybrid regimes, which often feature distinctive media system characteristics

combining elements of state control with partial market liberalization. As Stockmann and Gallagher (2011) demonstrated in their analysis of Chinese media consumption, selective exposure operates differently in controlled information environments—often through subtle interpretation differences rather than source selection. Political culture significantly moderates backlash effects across different electoral contexts. The normative standards applied to campaign discourse—and consequently the thresholds for backlash—vary significantly based on established political traditions and cultural values (Elmelund-Præstekær, 2010). For example, the United States typically demonstrates higher tolerance for direct personal attacks than Northern European democracies, where policy criticism predominates and character attacks face stronger normative sanctions.

Religious factors further condition these responses, with faith traditions emphasizing brotherly respect potentially amplifying negative reactions to perceived incivility. Historical experiences with democratic processes also influence backlash thresholds. As Norris (2011) observed, established democracies typically demonstrate higher tolerance for political criticism than emerging democratic systems where negative campaigning may trigger greater concern about systemic stability. This pattern has particular relevance for hybrid regimes, where criticism boundaries may reflect complex calculations balancing democratic appearance with systemic maintenance.

Iran's unique position as a hybrid regime with strong religious dimensions provides a particularly valuable case for examining these cross-cultural variations in negative campaigning. The country's collectivist cultural orientation, high power distance, and strong uncertainty avoidance (using Hofstede's cultural dimensions) likely create distinctive conditions for how negativity is expressed and received. In Iran's political discourse, religious norms that emphasize

dignity (keramat), respect (ehteram), and brotherhood potentially moderate both the tone and content of negative messaging compared to more individualistic Western contexts.

Simultaneously, the factional rather than party-based nature of Iran's political organization likely shapes selective exposure patterns differently than in Western systems with institutionalized partisan media. Iran's media system combines elements of the polarized pluralist model through factional newspaper alignment with strong state controls over broadcasting, creating complex conditions for political information dissemination. These distinctive cultural and institutional characteristics suggest that while basic psychological mechanisms like negativity bias may operate in Iran as elsewhere, their specific manifestation in campaign communication likely reflects significant contextual adaptation rather than simple replication of Western patterns.

3.4.2 Long-term Effects on Political Trust and System Legitimacy

Beyond immediate impacts on specific campaigns, negative campaigning may produce cumulative effects on political trust, system legitimacy, and democratic culture. These potential long-term consequences have generated significant scholarly attention and debate, particularly regarding negativity's implications for democratic sustainability. Early research raised significant concerns about negative campaigning's potential to undermine democratic legitimacy. Ansolabehere and Iyengar (1995) argued that exposure to negative political advertising reduces trust in government and political efficacy while increasing political cynicism. Their experiments suggested that these effects accumulated over time, potentially contributing to declining confidence in democratic institutions. This "demobilization thesis" portrayed negative campaigning as dangerous for democratic health by eroding the foundational trust required for system legitimacy.

However, subsequent research has challenged these pessimistic conclusions, revealing a more complex relationship between negative campaigning and system legitimacy. Brooks and Geer (2007) found that civil negative messages focusing on policy disagreements did not significantly reduce political trust or efficacy. Their experimental research distinguished between different types of negativity, with uncivil character attacks generating more concerning effects than substantive policy criticism. As Maier (2021) demonstrates through experimental research, the tone and civility of negative campaign messages—more than negativity itself—are decisive in shaping democratic legitimacy. His findings show that uncivil negativity led to an 18% decline in trust in politicians, while civil policy-focused criticism had no statistically significant negative effect. This distinction between types of negativities has been supported by empirical meta-analyses, which demonstrate that issue-based negative campaigning can enhance political knowledge and democratic engagement. For instance, Lau, Sigelman, and Rovner (2007) found that policy-focused criticism, unlike personal attacks, often leads to greater political learning and voter involvement, suggesting that not all negativity undermines democratic participation—some forms may actually strengthen it.

The relationship between negative campaigning and political trust appears highly conditional on institutional context. In systems with greater institutional trust and democratic consolidation, negative campaigning generates fewer legitimacy concerns than in fragile or transitional contexts (Norris, 2011). This pattern reflects the resilience of confidence in well-established systems, where criticism of specific politicians or policies does not necessarily generalize to the system itself. The relationship between negativity and legitimacy also varies across different dimensions of system support. Easton's (1975) classic distinction between diffuse and specific support provides a useful framework for understanding these differentiated

effects. Negative campaigning may reduce specific support for particular politicians or parties while leaving diffuse support for core democratic principles relatively intact. This distinction helps explain why democracies can endure high levels of negativity without fundamental legitimacy crises.

In a non-Western context like Iran, understanding the relationship between negative campaigning and system legitimacy requires attending to the specific institutional arrangement of hybrid regimes. In electoral authoritarian systems, controlled negativity within established boundaries may actually enhance legitimacy by creating an appearance of genuine competition without threatening core power structures (Schedler, 2013). This “legitimation through criticism” function differentiates hybrid regimes from both consolidated democracies and closed authoritarian systems. Research by Gandhi and Lust-Okar (2009) suggests that permitting circumscribed criticism can enhance regime stability by channeling dissent into managed electoral processes rather than more threatening forms of opposition. The religious dimension of Iran’s political system creates additional complexities for analyzing negativity’s legitimacy effects. When religious authority structures provide institutional oversight of political competition, negative campaigning may have distinctive implications for system legitimacy compared to secular systems.

When examining these potential long-term effects in Iran’s distinctive political environment, several unique considerations emerge. The religious dimension of Iran’s political system creates additional complexities for analyzing how negative campaigning affects system legitimacy. Unlike secular democracies where legitimacy derives primarily from popular sovereignty, Iran’s dual legitimacy sources—both religious authority and popular participation—create distinctive dynamics for how criticism influences systemic trust. Negative campaigning

that focuses on specific policies or officials while affirming fundamental system principles may actually enhance rather than undermine legitimacy by demonstrating the system's capacity for self-correction within established parameters. This dynamic was particularly evident in the 2021 presidential debates, where candidates criticized specific government failures while affirming the Islamic Republic's foundational values. The 2024 election following President Raisi's unexpected death further demonstrated this pattern, with candidates engaging in substantive policy criticism while emphasizing system continuity during a potentially destabilizing transition. This pattern suggests that in Iran's hybrid regime, controlled negativity within established boundaries may serve legitimation functions that differ significantly from either consolidated democracies or closed authoritarian systems. By permitting bounded criticism, the system potentially channels dissent into institutionalized processes rather than extra-systemic opposition, potentially enhancing rather than undermining long-term stability.

3.5 Negative Campaigning in Non-Western Political Contexts

The study of negative campaigning has predominantly focused on Western democracies, particularly the United States and Western European nations (Lau & Rovner, 2009; Walter & Vliegenthart, 2010). However, as electoral democracy has expanded globally, understanding how negative campaigning manifests in a non-Western context has become increasingly important (Kaid & Holtz-Bacha, 2006; Voltmer, 2013). This section examines the current state of research on negative campaigning in non-Western contexts, identifies theoretical frameworks and methodological approaches, and highlights existing knowledge gaps.

3.5.1 Empirical Findings from Diverse Political Systems

Research on negative campaigning in East and Southeast Asia remains relatively limited, though some studies provide valuable insights. Sullivan (2008) examined campaign advertising in Taiwan, finding that democratization processes shaped distinctive patterns of campaign communication, including negative messaging. While not exclusively focused on negative campaigning, Sullivan's work demonstrates how Taiwan's transition from authoritarian rule influenced campaign strategies, with candidates balancing democratic norms with culturally specific communication patterns. In South Korea, Chang and Park (2016) analyzed campaign rhetoric during presidential elections, finding strategic differences in how candidates deploy negative messaging in a Confucian cultural context that traditionally emphasizes harmony and respect. Their research suggests that Korean candidates must navigate cultural constraints when employing negative tactics, often using indirect criticism rather than the direct attacks common in Western contexts. For example, candidates frequently employed third-party surrogates to deliver criticism that would be considered inappropriate if presented directly, allowing the candidate to maintain harmony while still communicating negative messages.

In India, the world's largest democracy, studies of negative campaigning have begun to emerge, though they remain relatively sparse. Rao (2018) analyzed negative rhetoric in Indian parliamentary elections, noting the prevalence of identity-based attacks that leverage India's complex religious and caste dynamics. The study found that negative campaigning in India often employs culturally resonant symbolism that may not be captured by Western analytical frameworks. For instance, subtle references to caste background or religious symbolism can communicate powerful negative messages to Indian voters that might not register as negative content in Western coding schemes. Research on negative campaigning in the Middle East and

North Africa is particularly scarce, reflecting both the limited electoral competition in many countries and the challenges of conducting political communication research in restrictive environments. However, some valuable work has emerged from the region's more competitive electoral systems. Hamdy and Gomaa (2012) examined political discourse in Egypt's 2012 presidential election, the first after the Arab Spring uprising. While not explicitly focused on negative campaigning, their analysis reveals how candidates strategically deployed religious and revolutionary legitimacy claims to delegitimize opponents—a form of negativity that reflected Egypt's specific post-revolutionary context.

Research on negative campaigning in Latin America has produced more robust findings, benefiting from the region's longer history of competitive elections in many countries. Pérez-Liñán (2002) examined political advertising across several Latin American democracies, finding that negative messaging often focuses on corruption allegations—a pattern that reflects the region's historical struggles with public sector corruption. For example, in Brazil's 2018 presidential election, anti-corruption messaging dominated negative campaigning, with candidates across the political spectrum attempting to distance themselves from corruption scandals while implicating opponents. Waisbord (2006) analyzed political communication strategies in Argentina, Brazil, and Venezuela, noting that negative campaigning in these contexts often employs populist frames that divide the political landscape between “the people” and “corrupt elites.” This distinctive approach to negative campaigning reflects Latin America's strong populist tradition, which shapes how attack politics manifests in the region. More recently, Lupu (2019) conducted a comparative analysis of campaign effects in Argentina, providing experimental evidence that negative messaging influences voter perceptions differently than in the United States. The study suggests that Latin American voters may be more

receptive to certain types of negative messages, particularly those targeting corruption, than their North American counterparts.

Research on negative campaigning in Sub-Saharan Africa faces significant challenges, including limited documentation of campaigns, multilingual electoral environments, and uneven media development. Nevertheless, important work has emerged from the region's more established democracies. Bratton and van de Walle (1997), in their seminal work on African democratization, noted that personalistic politics in many African democracies creates conditions for highly personalized negative campaigning. While not focused specifically on campaign negativity, their analysis provides a valuable framework for understanding how institutional factors shape attack politics in African contexts. More recently, Cheeseman et al. (2021) examined campaign strategies in Kenya, Ghana, and Uganda, finding that negative campaigning in these contexts often leverages ethnic identities and historical grievances. The authors argue that the effectiveness of such strategies varies based on the salience of ethnic identities in each country's political system, suggesting that the dynamics of negative campaigning reflect broader patterns of political competition. Bleck and van de Walle (2018) analyzed electoral dynamics across 17 African countries, noting that while negative rhetoric is common, its specific manifestations vary based on each country's colonial legacy, ethnic composition, and democratization trajectory.

Truly comparative studies of negative campaigning across multiple non-Western regions remain exceptionally rare. Walter's (2014) analysis of campaign negativity across different electoral systems provides one of the few comparative frameworks, though it focuses primarily on established democracies rather than non-Western contexts specifically. Esser and Strömbäck (2012), in their comparative work on political communication across time and space, highlight

the methodological challenges of studying negative campaigning across diverse contexts. They note that variations in media systems, campaign regulations, and cultural norms create significant challenges for comparative research, requiring sophisticated research designs that can account for these contextual differences.

The digital transformation of political communication has significantly impacted negative campaigning strategies across non-Western contexts, often in ways that diverge from Western patterns. Chadwick's (2017) concept of "hybrid media systems" provides a valuable framework for understanding how traditional and digital media interact to shape campaign dynamics across diverse contexts. Udupa and Pohjonen (2019) analyzed digital political communication in India and Ethiopia, documenting how social media platforms have enabled distinctive forms of "extreme speech" that include elements of negative message. Their research highlights how platform-specific affordances interact with linguistic and cultural factors to shape online political discourse in ways that may not be captured by Western-derived analytical frameworks.

These empirical findings from diverse political contexts suggest several preliminary expectations for negative campaigning in Iran's presidential elections. As shown in Chapter 1, Iran's hybrid regime combines elements of electoral competition with significant religious oversight, creating conditions that share similarities with both competitive authoritarian systems and religiously influenced democracies. Based on the religious dimensions of Iran's political system described in section 1.3, we might expect negative campaigning to demonstrate greater emphasis on policy performance and religious-revolutionary credentials than personal character attacks that might violate Islamic ethical principles. The factional rather than party-based nature of Iran's political landscape outlined in section 1.4 suggests that negative messaging might target broader ideological orientations rather than specific party platforms, similar to patterns observed

in other non-party systems. The media environment described in section 1.5, with its combination of state broadcasting control and emerging digital spaces, likely creates distinctive conditions for negative campaigning distribution compared to either Western liberal media systems or fully controlled authoritarian environments. The voter behavior patterns outlined in section 1.6, particularly the importance of economic considerations in voting decisions, suggest that economic criticism may play a central role in negative campaigning content, similar to findings from other regions where material concerns drive political behavior. These expectations, drawn from Iran's specific institutional and cultural characteristics, guide the subsequent empirical investigation of negative campaigning in the 2021 and 2024 presidential elections.

3.5.2 Theoretical and Methodological Challenges in Cross-Cultural Analysis

Research on negative campaigning in non-Western contexts employs diverse methodological approaches, each with particular strengths and limitations. Content analysis protocols developed for Western campaigns may not adequately capture culturally specific forms of negative messaging that appear in non-Western contexts, requiring careful adaptation by researchers. For example, coding schemes developed for American presidential campaigns might miss subtle forms of negative messaging in Asian contexts where indirect criticism predominates. Experimental approaches, while less common, have yielded important insights into the effects of negative campaigning in non-Western settings. Lupu's (2019) experimental design in Argentina demonstrated how laboratory methods can isolate campaign effects across different contexts, though the author acknowledges that experimental findings may not fully capture the complexity of real-world campaign environments. Survey-based research on negative campaigning faces significant challenges in non-Western contexts. Norris and Inglehart (2019) note that survey instruments developed for Western populations may not adequately capture the

perceptual frameworks of non-Western respondents, necessitating careful cultural adaptation of research instruments.

Despite growing attention to comparative political communication, theoretical frameworks specifically designed for analyzing negative campaigning in non-Western contexts remain underdeveloped. As Voltmer (2013) argues, the field needs more sophisticated conceptual tools that can account for how institutional, cultural, and historical factors shape campaign negativity across diverse settings. While focused on Dutch elections, Walter and Vliegenthart (2010) demonstrate that variation in media systems and the degree of control over campaign messaging significantly shapes the tone and targets of negative campaigning. Their findings suggest that communication channels mediate the effects of negativity, a pattern with clear implications for cross-national research. Extending this work to non-Western contexts would require theoretical frameworks that can accommodate even greater institutional and cultural diversity while maintaining analytical coherence.

Methodological innovation represents another critical area for advancing research on negative campaigning in non-Western contexts. Esser and Strömbäck (2012) highlight the need for more sophisticated comparative research designs that can account for contextual differences while enabling meaningful cross-national analysis. Content analysis protocols require careful cultural adaptation to capture the nuances of negative messaging across diverse contexts. Researchers must develop coding schemes that can identify culturally specific forms of negativity that might be missed by Western-derived protocols. Research on negative campaigning across non-Western regions remains unevenly distributed, with significant gaps in coverage. Studies from East Asia, Latin America, and to some extent Sub-Saharan Africa have begun to emerge, but research from the Middle East, North Africa, Central Asia, and much of

Southeast Asia remains particularly limited. These regional gaps reflect broader challenges in conducting political communication research in contexts where electoral competition may be limited, media access restricted, or research infrastructure underdeveloped. Addressing these gaps will require both methodological innovation and international research collaboration that can navigate these practical challenges.

3.6 Implications for Studying Iranian Negative Campaigning

The cross-cultural perspectives on negative campaigning discussed throughout this chapter provide crucial context for studying this phenomenon in Iran's presidential elections. As established in previous sections, several key theoretical dimensions require particular attention when examining negative campaigning in Iran's unique political environment. First, as discussed in section 3.1, Iran's hybrid regime characteristics create distinctive patterns of bounded contestation. The Guardian Council's candidate vetting, religious oversight of campaign activities, and state media controls establish parameters for acceptable political criticism that differentiate Iran from both Western democracies and purely authoritarian systems. This institutional context shapes both the content and targeting of negative messaging in ways that require contextual adaptation of Western-derived frameworks. Second, as noted in section 3.2, the strategic functions of negative campaigning in Iran reflect a complex balancing act between criticism and system affirmation not required in Western contexts. Candidates must navigate both democratic competitive imperatives and the need to demonstrate fidelity to the Islamic Republic's foundational principles, creating distinctive strategic calculations that influence negative messaging deployment. Third, as examined in section 3.3, while psychological mechanisms like negativity bias likely operate in Iran as elsewhere, their expression is shaped by Iran's collectivist cultural orientation and religious values regarding appropriate discourse. The

religious norms of dignity (*keramat*) and respect (*ehteram*) discussed earlier potentially moderate how negativity is both expressed and received compared to more individualistic Western societies. Fourth, as explored in section 3.4, Iran's media system combines elements of state control with factional diversity, creating parallel information ecosystems that shape how negative messaging circulates among different audience segments. The development of digital platforms has created new spaces for negative campaigning that operate under different constraints than traditional media channels. Fifth, as analyzed in section 3.5, negative campaigning's long-term effects on political trust and system legitimacy likely manifest differently in Iran's hybrid regime. The system's dual legitimacy sources—both religious authority and popular participation—create distinctive dynamics where bounded criticism may actually enhance rather than undermine systemic legitimacy by demonstrating controlled accountability. Based on these insights, this research approaches negative campaigning in Iran's presidential elections not as a simple replication of Western patterns but as a distinctive hybrid phenomenon that combines universal psychological mechanisms with context-specific adaptations. This integrated theoretical framework guides the subsequent empirical analysis, allowing for nuanced interpretation of how negative campaigning functions within Iran's unique political environment.

3.7 Research Gaps and Opportunities

Despite substantial advances in understanding negative campaigning, several significant research gaps remain that this study addresses through its focus on Iran's presidential elections. These gaps represent important opportunities for theoretical advancement and empirical contribution. First, geographic and institutional biases limit existing research. The overwhelming majority of negative campaigning studies focus on Western liberal democracies, particularly the United States. As Walter and Vliegenthart (2010, p. 441) note, "research on negative

campaigning is dominated by studies on the United States,” creating significant limitations in understanding how negativity functions across diverse contexts. This geographical concentration has produced theories potentially limited by their Western contextual origins. Research explicitly testing these theories in non-Western settings remains remarkably scarce. Even comparative studies that venture beyond Western democracies typically focus on other competitive democracies rather than hybrid regimes combining democratic and authoritarian elements. While recent comparative research on political attitudes and values has expanded geographic coverage substantially (Norris & Inglehart, 2019), research on negative campaigning specifically remains concentrated in liberal democratic contexts, with hybrid regimes combining democratic and authoritarian elements remaining largely unstudied.

Second, methodological limitations constrain existing research. Experimental approaches dominate the literature, providing strong causal evidence but potentially sacrificing ecological validity. As Lau and colleagues (2007) acknowledge in their meta-analysis, laboratory findings about negative campaigning effects frequently fail to generalize to real electoral contexts. Furthermore, content analysis methods typically focus on traditional campaign materials (advertisements, debates, speeches) while neglecting social media and user-generated content that increasingly define contemporary campaign environments (Jungherr, 2016). This methodological gap is particularly problematic for studying negative campaigning in non-Western contexts where digital platforms may serve distinct political functions compared to controlled traditional media.

Recent advances in computational text analysis have opened new possibilities for studying negative campaigning at scale, though these methodological developments remain unevenly applied across political contexts. Automated content analysis methods—including

sentiment analysis, supervised machine learning, and transformer-based natural language processing models—enable researchers to analyze vast corpora of political communication that would be infeasible to code manually (Grimmer & Stewart, 2013; van Atteveldt et al., 2021). These computational approaches have been increasingly applied to study negative campaigning on social media platforms, where the volume and velocity of political communication far exceeds traditional campaign materials (Gerstlé & Nai, 2019; Bene et al., 2022). The explosive expansion of digital textual data combined with rapid progress in automated text analysis provides vast opportunities for innovative research on political communication, particularly for examining campaigns across multiple elections, platforms, and linguistic contexts simultaneously (Haselmayer et al., 2017).

However, computational measurement of negativity faces significant challenges, particularly regarding language-specific adaptation and contextual sensitivity. Most automated sentiment analysis tools exhibit strong language bias, having been developed and validated predominantly with English-language data (Mohammad, 2016; Haselmayer et al., 2017). The performance of these tools degrades substantially when applied to other languages or political contexts without careful adaptation and validation. As van Atteveldt and colleagues (2021) demonstrate through systematic testing, while automated approaches can identify basic sentiment polarity with reasonable accuracy, they struggle with more complex variables central to political communication research—including distinguishing types of negativity, detecting incivility, or capturing nuanced evaluations—often underperforming compared to human coding for such sophisticated judgments. This limitation proves particularly problematic for studying negative campaigning, where the distinction between civil policy criticism and uncivil personal attacks carries theoretical importance but requires subtle linguistic discrimination.

Moreover, detecting negativity requires capturing contextual cues beyond simple word presence or frequency. Recent methodological developments address these challenges through multiple approaches. First, researchers have developed methods to model syntactic relationships in texts, enabling more accurate identification of who is attacking whom and regarding what issues—critical distinctions often obscured by traditional bag-of-words approaches (Fogel-Dror et al., 2019). Second, word embedding techniques attempt to grasp semantic meanings of features through their contextual usage patterns, though concerns remain about potential biases embedded in these models (Mikolov et al., 2013; Bolukbasi et al., 2016). Third, transformer-based models employing transfer learning—such as BERT and its variants—demonstrate improved performance by leveraging pre-trained language understanding that can be fine-tuned for specific tasks including negativity detection. These models better capture long-distance dependencies and contextual information that determine whether a statement constitutes an attack.

For non-Western contexts, these challenges intensify substantially. The scarcity of validated sentiment analysis tools for languages beyond English constrains research on political communication in much of the world, creating a computational divide that mirrors and potentially exacerbates the geographic bias in negative campaigning research. Scholars studying non-English contexts face dual obstacles: theoretical frameworks developed primarily in Western democracies and methodological tools optimized for English text (Mohammad, 2016). This technological gap has practical consequences, as researchers either must invest substantial resources developing language-specific tools or rely on potentially invalid translations and adaptations of English-language instruments.

Emerging research has begun addressing these limitations through several innovative approaches. Crowd coding methods enable construction of language-specific sentiment dictionaries by leveraging online coders to provide fine-grained sentiment scores for words in the target language and political domain, offering a more feasible alternative to expert coding while maintaining acceptable quality standards (Haselmayer et al., 2017). These domain-specific dictionaries can then be applied to analyze large text corpora that resource-intensive hand-coding struggles to process. Transfer learning approaches adapt pre-trained multilingual models to new linguistic contexts, though performance remains inferior to models trained on abundant target-language data (van Atteveldt & Peng, 2018). Hybrid or semi-automated methods combine computational pattern detection with contextual human interpretation, using quantitative findings to inform deeper qualitative understanding of political communication environments (Lewis et al., 2013). This triangulation approach enables identification of both statistical patterns and their contextual significance, moving beyond limitations of purely computational or purely interpretive approaches.

The methodological gap proves particularly acute for studying political communication in Persian, where natural language processing applications remain substantially less developed than for major European languages. While emerging research has made progress in adapting models to assess sentiment in Persian social media posts and detect misinformation (Rajabi & Valavi, 2021), political text analysis tools specifically remain scarce. Recent work has begun developing Persian-language datasets for detecting hateful and offensive language through crowdsourcing and manual annotation (Kebriaei et al., 2024), and creating two-stage classifiers for identifying campaign negativity using axis embeddings in Persian tweets. However, these represent initial

steps in a much longer process of developing robust computational infrastructure for studying Persian political communication comparable to what exists for English.

This study addresses this methodological gap by developing computational tools specifically adapted for Persian political discourse. The research creates specialized deep learning models trained on Persian political language to detect negativity, character attacks, and political attacks with tailored accuracy for Iran's unique linguistic and political context. These tools, including the ParsBERT model for negative content classification, demonstrate that language-specific adaptation substantially improves performance compared to generic sentiment analysis tools. However, the challenges encountered in this development process underscore the substantial methodological barriers facing researchers studying negative campaigning beyond Western contexts. The broader field would benefit from coordinated efforts to develop open-source, validated tools for political text analysis across diverse languages, enabling more truly global research on political communication.

Finally, validation remains essential yet often overlooked in computational approaches to studying political communication. Grimmer and Stewart (2013, p. 3) emphasize that "there is no globally best method for automated text analysis"—rather, different methods suit different quantities of interest and data structures. This insight requires researchers to demonstrate that their automated measures actually capture the theoretical constructs of interest, typically through comparison against gold-standard human coding or through triangulation with other measurement approaches (van Atteveldt et al., 2021). The specific F1 scores, precision, and recall statistics for computational measures should be reported transparently, enabling readers to assess measurement quality. Too often, computational studies of political communication report only that automated methods were employed without adequately validating that these methods

reliably measure negativity or other constructs as theoretically understood. This validation gap undermines the cumulative progress of research employing computational methods, as readers cannot assess whether observed patterns reflect actual phenomena or measurement artifacts.

In summary, while computational approaches offer tremendous potential for advancing negative campaigning research—particularly enabling analysis of campaigns across time, platforms, and contexts at unprecedented scale—their effective application requires substantial methodological care. Language-specific adaptation, contextual validation, and transparent reporting of measurement performance remain essential. This study’s computational approach represents one effort to extend these methodological tools beyond their original English-language context, though much work remains to develop truly global infrastructure for studying political communication computationally.

Third, theoretical integration remains insufficient. Existing research often treats various psychological mechanisms—negativity bias, selective exposure, cognitive dissonance—as competing rather than complementary explanations. While some research focuses on individual psychological dispositions such as personality traits (Meffert et al., 2006; Nai & Maier, 2021), this study takes a complementary approach by examining how demographic characteristics, ideological alignment, and contextual factors moderate negative campaigning effects. More integrated frameworks are needed that examine how both individual dispositions and contextual factors produce distinctive campaign patterns across different political systems (Maier & Nai, 2021; Martin & Nai, 2024). This contextual moderation is particularly pronounced in hybrid regimes, where bounded criticism operates within distinctive institutional and normative frameworks that shape both elite messaging strategies and citizen reception patterns (Valli & Nai, 2020). Understanding these context-mechanism interactions is essential for developing

globally comprehensive theories of negative campaigning that account for variation beyond Western liberal democratic settings.

Fourth, beyond simple geographic expansion of negative campaigning research, recent comparative studies have revealed that institutional and cultural contexts substantially moderate how negativity functions in electoral competition. The development of large-scale comparative datasets tracking campaigns across dozens of countries has enabled systematic testing of whether Western-derived theories apply universally or require contextual modification (Nai, 2020; Nai & Walter, 2015). These comparative efforts represent a significant evolution from the field's earlier concentration on single-country—particularly United States—case studies, allowing researchers to identify which patterns reflect universal strategic logic versus context-specific adaptation.

Nai's (2020) analysis of 172 candidates competing in 35 elections worldwide between June 2016 and May 2017 provides particularly valuable insights into the global patterns and variations of negative campaigning. This comprehensive dataset, based on expert assessments, demonstrates that while some strategic behaviors appear relatively consistent across contexts—such as challengers attacking frontrunners, candidates targeting ideologically distant opponents, and reciprocal attack dynamics—the intensity and specific targets of negative campaigning vary substantially based on electoral systems, party system fragmentation, and regime type.

Importantly, this research revealed that contextual factors often operate indirectly, by altering how individual candidate characteristics translate into campaign strategies rather than directly determining negativity levels. For instance, trailing candidates universally tend toward more negative campaigning, but the magnitude of this effect differs significantly across institutional contexts.

Recent comparative research has particularly illuminated how negativity operates differently across varied electoral contexts and regime types. Maier and colleagues' (2024) analysis of 150+ parties across 28 countries participating in both the 2019 European Parliament elections and national elections between 2016-2020 revealed systematic differences in campaign behavior between first-order and second-order elections. Parties campaigned significantly more negatively in European elections compared to national contests, with this pattern especially pronounced for extreme parties. These findings challenge assumptions that strategic imperatives operate uniformly across electoral contexts, demonstrating instead that the perceived stakes and visibility of elections shape campaign tone even when the same parties compete under similar institutional rules.

Comparative research on regions beyond Western Europe and North America remains particularly valuable yet scarce. The limited existing studies suggest distinctive patterns shaped by regional political cultures and institutional arrangements. Research examining negative campaigning in Central and Eastern European countries during 2020-2022 national elections demonstrates how geopolitical context and democratic consolidation stage influence campaign content (Kreko et al., 2024). While Western European campaigns tend to emphasize immigration, terrorism, and social policy in negative messages, Central and Eastern European campaigns focus substantially on corruption, foreign policy (particularly regarding Russia and European Union relations), and economic governance. These topic differences reflect not merely different issue salience but fundamental variations in how political competition operates in younger democracies with more volatile party systems and different historical experiences. The 2022 Hungarian parliamentary election campaign, for instance, was profoundly shaped by Russia's invasion of Ukraine, with negative statements predominantly addressing war, defense

policy, and energy security—topics largely absent from contemporaneous Western European campaigns.

Valli and Nai's (2020) comparative analysis of attack politics from Albania to Zimbabwe provides rare evidence about negative campaigning drivers across diverse regime types and geographic regions. Their research demonstrates that while some universal patterns exist—such as the relationship between competitive pressure and negativity—the specific mechanisms through which these operate differ substantially across contexts. In hybrid regimes and consolidating democracies, factors such as media freedom, rule of law strength, and civil society development moderate how and when candidates deploy negative messaging. These contextual variations suggest that theories developed in established Western democracies may require substantial modification when applied to other regime types, rather than straightforward extension.

The comparative study of negative campaigning faces significant methodological challenges that have limited progress. First, conceptual equivalence across contexts proves difficult, as what constitutes "negative" or "uncivil" communication depends partly on culturally-specific norms about acceptable political discourse. A statement considered merely critical in one political culture might constitute serious incivility in another (Elmelund-Præstekær, 2010). Second, data availability and quality vary dramatically across countries, with sophisticated content analysis and survey research concentrated in established democracies while less systematic evidence exists for much of the world. Expert surveys partially address this challenge by leveraging local knowledge to assess campaigns, though they introduce their own limitations regarding reliability and potential bias (Nai, 2020). Third, the diversity of electoral systems, party systems, and media environments creates substantial variation in the opportunities and

constraints for negative campaigning, making direct cross-national comparison complex. Researchers must balance the desire for broad comparative coverage against the need for sufficient contextual understanding to interpret findings appropriately.

Recent methodological innovations have begun addressing these challenges. The development of standardized expert survey instruments enables systematic data collection across diverse contexts while preserving contextual sensitivity through local expert knowledge (Nai & Maier, 2023). Computational approaches increasingly enable analysis of campaign materials—particularly social media communication—across countries using comparable methods, though language-specific adaptation remains essential (Gerstlé & Nai, 2019). Mixed-methods designs combining quantitative pattern identification with qualitative contextual interpretation offer promising pathways for comparative research that maintains both systematic rigor and contextual validity (Bene et al., 2022). These methodological advances create opportunities for more truly global research on negative campaigning that moves beyond Western-centric theory testing toward genuine comparative understanding.

Despite this progress, research examining negative campaigning in hybrid regimes and non-democracies remains particularly scarce. The few existing studies suggest these systems create distinctive conditions for political communication that may not conform to patterns observed in liberal democracies. Institutional constraints on media freedom, consequences for transgressing regime-defined boundaries, and the absence of genuinely competitive elections alter the strategic calculations underlying negative campaigning. In hybrid regimes combining elements of electoral competition with authoritarian control, candidates may face simultaneous pressures to differentiate themselves from competitors while avoiding criticism that threatens regime stability or violates prescribed norms (Nai, 2020). These dynamics create complex

strategic environments inadequately captured by existing theoretical frameworks developed in consolidated democracies.

This study addresses these comparative gaps by examining negative campaigning in Iran's hybrid regime characterized by competitive elections operating within substantial institutional constraints and religious normative frameworks. By positioning Iran as a critical case for testing whether Western-derived theories of negative campaigning require modification for different institutional contexts, the research contributes to developing more globally comprehensive understanding of political communication. The study demonstrates how factional competition differs from party-based systems, how religious oversight shapes acceptable criticism boundaries, and how hybrid regime characteristics create distinctive patterns of both elite messaging and citizen reception. These insights advance comparative political communication research beyond its current concentration in Western democracies toward theoretical frameworks capable of explaining negative campaigning across diverse regime types and cultural contexts.

Fifth, the citizen-level processing of negative campaigning in non-Western contexts remains particularly underexplored. While substantial research examines how Western citizens respond to negativity, we have minimal evidence regarding whether these same patterns apply in significantly different cultural and institutional environments. As Norris (2004, p. 179) observes, "electoral engineering needs to take serious account of how formal rules interact with informal cultural values." This gap limits our ability to determine which aspects of negative campaigning effects are universal psychological phenomena and which are contingent on specific contextual factors.

By investigating negative campaigning in Iran's presidential elections, this research addresses these gaps in several ways. It extends negative campaigning research beyond Western contexts by examining this phenomenon in a hybrid regime with distinctive religious and factional characteristics. The study employs mixed methodological approaches that overcome limitations of existing research, combining computational analysis of social media data with contextual interpretation grounded in deep political and cultural knowledge. The research integrates multiple psychological mechanisms rather than treating them as competing explanations, showing how negativity bias, selective exposure, and backlash effects interact within Iran's specific political context. The comparative analysis of the 2021 and 2024 elections enables examination of temporal dynamics across electoral cycles, identifying both consistent patterns and evolutionary changes. Finally, the research systematically investigates citizen-level processing of negative campaigning in a non-Western context, providing valuable insights regarding which psychological mechanisms operate similarly across diverse political systems versus those that demonstrate context-specific manifestations.

By investigating negative campaigning in Iran's hybrid regime, this research addresses these gaps in several specific ways. First, it extends empirical analysis beyond Western contexts by providing the first systematic study of negative campaigning in Iranian presidential elections, contributing to geographical diversification of the literature while challenging Western-centric assumptions. Second, it employs innovative methodological approaches tailored to non-Western political communication, including computational tools specifically adapted for Persian political discourse and network analytical methods designed for factional rather than party-based political systems. Third, it contributes to integrating multiple psychological mechanisms by testing how they manifest in a hybrid regime context. Fourth, through its comparative analysis of the 2021

and 2024 elections, the research addresses the understudied temporal dimension of negative campaigning, identifying both consistent patterns that transcend specific electoral contexts and evolutionary trends that reflect systematic adaptation. Fifth, the study provides unprecedented insight into citizen-level processing of negative political information in a non-Western context by analyzing large dataset of social media interactions, revealing which aspects of audience reception represent universal psychological tendencies versus those that demonstrate contextual sensitivity. Sixth, by examining negative campaigning within a religiously-influenced hybrid regime, the research contributes to theoretical understanding of how bounded criticism can simultaneously serve accountability functions while reinforcing system legitimacy—a dynamic poorly captured by existing Western-derived frameworks. Through these specific contributions, this study advances not only our understanding of Iranian politics but also the development of more globally comprehensive theories of political communication that can account for negative campaigning across diverse institutional arrangements, cultural contexts, and media environments.

3.8 Conclusion

This literature review has established the theoretical foundations for understanding negative campaigning, examining its definitions, types, functions, and effects across diverse political contexts. The review reveals robust theoretical and empirical knowledge regarding negativity in Western liberal democracies while highlighting the limited application of these frameworks to hybrid regimes like Iran. The concept of negative campaigning encompasses a broad range of critical messaging strategies that candidates employ against opponents during electoral campaigns. These strategies serve multiple functions, from informing voters about candidates' weaknesses to mobilizing supporters through emotional engagement. The

psychological mechanisms underlying negative campaigning—including negativity bias, selective exposure, and backlash effects—help explain both its prevalence and its complex, sometimes contradictory effects on electoral outcomes.

Cross-cultural research demonstrates that while certain psychological mechanisms operate across diverse contexts, their specific manifestations are significantly shaped by institutional arrangements, political culture, and historical factors. This contextual moderation is particularly important for understanding negative campaigning in non-Western settings, where different media systems, cultural norms, and political structures create distinctive conditions for political communication. The limited research on negative campaigning in non-Western contexts highlights significant gaps in our understanding of how this phenomenon functions across diverse political systems. Studies from East Asia, Latin America, and Africa provide valuable insights but remain insufficient for developing truly global theories of negative campaigning. Research on negative campaigning in the Middle East and North Africa, including Iran, is particularly scarce despite the importance of understanding political communication in these regions. Iran's unique political system—combining democratic procedures with religious oversight through a hybrid institutional framework—provides a valuable case for examining how negative campaigning functions outside Western liberal democracies. The factional rather than party-based nature of Iran's political landscape, the religious dimensions of its electoral politics, and the bounded contestation environment created by its hybrid regime all suggest distinctive patterns of negative campaigning that warrant systematic investigation. By addressing the identified research gaps through a comprehensive analysis of negative campaigning in Iran's 2021 and 2024 presidential elections, this study contributes to both theoretical advancement and empirical knowledge. The findings will illuminate which aspects of negative campaigning

represent universal patterns across diverse political systems versus those that demonstrate context-specific manifestations shaped by Iran's unique institutional and cultural environment.

The next chapter builds upon this theoretical foundation by developing specific hypotheses regarding both the supply of negative messages by candidates (strategic dimensions) and the demand for such content among voters (reception dimensions) in Iran's presidential elections. These hypotheses will bridge universal theoretical expectations with context-specific considerations, creating a framework for systematic empirical analysis of negative campaigning in this distinctive political context.

Chapter 4: Supply-Side Hypotheses: Strategic Use of Negative Campaigning

This chapter develops the theoretical framework and hypotheses for examining the strategic deployment of negative messaging by candidates in Iran’s 2021 and 2024 presidential elections. Drawing on both universal theories of campaign strategy and context-specific insights regarding Iran’s hybrid regime, the chapter proposes a series of testable expectations about how candidates navigate the opportunities and constraints of negative campaigning within this distinctive political environment. The chapter begins by establishing the theoretical foundations for understanding the supply-side dynamics of negative campaigning—the strategic calculations that drive candidates to employ criticism against their opponents. It then develops specific hypotheses regarding targeting patterns, factional dynamics, and overall negativity levels that reflect both universal campaign imperatives and Iran-specific adaptations. These hypotheses address fundamental questions about who gets targeted by negative messaging, which candidates employ such tactics most aggressively, and how religious and cultural constraints might moderate overall negativity levels in Iran’s presidential elections. By systematically developing these supply-side hypotheses, the chapter creates a framework for empirically examining how negative campaigning manifests in a non-Western, hybrid regime context, laying the groundwork for the analysis that follows in subsequent chapters. While the core hypotheses address patterns expected within presidential elections generally, the comparative design enables examination of how contextual differences between elections moderate these patterns. The 2024 election occurred as a ‘focusing event’ (Birkland, 1997) following President Raisi’s unexpected death, potentially intensifying emotional responses and altering strategic calculations. Such crisis-driven elections may produce different negativity patterns than routine end-of-term elections like

2021. Additionally, the different competitive structures (more competitive in 2024) and factional balances may moderate the baseline patterns predicted by each hypothesis.

4.1 Theoretical Framework for Supply-Side Analysis

Political campaigns represent complex strategic environments where candidates must continuously calculate the potential benefits and costs of their communication choices. Negative campaigning—defined as criticizing opponents rather than promoting one’s own agenda—has emerged as a particularly powerful yet potentially risky approach across diverse electoral contexts. This chapter develops the theoretical framework and hypotheses for understanding the supply-side dynamics of negative campaigning in Iran’s presidential elections. Drawing on Norris’s (2004) conceptual framework that distinguishes between supply and demand factors in electoral studies, the “supply-side” encompasses the institutional arrangements, elite strategies, and campaign communications that shape political discourse. In the context of negative campaigning, this refers to how political actors strategically produce and deploy critical messages based on electoral calculations, institutional constraints, and normative considerations. This approach recognizes that candidates are rational actors who make deliberate choices about negative messaging based on their assessment of electoral advantages and risks.

Recent comparative research has significantly advanced our understanding of these strategic calculations. Nai and Maier (2022) demonstrate that institutional contexts fundamentally shape the strategic deployment of negative messaging, with hybrid regimes presenting distinctive constraint structures that differ from both consolidated democracies and fully authoritarian systems. Advances in measurement (Walter et al., 2020) enable more nuanced distinctions between attack types, moving beyond binary classifications to capture the multidimensional nature of negativity. Recent evidence (Fowler et al., 2021) confirms that

negative messaging remains strategically rational despite potential backlash effects, particularly for challengers lacking institutional advantages or name recognition.

By examining the patterns of negative messaging production across different candidates and electoral contexts, we can identify the strategic logic underlying campaign communication in Iran's unique political environment. The five hypotheses developed in this chapter reflect a theoretically integrated framework rather than an ad hoc collection of factors. They address three fundamental dimensions of strategic negative campaigning: (1) target selection (h-a, h-c) - who receives attacks based on accountability and competitive logic; (2) strategic positioning (h-b) - how candidate status shapes attack incentives; and (3) institutional constraints (h-d, h-e) - how Iran's unique factional structure and religious norms moderate attack patterns. Together, these hypotheses capture both universal campaign imperatives and context-specific adaptations that define negative campaigning in hybrid regimes.

4.1.1 Negative Campaigning in Hybrid Regimes

While extensive research has explored negative campaigning in Western democracies, its functioning in hybrid regimes remains undertheorized. The intersection of negative campaigning and hybrid regime theory offers fertile ground for developing new insights into how criticism operates in constrained political environments. When examining the supply-side dynamics of negative campaigning in hybrid regimes, we must consider how candidates navigate both universal strategic imperatives and system-specific constraints on political discourse.

Levitsky and Way's (2002) competitive authoritarianism framework provides a foundational basis for understanding this dynamic. These regimes permit meaningful electoral competition but operate within boundaries designed to preserve incumbent power. Brumberg (2001) complements this view by characterizing regimes like Iran as liberalized autocracies, where

political openings exist but are carefully managed to sustain systemic continuity. Iran exemplifies such a system: electoral competition is genuine but bounded by formal mechanisms (e.g., Guardian Council vetting) and informal norms governing acceptable political discourse.

Diamond (2002) deepens this theoretical lens by identifying the “manipulation of the arena of contestation” and describing hybrid politics as “politics within limits.” This is especially applicable to Iran, where both institutional and discursive constraints define the permissible boundaries of critique. Understanding negative campaigning in such systems requires attention to how these limits shape candidates’ strategic choices and how citizens interpret political criticism under constraint. This integrated theoretical framework suggests several expectations for negative campaigning in Iran:

1. While universal strategic incentives (like attacking frontrunners) should operate similarly to other electoral contexts, they likely function within system-specific boundaries that constrain certain criticism forms or targets.
2. The factional rather than party-based nature of political organization in Iran likely creates distinctive coordination dynamics not captured in Western party-focused models.
3. Religious oversight mechanisms introduce normative dimensions absent in secular theoretical frameworks.

The following sections develop specific hypotheses about negative campaigning patterns based on this integrated theoretical framework.

4.2 Strategic Target Selection in Negative Campaigning

One of the most fundamental strategic questions in negative campaigning concerns whom to attack. Candidates must make calculated decisions about which opponents represent the most advantageous targets for criticism. Research across diverse electoral contexts has identified several consistent patterns in these targeting decisions.

4.2.1 Government-Affiliated Targeting

Extensive research demonstrates that incumbent or government-affiliated candidates consistently receive disproportionate criticism in electoral contests. This pattern has been documented across both two-party and multi-party systems and appears to represent a fundamental feature of electoral competition (Walter, 2014; Hale et al., 1996). Comparative analysis (Holtz-Bacha & Johansson, 2017) confirms that government-affiliated candidates face disproportionate criticism across diverse political systems, though the intensity varies by regime type. Several theoretical mechanisms explain this consistent pattern:

Accountability Function: Elections serve as mechanisms for holding power-holders accountable. Challengers must establish rationales for change by critiquing the current government's performance. As Hale et al. (1996) note through their content analysis of 420 advertisements from U.S. Senate campaigns, challengers must build a case for change by directly criticizing the status quo represented by incumbents.

Record Vulnerability: Incumbents or government-aligned candidates have tangible governance records that provide clear targets for criticism. In contrast, challengers' proposals remain hypothetical, creating a natural asymmetry that encourages attacks on those in power.

In Iran's specific institutional context, this general pattern interacts with features of its hybrid regime. The dual structure of elected and unelected authority creates an environment where criticism tends to concentrate on elected officials-particularly the president and cabinet-who serve as the visible face of governance. While unelected bodies such as the Supreme Leader's office remain largely insulated from electoral accountability, elected institutions operate within more public-facing domains. This dynamic reflects what Slater and Fenner (2011) describe as the infrastructural mechanisms authoritarian regimes use to manage dissent-coercive and non-coercive tools that stabilize rule while avoiding direct repression. In the 2021 Iranian presidential election, although no incumbent ran due to President Rouhani's term limit, candidates affiliated with his administration became targets as representatives of the status quo. Similarly, in the 2024 election, figures linked to President Raisi's administration may be criticized, although the national mourning following his unexpected death could moderate the intensity and tone of such attacks. Based on these theoretical insights regarding government-affiliated targeting, I propose the following hypothesis:

Hypothesis A (1): Government-affiliated candidates are the primary targets of negative messages.

Hypothesis A (2): The intensity of negative attacks against government-affiliated candidates will be lower in the 2024 election following Raisi's death compared to the 2021 election.

4.2.2 Competitive Positioning and Challenger Strategy

Another robust finding across electoral studies is the “competitive positioning” theory, which posits that front-runners are more likely to be attacked than candidates trailing in polls (Skaperdas & Grofman, 1995; Haynes & Rhine, 1998; Walter et al., 2014). This pattern emerges from the strategic logic that to win an election, candidates must diminish support for leading opponents. Empirical research strongly supports this theoretical expectation. Haynes and Rhine (1998) examined attack politics in the 1992 Democratic nomination race in the U.S. by analyzing coverage from three national newspapers, one national news program, and 19 state newspapers. Their findings provided statistically significant support for competitive positioning theory across various applications, including frontrunner and runner-up attack behaviors. Cross-national research by Valli and Nai (2020) reveals that the use of negative campaigning follows systematic patterns across electoral systems. Analyzing 84 elections in 71 countries, their study supports the competitive positioning theory: challengers, ideological outsiders, and right-wing candidates consistently display greater reliance on negativity than incumbents or centrists. These findings demonstrate that the strategic appeal of attack messaging transcends Western liberal democracies, applying across institutional and cultural boundaries. Recent work on coalition systems (Bailer & Ohmura, 2018) demonstrates that competitive positioning effects persist even in non-majoritarian contexts, though with distinctive patterns.

The literature consistently suggests that candidates trailing in the polls adopt negative tactics more frequently than front-runners (Theilmann & Wilhite, 1998; Fowler et al., 2021). This pattern reflects a strategic calculation: leading candidates have more to lose from potential backlash effects, while trailing candidates face fewer reputational risks. As Skaperdas and Grofman (1995, 53) explain, “Leading candidates typically avoid initiating attacks because they

risk their advantageous position and may trigger counter-attacks that erode their support.” This finding is further confirmed by Fowler et al. (2021), whose analysis of U.S. Senate and gubernatorial races from 2000 to 2018 shows that candidates trailing by more than five percentage points were significantly more likely to air negative advertisements than those leading by a similar margin.

When front-runners do initiate attacks, they often legitimize retaliatory responses that might otherwise appear unprovoked or excessive. Nai (2020) shows that candidates often engage in attack reciprocity, with negativity more likely against frontrunners and ideologically distant rivals. Taken together with evidence from multiparty campaigns that attacks commonly provoke counterattacks (Dolezal et al., 2016), these dynamics indicate how strategic aggression can escalate—especially when competition is tight or ideological distance is high. While Nai’s study establishes reciprocity and targeting patterns, it does not itself model multi-step escalation over time.

Iran’s electoral context provides a valuable opportunity to examine these strategic considerations within a hybrid regime. The 2021 election featured Ebrahim Raisi as the clear front-runner from early in the campaign, creating strong incentives for challenging candidates like Abdolnaser Hemmati to employ negative tactics to reduce his substantial lead. By contrast, the 2024 election initially featured a more uncertain competitive landscape following President Raisi’s unexpected death, potentially creating different strategic imperatives for negativity deployment. According to competitive positioning theory, we should expect the candidate running second in polls to initiate the most attacks in both elections. This strategic choice would reflect the challenger’s need to diminish support for the frontrunner while distinguishing themselves from other alternatives. However, the extraordinary circumstances of the 2024

election, including the national mourning period and compressed timeframe, may moderate this tendency compared to 2021. Based on these theoretical insights regarding competitive positioning, I propose the following hypothesis:

Hypothesis B: The challenger (candidate running second in polls) is more likely to use the most negative messages.

4.2.3 Third-Place Targeting

Extending the competitive positioning theory, candidates in less competitive positions (particularly those in third place or lower) typically receive significantly less negative attention than frontrunners or strong challengers. This pattern reflects strategic resource allocation—candidates focus their limited campaign resources on criticizing their most significant competitors rather than those who pose minimal electoral threat. Walter et al. (2014), in their analysis of ten Dutch parliamentary elections, find that larger parties are disproportionately targeted by negative campaigning—likely due to their prominence and perceived competitive threat. This strategic targeting reflects what Elmelund-Præstekær (2010) terms “electoral market competition,” where campaign resources are concentrated on actors who pose the greatest challenge, rather than evenly across all rivals. De Nooy and Kleinnijenhuis (2013) demonstrate that patterns of support and attack in campaign communication form dynamic networks, in which parties adjust their behaviour in response to prior interactions and coalition signalling rather than acting on ideology alone.

Iran’s electoral context provides a valuable opportunity to examine third-place targeting dynamics within a hybrid regime. The 2021 election featured several candidates beyond the frontrunners Raisi and Hemmati, including Mohsen Rezaei, who consistently placed third in pre-

election polls. Similarly, the 2024 first-round included multiple candidates beyond the leading contenders. The distinctive factional rather than party-based nature of Iranian politics potentially modifies these targeting calculations compared to Western systems. With multiple principlist candidates often competing for similar constituencies, strategic considerations might dictate focusing attacks on ideologically similar competitors rather than those presenting less immediate threat. As an extension of competitive positioning theory, candidates trailing significantly in polls should receive fewer attacks since they pose less immediate threat to leading candidates. From a strategic perspective, attacking these candidates provides limited potential benefit while still carrying risks of backlash effects. Based on these theoretical insights regarding the targeting of lower-ranked candidates, I propose the following hypothesis:

Hypothesis C: The candidates in third place in the polls are least likely to be attacked by others.

4.3 Factional Dynamics and Negative Campaigning

Beyond competitive positioning, another key determinant of attack behavior is the “ideological or issue proximity” theory, which posits that candidates focus negative attention on opponents who occupy similar ideological positions or address similar issues (Downs, 1957; Walter et al., 2014). This strategic logic reflects the competition for overlapping voter segments—candidates must differentiate themselves from ideologically similar opponents to secure their natural constituency. However, research reveals important contextual variations in how this principle operates. In U.S. presidential nomination campaigns, Ridout and Holland (2010) found that candidates often avoid attacking opponents who share their ideological base to preserve party unity for the general election. Their analysis of tracking data from the 2004 and

2008 presidential nomination campaigns revealed that timing significantly influences attack patterns, with early-stage campaigns featuring less intra-ideological attacking than later stages.

In multi-party systems, ideological proximity theory manifests in more complex ways than in two-party systems. Walter (2014), in her comparative study of Western European elections, demonstrates that larger parties are disproportionately targeted with negative campaigning due to their perceived competitive threat. However, her findings also indicate that ideologically proximate smaller parties—those drawing from similar voter pools—may be targeted as well, particularly when they present a credible challenge within the same ideological space. This reflects the principle of electoral market competition articulated by Elmelund-Præstekær (2010), whereby parties concentrate negative messaging on competitors fighting for similar constituencies rather than distributing attacks evenly.

At the same time, a distinct pattern is evident among ideologically extreme parties. Walter and van der Brug (2013), based on an empirical analysis of Dutch parliamentary election campaigns, show that extreme parties often focus their attacks on ideologically distant opponents, rather than on proximate competitors. This tendency is confirmed by Poljak and Walter (2024), who find that polarization intensifies cross-ideological attacks, particularly in cases where parties seek to sharpen distinctions and assert moral or policy-based contrast. Elmelund-Præstekær (2010), in his analysis of Danish election campaigns, supports this interpretation, showing that parties on the ideological fringes frequently target their opposite extremes, driven by deep policy disagreements and the strategic goal of affirming a distinct political identity.

Research by De Nooy and Kleinnijenhuis (2013) provides valuable nuance to these patterns. Their dynamic network analysis of campaign interactions in the Dutch elections

demonstrates that attacks and endorsements evolve within structured networks shaped by prior exchanges and coalition signalling. Parties adjust their communicative strategies in ways that reflect their competitive positions and potential governing alliances, producing patterned forms of negative and positive campaigning that link immediate electoral tactics to longer-term coalition prospects. Applied to the Iranian context, these theoretical insights suggest unique expectations regarding negative campaigning patterns. Iran's political landscape features distinctive factional dynamics rather than party competition. As Tezcür (2012) explains, Iranian politics has evolved through shifting factional alignments that defy simple ideological categorization. While terms like "principlist" (conservative), "reformist," and "pragmatist" provide useful analytical categories, these groupings have fluid boundaries and internal divisions.

The 2021 presidential election featured multiple candidates associated with the principlist faction alongside a single reformist-supported candidate, creating an asymmetric competitive environment with distinctive strategic considerations. The 2024 election, occurring after Raisi's death, likely introduces additional complexities regarding factional coordination during an unexpected succession. Based on ideological proximity theory as developed in Western contexts, one might expect principlist candidates to attack each other to differentiate themselves within their shared ideological space. However, I propose that the strategic realities of Iran's elections might override this theoretical expectation. As Walter et al. (2014, 712) observe in their analysis of party competition more generally, "Strategic coordination frequently supersedes ideological competition when larger political goals are at stake." In the Iranian context, principlist candidates might coordinate their campaigns to maximize factional success rather than pursuing individual advantage, particularly when a clear factional frontrunner emerges. This coordination might be

even stronger in the 2024 election, where the unexpected succession context could intensify pressure for factional unity.

This factional coordination could reflect what Reuter and Gandhi (2011) term authoritarian power-sharing, where elite groups within non-democratic systems maintain cooperative relationships despite internal competition. Slater (2010) further explains similar patterns through his concept of authoritarian Leviathans, where ruling groups prioritize collective survival over individual advancement when facing potential threats from opposition forces. In Iran's hybrid system, these coordination mechanisms might operate through what Tezcür (2012) describes as elite networking and factional bargaining, potentially creating distinctive negative campaigning patterns that balance internal differentiation with external solidarity. Rather than attacking each other, principlist candidates might coordinate their campaign messaging to support their faction's leading candidate while focusing attacks on non-principlist alternatives. This strategic dynamic leads to my next hypothesis:

Hypothesis D: The number of negative attacks among principlists should be minimal.

4.4 Religious Norms and Overall Negativity Levels

Beyond standard campaign dynamics, Iran's political system features unique religious and cultural constraints on negative campaigning. The Supreme Leader has repeatedly discouraged negative campaigning in debates and campaign communications (Khamenei.ir, 2021). These pronouncements carry significant weight within Iran's political system, particularly for principlist candidates who closely align with the Supreme Leader's authority. Furthermore, Iranian political culture traditionally views excessive negative messaging with caution. Traditional Iranian political discourse emphasizes dignity (keramat) and respect (ehteram) even

while engaging in political competition. Boroujerdi and Rahimkhani (2018) observe that even during periods of intense factional competition, certain boundaries of civility typically remain preserved, particularly regarding personal attacks against candidates who have received approval from the Guardian Council. While religious and cultural constraints suggest limited negativity in Iranian campaigns, competing theoretical perspectives offer alternative predictions. Resource mobilization theory (McCarthy & Zald, 1977) suggests that when facing resource asymmetries, disadvantaged candidates increase negativity to gain visibility despite normative preferences for civility.

Signaling theory, originally developed by Spence (1973) in the context of labor markets, has since been widely applied to political behavior under conditions of asymmetric information. In restricted or authoritarian political environments, candidates or political actors may employ calibrated forms of criticism or negativity as strategic signals of independence, provided such behavior remains within tolerated boundaries. This aligns with the concept of costly signaling, where actors engage in behaviors that are potentially risky or costly to demonstrate credibility or differentiate themselves. While Spence (1973) focused on education as a signal of productivity, the broader logic of costly signaling has been used to explain political behavior in constrained systems. For example, Malesky and Schuler (2010), analyzing the Vietnamese National Assembly, find that some delegates engage in controlled criticism of the regime to signal responsiveness and build personal credibility with constituents. Although these behaviors occur within strict institutional limits, they serve as credible signals of agency and political value, demonstrating how even constrained political environments can permit limited, strategic dissent.

The Iranian electoral context presents particularly rich terrain for examining how religious and cultural norms shape negativity levels. The Supreme Leader has consistently

discouraged excessive negativity in campaign rhetoric, with Ayatollah Khamenei specifically warning candidates against “destroying rivals” before both the 2021 and 2024 elections. These admonitions carry significant normative weight, particularly for principlist candidates who emphasize loyalty to leadership. Additionally, Islamic ethical principles regarding appropriate speech (adab) create distinctive boundaries for acceptable criticism compared to secular Western systems. The concept of gheebat (backbiting) in Islamic ethics specifically discourages speaking negatively about others in their absence, potentially creating unique constraints on negative campaigning tactics. However, these religious constraints operate alongside strategic imperatives for differentiation that might encourage negativity despite normative preferences for civility. The tension between these competing pressures creates a distinctive environment for examining how cultural and religious factors moderate negative campaigning intensity.

These competing perspectives highlight theoretical tension between normative constraints and strategic imperatives. While religious norms discourage excessive criticism, competitive necessities create countervailing pressure toward negativity, particularly for candidates lacking institutional advantages. This tension likely varies between the 2021 election (conducted under normal circumstances) and the 2024 election (following Raisi’s death), with the latter context introducing additional normative constraints. Based on these distinctive religious and cultural factors, I propose the following hypothesis:

Hypothesis E: Candidates should have used fewer negative messages than positive ones, with this pattern more pronounced in the 2024 election.

4.5 Summary and Transition to Demand-Side Hypotheses

This chapter has developed five supply-side hypotheses regarding the strategic deployment of negative messaging in Iran's presidential elections. These hypotheses address fundamental questions about targeting patterns (H-A, H-C), strategic positioning (H-B), factional dynamics (H-D), and overall negativity levels (H-E) within Iran's distinctive hybrid regime context. Collectively, they create a framework for empirically examining how candidates navigate both universal campaign imperatives and context-specific constraints when deploying negative messages in presidential elections.

While these supply-side hypotheses focus on candidates' strategic calculations, they represent only half of the negative campaigning equation. Understanding how citizens process, evaluate, and respond to such negative messages is equally crucial for developing a comprehensive theory of negative campaigning in Iran's hybrid regime. The next chapter turns to this demand-side dimension, developing hypotheses regarding citizen responses to negative campaigning based on psychological mechanisms like negativity bias, selective exposure, and normative evaluations. By examining both the supply and demand dimensions of negative campaigning, we can develop a more complete understanding of how this communication strategy functions within Iran's unique political environment.

Chapter 5: Demand-Side Hypotheses: Voter Reception of Negative Campaigning

This chapter develops the theoretical framework and hypotheses for understanding how Iranian citizens process, evaluate, and respond to negative campaign messages—what can be termed the “demand side” of negative campaigning. While Chapter 4 focused on candidates’ strategic use of negative messaging, this chapter examines the complementary dimension of audience reception, exploring the psychological mechanisms and contextual factors that shape how voters engage with such content. Drawing on both universal psychological theories and Iran-specific cultural considerations, the chapter proposes a series of testable hypotheses regarding negativity bias, selective exposure, boomerang effects, ideological alignment, and gender differences in response patterns. These hypotheses address fundamental questions about whether Iranian citizens demonstrate the same psychological tendencies documented in Western contexts or exhibit distinctive patterns shaped by Iran’s unique religious, cultural, and institutional environment. The framework developed here recognizes that citizens are not passive recipients of campaign messages but rather active processors who filter, interpret, and respond to political information based on pre-existing attitudes, identities, and cognitive predispositions. By systematically investigating these audience-centered dynamics, this chapter complements the supply-side analysis to create a comprehensive theoretical foundation for understanding negative campaigning in Iran’s presidential elections.

5.1 Theoretical Framework for Demand-Side Analysis

While the previous chapter focused on how candidates strategically deploy negative messaging, this chapter examines the complementary “demand side” of negative campaigning—how voters process, evaluate, and respond to negative political information. Following Norris’s (2004) analytical framework for electoral studies, the “demand-side” refers to citizen-level

factors that shape political behavior, including psychological predispositions, sociological characteristics, and rational evaluations. In the context of negative campaigning, this encompasses how citizens receive, filter, process, and respond to negative messages based on their pre-existing attitudes, social identities, and cognitive tendencies. As Norris argues, understanding electoral phenomena requires examining both institutional supply and citizen demand as interrelated but distinct dimensions of political processes. This demand-side perspective recognizes that voters are not passive recipients of campaign messages but rather active processors who engage with political information in ways shaped by both universal psychological mechanisms and contextually specific factors. Understanding these psychological and social dynamics is essential for developing a comprehensive theory of negative campaigning in Iran's electoral environment.

This demand-side perspective recognizes that voters are not passive recipients of campaign messages but rather active processors who engage with political information in ways shaped by both universal psychological mechanisms and contextually specific factors. Research by Taber and Lodge (2006) on motivated skepticism demonstrates that individuals process political messages through affective and cognitive filters that bias them toward information consistent with their prior beliefs. This dynamic helps explain why negative campaign messages may have polarizing effects, strengthening existing attitudes rather than altering opinions. Similarly, Stroud (2010) shows that partisan selective exposure shapes how citizens encounter and evaluate political content, with many individuals gravitating toward information environments that reinforce their partisan identities. These patterns suggest that the effectiveness of negative campaigning depends not only on message content but also on how audiences select, interpret, and emotionally respond to political stimuli based on their predispositions.

5.1.1 Universal Psychological Mechanisms and Cultural Variation

Research across diverse contexts has identified several fundamental psychological mechanisms that influence how citizens process negative political information. These mechanisms operate at cognitive, emotional, and social levels, creating complex response patterns that campaigns must navigate to achieve their persuasive objectives. While some of these mechanisms appear to function similarly across cultural contexts, others demonstrate significant variation based on institutional arrangements, cultural values, and historical factors. Recent cross-cultural research by Soroka et al. (2019) and Fournier et al. (2020) confirms that certain psychological processes, such as negativity bias, operate across diverse political environments. Their analysis of responses to negative political information in 17 countries spanning diverse cultural and political systems showed consistent psychological attentional patterns, though with varying intensity across contexts. This suggests that while some psychological tendencies may represent universal human characteristics, their specific manifestations are shaped by cultural and institutional environments. For Iran's electoral context, this theoretical perspective suggests examining both universal psychological mechanisms and their culturally specific manifestations. Iran's distinctive religious, cultural, and institutional characteristics likely shape how universal psychological tendencies manifest in citizens' responses to negative campaigning. Understanding these interactions between universal mechanisms and cultural-institutional contexts is crucial for developing a comprehensive theory of negative campaigning in Iran's unique political environment. The following sections develop specific hypotheses about voter response patterns based on key psychological mechanisms

identified in previous research, while considering how Iran's specific context might shape these responses.

Iran's distinctive context shapes these psychological mechanisms in several important ways. The country's hybrid regime characteristics create a political environment where electoral competition occurs within defined boundaries, potentially influencing how citizens interpret and respond to criticism that respects versus challenges these parameters. Iran's strong religious dimensions introduce normative considerations absent in secular Western democracies, with Islamic ethical principles regarding appropriate speech potentially shaping evaluations of campaign negativity. The factional rather than party-based nature of Iran's political landscape creates distinctive identity-based filtering mechanisms that differ from the partisan selective exposure documented in Western democracies. Additionally, Iran's media environment—featuring state broadcasting control alongside emerging digital spaces—creates unique conditions for information dissemination and reception compared to either Western liberal media systems or fully controlled authoritarian environments. These distinctive characteristics make Iran a particularly valuable case for examining how universal psychological mechanisms interact with specific cultural, religious, and institutional factors to shape citizen responses to negative campaigning.

The demand-side hypotheses are organized around a theoretically coherent framework addressing three dimensions: (1) cognitive mechanisms (h-f, h-g) examining universal psychological responses to negativity; (2) identity-based filtering (h-h, h-i) exploring how pre-existing alignments shape message reception; and (3) socio-cultural moderators (h-l) investigating how gender norms specific to Iran's context may moderate response patterns. This framework was selected because these factors are (a) theoretically grounded in established

political psychology literature, (b) observable through digital behavioral data available in Twitter(X) interactions, and (c) contextually relevant to Iran's distinctive political and cultural environment. While personality traits or other psychological dispositions would offer additional explanatory power, they cannot be reliably measured through behavioral social media data without survey instruments.

The demand-side hypotheses developed in this chapter deliberately test mechanisms that are well-established in Western political psychology literature. This approach is methodologically intentional rather than theoretically naive. As scholars increasingly recognize the Western bias in political science research (Pepinsky 2019; Kurlantzick 2013), testing whether foundational psychological mechanisms operate similarly across diverse institutional contexts becomes essential for theory development. Iran's hybrid regime—combining competitive elections with authoritarian constraints, religious oversight with factional pluralism, and Islamic cultural norms with revolutionary political discourse—provides an ideal context for examining whether Western-derived theories represent universal patterns of human political psychology or context-dependent phenomena shaped by specific institutional arrangements. Rather than assuming universality or uniqueness, this research empirically investigates which psychological mechanisms transcend institutional boundaries and which require theoretical modification when applied beyond Western liberal democracies. The value of these hypotheses lies not in their novelty within Western contexts, but in their capacity to advance comparative political psychology by identifying the scope conditions under which established theories apply across diverse regime types.

5.2 Negativity Bias and Political Information Processing

The theoretical foundation for negative campaigning's effectiveness lies in the psychological principle of "negativity bias"—the tendency for negative information to exert disproportionate influence compared to equally extreme positive information. This psychological mechanism has been extensively documented across diverse contexts and represents perhaps the most fundamental explanation for why negative messaging persists despite potential risks and ethical concerns. Beginning with Nehemiah Jordan's (1965) pioneering work, extensive research demonstrates that humans generally pay more attention to, process more deeply, and remember longer negative information compared to positive information of equal intensity (Anderson, 1965; Hamilton & Zanna, 1972; Kahneman & Tversky, 1979; Kanouse & Hanson, 1972; Gilbert & Malone, 1995; Klein & O'Brien, 2016; Ohman et al., 2001). Kahneman (2011) explains this bias through evolutionary psychology, arguing that human and animal brains have evolved to prioritize negative information as a survival mechanism. This prioritization manifests as "loss aversion," whereby potential threats receive heightened attention and emotional response even when merely symbolic rather than actual dangers. As Meffert et al. (2006) observe, negativity bias "refers to the greater weight given to negative information relative to equally extreme and equally likely positive information in various judgement and information processing tasks." Rozin and Royzman (2001, 297) characterize negative information as "more salient, potent, dominant... and efficacious" than positive information across diverse contexts. This psychological tendency has clear evolutionary advantages—as Shoemaker (1996) explains, humans are "hardwired" to actively identify threats and respond more intensely to negativity as a survival mechanism. Recent neuroimaging research by Soroka et al. (2019) provides physiological evidence for this bias, showing that negative political information consistently generates stronger neural responses than positive information of equivalent significance.

This heightened attentiveness to negative information has direct implications for political communication. Negative news generally attracts greater attention than positive information (Zillmann et al., 2001, 2004), with negative political news particularly effective at capturing audience engagement (Lengauer et al., 2012). Klein and O'Brien's (2016) experimental study demonstrates that participants require significantly less negative information to form judgments compared to positive information, confirming negativity's cognitive efficiency advantage. Political campaign strategists recognize this attention advantage, understanding that capturing audience attention is the essential first step toward persuasion (Martin, 2004). Meffert et al. (2006) note that "voters will predominantly select, process, and recall negative information independent of the candidate," creating what Martin (2004) describes as "higher arousal and higher attention levels" compared to positive messaging. Recent research by Soroka et al. (2019) and Fournier et al. (2020) confirms negativity bias's cross-cultural persistence, finding consistent psychological responses to negative political information across 17 countries spanning diverse cultural and political systems. This suggests that negativity bias represents a fundamental psychological mechanism rather than a culturally specific phenomenon.

In Iran's specific cultural context, negativity bias likely operates through distinctive channels shaped by the country's political and religious traditions. Studies of Iranian political communication suggest that factional alignment significantly influences how messages are evaluated, with citizens' political orientations shaping their reception and interpretation of media content across Iran's political landscape. This pattern aligns with what Rajaei (2007) identifies as the "justice orientation" in Iranian political discourse—a cultural emphasis on fairness and equity that makes economic critique particularly resonant. Based on these theoretical insights

and empirical findings regarding negativity bias, I propose the following hypothesis for the Iranian context:

Hypothesis F: People have more interactions and engagement with negative messages than positive ones (Negativity Bias).

5.3 The Boomerang Effect: When Negative Campaigning Backfires

Despite the attention advantages that negativity provides, negative campaigning sometimes produces unintended consequences that harm the attacking candidate rather than the target. Political communication research has developed several theoretical frameworks explaining these “boomerang” or “backlash” effects. The “source credibility” model, developed from Hovland and Weiss’s (1951) persuasion research, suggests backlash occurs when message sources lack perceived expertise or trustworthiness. Applied to negative campaigning, this framework explains why attacks from candidates with questionable reputations often produce stronger backlash than identical content from more credible sources (Sigelman & Shiraev, 2002). For example, when a candidate with past ethical controversies attacks an opponent’s integrity, voters may perceive this as hypocritical, generating negative reactions toward the attacker rather than the target.

The “norm violation” perspective, advanced by Mutz and Reeves (2005), argues that backlash reflects violations of civility norms. This model suggests that negative messages transgressing accepted discourse boundaries trigger social disapproval regardless of content accuracy. For instance, attacks perceived as excessively personal or inappropriate may violate social norms regarding acceptable political discourse, creating negative impressions of the attacker rather than the target. The normative standards applied, however, vary significantly

across political cultures, a particularly relevant consideration when examining negative campaigning in non-Western contexts with different discursive traditions.

The “psychological reactance” framework draws on Brehm’s (1966) theory that perceived threats to freedom trigger oppositional responses. In campaign contexts, reactance theory suggests that overly aggressive attacks appear manipulative, prompting resistance rather than persuasion (Brehm & Brehm, 1981). For example, when voters perceive a campaign advertisement as attempting to manipulate their views through excessive negativity, they may reject both the message and its source as a means of asserting autonomy. This reaction may be particularly pronounced in political cultures where religious or traditional values emphasize individual dignity and respect. These competing yet complementary models demonstrate the multi-causal nature of backlash effects, suggesting that negative campaigning’s consequences reflect complex interactions between message characteristics, source factors, normative contexts, and psychological processes. This theoretical complexity requires careful consideration when examining negative campaigning across different political systems and cultural environments.

Garramone’s (1984, 157) pioneering research identified “boomerang” effects where attacks generate “more negative feelings toward the sponsor, rather than toward the target.” These effects typically occur when voters perceive attacks as unfair, unjustified, or excessively personal. Garramone (1984) introduced the concept of the “victim syndrome,” describing how unfair or excessive attacks can generate sympathy for the target and backlash against the attacker. Recent research by Nai and Maier (2023) reinforces this insight, finding that such backlash effects are particularly pronounced when personal attacks are perceived to violate ethical boundaries, especially in highly moralized or polarized electoral contexts. Walter and Vliegenthart (2010) demonstrated that issue-based negative campaigning—especially when

focused on substantive policy criticism—can enhance political knowledge and stimulate democratic engagement. Their content analysis of Dutch election campaigns showed that such forms of negativity contribute to meaningful debate rather than cynicism, particularly when contrasted with personal attacks.

In Iran’s specific context, religious and cultural norms create distinctive parameters for acceptable criticism. Boroujerdi and Rahimkhani (2018) document how Islamic ethical principles regarding speech establish normative boundaries that shape political discourse. These religious constraints might intensify backlash effects when candidates cross perceived ethical boundaries, particularly regarding personal attacks. While there is limited research specifically examining Iranian social media reactions to different forms of political attacks, some research on Iranian political communication suggests heightened sensitivity to personal attacks. Iranian political discourse demonstrates distinctive patterns of rejection when campaign rhetoric violates traditional norms of dignified speech. These differential effects illustrate what Mattes and Redlawsk (2014) call the “negativity dilemma”—while negative messages draw more attention than positive ones, certain forms of negativity risk alienating voters through backlash. Issue-focused attacks tend to be viewed as more informative and acceptable to the electorate (Geer, 2006), whereas personal/character attacks are more likely to provoke negative emotional responses, backfire on the sender, and undermine trust in the political system (Carraro et al., 2010; Mutz & Reeves, 2005). Based on these insights regarding differential responses to various forms of negative campaigning, I propose the following hypothesis for the Iranian context:

Hypothesis G: Users react negatively to personal negative messages. (Boomerang Effect)

5.4 Selective Exposure and Political Identity

Beyond general negativity bias, extensive research demonstrates that individuals' reception of political messages is significantly shaped by pre-existing attitudes and preferences. This selective processing creates complex patterns in how citizens respond to negative campaign information. Festinger's (1957) cognitive dissonance theory established that individuals prefer information that aligns with their existing beliefs while avoiding challenges to those beliefs. D'Alessio and Allen's (2002) meta-analysis of post-decision selective exposure in controlled settings confirms this fundamental tendency. Recent research on online political information consumption further demonstrates that people consistently favor "attitude-consistent" messages (Knobloch-Westerwick, 2015; Garrett et al., 2016). While scholars continue to debate whether this confirmation bias contributes to political polarization (Stroud, 2010; Iyengar et al., 2012) and whether the preference for congenial information equals active avoidance of uncongenial content (Garrett, 2009; Bakshy et al., 2015), the evidence consistently shows that individuals approach political messages with confirmation bias. Selective exposure theory further suggests that media consumption occurs predominantly through active selection rather than passive reception (Knobloch-Westerwick, 2015). Individuals choose content that aligns with their preferences and values, effectively self-selecting their media environment to produce desired cognitive and emotional effects. Recent research by Dvir-Gvirsman et al. (2018) confirms that these selection patterns have intensified in high-choice media environments, with individuals increasingly able to construct personalized information ecosystems that reinforce existing beliefs.

When combining confirmation bias and selective exposure theories with negativity bias, a more complex theoretical expectation emerges regarding political information processing. While

negativity bias suggests general attentiveness to negative information, selective exposure and confirmation bias suggest this attentiveness will be moderated by existing political preferences. I term this interaction “negative selective exposure”—the tendency to selectively process negative information based on its alignment with pre-existing preferences. As Meffert et al. (2006) explain, individuals not only selectively attend to political information but actively transform “raw” political messages based on their “motivations and pre-existing preferences.” While negativity bias attracts attention to negative information generally, confirmation bias leads individuals to “convert [any] incongruent negative information into support for a [their] pre-existing preference” (2006). Recent research by Taber and Lodge (2016) and Tappin et al. (2020) confirms this interaction, finding that individuals process negative information about preferred candidates differently than identical information about opposed candidates.

In Iran’s factional political environment, selective exposure likely operates through distinctive patterns shaped by the country’s unique political organization. Rather than the party-based selectivity documented in Western democracies (Stroud, 2010), Iranian citizens likely demonstrate patterns of selective information consumption, where information is filtered and processed according to pre-existing factional orientations rather than evaluated independently. This factional selectivity creates what Michaelsen (2018) describes as “parallel information ecosystems” where different political constituencies encounter fundamentally different versions of reality. These parallel ecosystems operate particularly powerfully on social media platforms where algorithmic curation and user choice combine to create highly personalized information environments.

Recent research on digital information environments reveals that selective exposure operates differently online than in traditional media contexts. Contrary to strong echo chamber

claims, evidence (Barberá et al., 2015) demonstrates that Twitter(X) users encounter more cross-cutting content than traditional media consumers, though algorithmic and behavioral factors still produce ideological clustering. Research on social media exposure patterns (Fletcher & Nielsen, 2018) highlights how platform architectures shape selective exposure differently across national contexts, with important implications for understanding information consumption in restricted digital environments. Contemporary research on digital political behavior (Barberá et al., 2021) demonstrates that ideology structures online engagement patterns, though institutional contexts moderate these relationships in ways that remain underexplored in hybrid regimes.

Based on these theoretical insights regarding the interaction between negativity bias and confirmation bias, I propose the following hypothesis for the Iranian context:

Hypothesis H: Individuals tend to ignore any negativity against their pre-existing political attitudes and engage more with negative political messages aligned with their political views (Negative Selective Exposure).

While selective exposure is well-documented in Western democracies characterized by stable party systems and diverse media landscapes, Iran's political environment differs in ways that make the manifestation of this mechanism theoretically uncertain. First, Iran's factional politics operates without formalized party structures, potentially producing more fluid and less predictable patterns of identity-based information seeking compared to contexts with stable partisan attachments. Second, state dominance of traditional media and periodic restrictions on social media platforms may constrain citizens' ability to curate ideologically congenial information environments, potentially forcing exposure to cross-cutting information in ways

uncommon in Western democracies. Third, the Guardian Council's candidate vetting process restricts ideological diversity among presidential contenders, potentially reducing the distinctiveness that motivates selective exposure in more pluralistic systems. Fourth, widespread use of VPNs and transnational media access among Iranian Twitter(X) users may create distinctive patterns of information consumption that diverge from those observed in contexts with unrestricted media access. The question is therefore not whether selective exposure occurs, but HOW it manifests under Iran's unique combination of factional politics, state media control, and digitally-mediated contestation. Testing this hypothesis illuminates whether fundamental psychological mechanisms of motivated reasoning operate similarly across radically different institutional environments.

5.5 Ideology Alignment and Message Reception

Research has increasingly demonstrated that citizens' perceptions of negativity vary significantly based on their political worldview, creating complex patterns in how negative campaigning is received across different voter segments. Lipsitz and Geer (2017) highlight a critical dimension of negative campaign research—the significant variability in citizens' perceptions of negativity based on their political worldview. Their analysis of 17,400 Americans viewing 2012 presidential campaign advertisements revealed that citizens interpret political messages dramatically differently depending on their political preferences. Messages that Republicans perceive as highly negative might appear relatively positive to Democrats, with independents typically perceiving intermediate negativity levels.

This perceptual variation reflects what Budesheim et al. (1996) demonstrated in experimental studies—ideological affiliation shapes information processing regarding negative messages. Their research shows that individuals evaluate negative messages differently when

they come from sources sharing their political orientation versus opposing sources. When the message source belongs to an individual's political in-group, they carefully evaluate message quality and justification rather than dismissing it outright. Recent research by Druckman et al. (2019) extends this understanding, demonstrating that partisan identity not only shapes message reception but increasingly determines factual belief acceptance, with individuals more likely to accept factual claims from co-partisan sources even when objectively questionable.

In Iran's political context, ideological orientation likely operates through factional rather than partisan identities. As Tezcür (2012) documents, Iranian citizens typically align with different factional tendencies that have evolved over time. These factional identities, while less institutionalized than Western partisan affiliations, nonetheless function as perceptual filters shaping how citizens interpret political information. Studies of Iranian political communication suggest that factional alignment influences how messages are evaluated. The factional sensibilities shape media reception in Iran's political landscape, with citizens evaluating identical content differently based on its alignment with their preferred political tendency. These insights regarding ideological influences on message reception lead to my next hypothesis:

Hypothesis I: If a negative message is aligned with individuals' political ideology, they will engage positively with it.

While alignment between message content and recipient ideology represents one of the most intuitive predictions in political communication research, Iran's distinctive ideological landscape creates theoretical ambiguity about how this mechanism operates. First, the Guardian Council's vetting ensures all candidates accept the foundational principles of velayat-e faqih

(guardianship of the jurist), potentially compressing ideological variation to a degree that undermines alignment effects documented in more pluralistic systems. Second, Iran's factional divisions (principlist versus reformist) represent complex bundles of positions on governance style, international relations, and social policy rather than coherent left-right ideologies, potentially producing weaker or more inconsistent alignment effects than observed in Western party systems. Third, the bounded nature of permissible discourse may create conditions where citizens respond to stylistic or symbolic differences rather than substantive ideological distinctions, fundamentally altering what "alignment" means. Fourth, the prevalence of strategic voting in Iran's hybrid system—where citizens often support candidates based on electability rather than preference—may disrupt the ideology-reception relationship documented in more straightforward democratic contexts. The critical question is therefore not whether aligned messages generate more positive responses, but whether Iran's compressed ideological spectrum and hybrid regime dynamics fundamentally reshape how ideology structures political information processing. This hypothesis thus tests the boundaries of established theory by examining whether ideology alignment effects persist even when institutional constraints severely limit ideological variation among candidates.

5.6 Gender Differences in Response to Negativity

Research suggests that gender plays a significant role in shaping responses to negative political messages, with men and women potentially demonstrating different patterns of engagement with campaign criticism. Krupnikov and Bauer's (2014) experimental analysis found that female candidates face stronger backlash effects than male candidates when employing negative tactics. This gender-based response asymmetry extends to message reception as well as candidate evaluation. Kaid and Holtz-Bacha's cross-national study found that women

consistently demonstrate stronger emotional responses to political broadcasts than men, with particularly pronounced gender differences in the United States compared to other countries (2006). Kern and Just (1997, 108) specifically found that “women were more responsive than men to negative attack messages, in particular, they were more likely to blame the author rather than the object of the attack.” These gender differences likely reflect socialized behavioral norms—passivity receives positive reinforcement among females while aggression receives encouragement among males (Ashmore & Del Boca, 1979; Owen & Dennis, 1988). Recent research by Cassese and Holman (2018) confirms these patterns while adding important nuance, finding that women respond particularly negatively to gendered attacks and uncivil messaging while demonstrating less aversion to policy-based criticism.

In Iran’s cultural context, gender may play an even more significant role in shaping responses to negative campaigning given the country’s distinctive gender socialization patterns. Tohidi (2016) documents how Iranian women and men demonstrate significantly different patterns of political media consumption, with gender-differentiated approaches to political conflict and negativity. Barlow and Akbarzadeh (2006) argue that these gendered response patterns reflect distinctive communicative norms, where women face stronger expectations regarding civility and restraint in public discourse. These gendered expectations potentially create heightened sensitivity to violations of communicative norms, particularly regarding personal attacks that violate culturally prescribed boundaries of acceptable discourse. Based on these gender-related insights, I propose my final hypothesis:

Hypothesis L: Women users will have more negative engagement with negative political messages than men.

While gender differences in response to negative campaigning have been documented in Western democracies, Iran's distinctive gender regime creates conditions that make simple extrapolation of these findings theoretically problematic. First, Iran's legal and social structures enforce gender segregation in many public domains while simultaneously requiring women's participation in formal politics to demonstrate the Islamic Republic's representative character, creating contradictory pressures that may shape political communication patterns in unique ways. Second, Iranian women's political engagement occurs within cultural frameworks that emphasize both Islamic modesty norms and revolutionary participation, potentially producing response patterns to negativity that differ from those observed in secular Western contexts. Third, the demographics of Iranian social media users skew heavily male (approximately 76% in our dataset), suggesting that women's online political participation may represent a more self-selected and potentially distinctive subpopulation than in contexts with more gender-balanced digital participation. Fourth, Iran's contemporary political discourse features ongoing contestation over women's rights and social freedoms, potentially heightening women's sensitivity to political negativity in ways specific to this context. The question is therefore not simply whether women respond differently to negative campaigning, but whether Iran's distinctive combination of Islamic cultural norms, revolutionary political culture, and gendered social structures produces patterns that affirm, contradict, or fundamentally reconceptualize gender differences observed in Western democracies. Testing this hypothesis in Iran thus contributes to decentering Western-centric assumptions about gender and political communication.

5.7 Concluding Remarks

This chapter has developed five demand-side hypotheses regarding how Iranian citizens process, evaluate, and respond to negative campaign messages in presidential elections. These hypotheses address fundamental psychological mechanisms that shape audience reception of political communication, including negativity bias (Hypothesis F), boomerang effects (Hypothesis G), negative selective exposure (Hypothesis H), ideology alignment (Hypothesis I), and gender differences (Hypothesis L). Collectively, they create a framework for empirically examining whether Iranian citizens demonstrate the same psychological tendencies documented in Western contexts or exhibit distinctive patterns shaped by Iran's unique religious, cultural, and institutional environment.

These demand-side hypotheses complement the supply-side hypotheses developed in Chapter 4, creating a comprehensive theoretical framework for understanding negative campaigning in Iran's presidential elections. While the supply-side analysis focuses on candidates' strategic calculations when deploying negative messages, the demand-side perspective examines how citizens actively filter, interpret, and respond to such content based on their pre-existing attitudes, identities, and cognitive predispositions. Together, these perspectives capture the dynamic interplay between message production and reception that characterizes political communication in electoral contexts.

The theoretical framework developed in these two chapters generates testable predictions about both the strategic deployment of negative messaging by candidates and the psychological processing of such content by citizens. Testing these hypotheses requires careful methodological design that can capture both universal patterns and contextual variations across Iran's 2021 and 2024 presidential elections. The next chapter turns to this methodological challenge, outlining a research design that combines computational analysis of large-scale social media data with

contextual interpretation grounded in Iran's specific political environment. This mixed-methods approach enables systematic investigation of how negative campaigning functions within a hybrid regime characterized by religious oversight, factional competition, and bounded contestation.

Chapter 6: Research Methodology

6.1 Research Design

I employ a quantitative research design to examine negative campaigning in Iran's presidential elections, focusing specifically on the 2021 election and both rounds of the 2024 election. I adopt a data-driven approach, utilizing computational methods and statistical analysis to examine patterns of negativity in political communication. This approach allows for systematic examination of large volumes of social media data, enabling identification of patterns that might not be apparent through qualitative methods alone. By collecting and analyzing Twitter(X) data from political users, presidential candidates, and public responses, I provide empirical evidence about how negative campaigning functions in Iran's distinctive electoral environment. The comparative dimension, examining both the 2021 and 2024 presidential elections, provides additional analytical value. The 2021 election occurred under relatively normal circumstances, while the 2024 election took place following the unexpected death of incumbent President Ebrahim Raisi, necessitating an unplanned electoral contest. These natural settings enable exploration of how different electoral contexts shape negative campaigning strategies and their reception.

6.2 Comparative Research Design and Contextual Variation

My research design leverages natural settings provided by the 2021 and 2024 Iranian presidential elections to examine how contextual factors moderate the psychological mechanisms of negative campaigning reception. The 2021 election occurred under relatively normal circumstances according to Iran's constitutional schedule, while the 2024 election took place following the unexpected death of President Raisi in a helicopter crash. This contextual difference likely influences how candidates deploy negative messages and how citizens process such information across these two electoral cycles. Cross-cultural psychology has identified significant differences in negativity sensitivity between individualist and collectivist societies (Kitayama et al., 2006). Collectivist cultures typically demonstrate greater concern with social harmony and face-saving, potentially intensifying negative responses to political attacks perceived as threatening group cohesion or personal dignity. Media system characteristics—including regulatory frameworks, ownership structures, and journalistic cultures—substantially influence opportunities for selective engagement with political information (Hallin & Mancini, 2004). In polarized pluralist systems with party-aligned media, selective exposure operates primarily through outlet selection (Goldman & Mutz, 2011).

These institutional variations are particularly relevant for understanding political communication in hybrid regimes like Iran, which often feature distinctive media system characteristics combining elements of state control with partial market liberalization. As Stockmann and Gallagher (2011) demonstrated in their analysis of Chinese media consumption, selective exposure operates differently in controlled information environments—often through subtle interpretation differences rather than source selection. The national mourning period following Raisi's death potentially creates a distinctive emotional environment that shapes responses to negative messaging in the 2024 election. Additionally, the compressed timeline of

the 2024 election—with just 35 days between Raisi’s death and the first-round vote—likely creates different information processing dynamics compared to the more extended 2021 campaign. These contextual differences enable investigation of which psychological mechanisms represent relatively stable processes versus those that demonstrate significant contextual sensitivity.

While media system characteristics—including regulatory frameworks, ownership structures, and journalistic cultures—remained largely consistent between elections, the different electoral circumstances potentially created distinctive dynamics for negative campaigning. The 2021 field was heavily dominated by principlist candidates (5 of 7 approved candidates), with limited reformist representation through moderate technocrat Hemmati. This created a fragmented principlist field competing for similar constituencies alongside minimal reformist alternatives. The 2024 field maintained principlist dominance (5 of 6 approved candidates) but featured a more prominent reformist presence through Pezeshkian, whose parliamentary credentials and physician background provided stronger reformist representation than was available in 2021. By examining how citizen responses vary between these two distinct electoral contexts, I can develop more nuanced understanding of the psychological foundations of negative campaigning reception and determine which aspects represent universal patterns versus context-specific adaptations. This comparative approach informs my data collection strategy, which captures both elections through consistent methodological approaches to enable direct comparison while remaining sensitive to their unique characteristics.

6.3 Data Collection

I utilize Twitter(X) as the primary data source for examining political communication during Iran's presidential elections. Despite official access restrictions in Iran, Twitter(X) remains an important platform for political discourse among elites and politically engaged citizens. I collected three distinct datasets:

The Political Users Dataset (2021) includes 5,100 tweets posted by 47 political users (including presidential candidates) from May 10, 2021, to June 24, 2021. The term "political users" refers to politically influential individuals in Iran's political sphere, including not only the candidates themselves but also campaign managers, political advisors, party officials, journalists, and political commentators who actively engage in election discourse on Twitter(X). I selected these users based on their political prominence, level of engagement in election discussions, and follower count. Of these tweets, 1,447 were identified as negative tweets, with 507 involving personal attacks and 894 involving political attacks. Additionally, 1,273 tweets in this dataset were posted by candidates themselves.

The Political Users Dataset (2024, First Round) includes 2,519 tweets posted by 38 political users (including presidential candidates) from May 31 to July 6, 2024 (one week after the end of the first round). This dataset contained 975 negative tweets, with 372 involving personal attacks and 634 involving political attacks. Candidates posted 1,014 of these tweets.

The Political Users Dataset (2024, Second Round) includes 2,713 tweets posted by 36 political users (including the two final-round presidential candidates) from May 31 to July 13, 2024 (one week after the end of the second round). This dataset contained 949 negative tweets, with 361 involving personal attacks and 612 involving political attacks. The two candidates posted 701 of these tweets.

For each election period, I collected a corresponding dataset of replies to candidates' tweets. For the 2021 election, this included 124,739 replies posted by 31,429 users. For the first round of the 2024 election, I collected 117,695 replies from 32,899 users. For the second round, I analyzed 84,828 replies from 26,455 users.

I collected the Twitter(X) data using Twitter(X)'s API to gather tweets from specified users, along with associated metadata including user information and engagement metrics. I selected political users based on three criteria: political relevance (individuals who play significant roles in Iran's political sphere), active engagement (regular participation in election-related discussions), and audience reach (substantial follower counts indicating influence).

For each dataset, I undertook several preprocessing steps to prepare the data for analysis. I classified each tweet as either containing negativity (1) or not (0) using a deep learning model based on ParsBert. ParsBert is a Bidirectional Encoder Representations from Transformers (BERT) model that has been specifically trained on Persian text. Unlike general language models, ParsBert has been fine-tuned to understand the nuances, cultural references, and linguistic patterns specific to Persian language, making it particularly effective for analyzing Persian political discourse. This model analyzed the semantic content of tweets to identify negative messaging, criticism, attacks, and other forms of negative political communication.

I further classified negative tweets as containing character attacks, political attacks, or both, using specialized models trained on manually labeled data. Character attacks refer to criticism targeting personal attributes, integrity, or competence of candidates, while political attacks focus on policy positions, governance record, or ideological orientation.

I classified each tweet and reply according to sentiment (negative, neutral, or positive) using a Long Short-Term Memory (LSTM) model specifically designed for Persian text. LSTM is a type of recurrent neural network capable of learning long-term dependencies in text, making it particularly effective for sentiment analysis that requires understanding context and emotional tone.

For users in the replies dataset, I inferred gender using the M3 model, a deep learning approach for demographic inference. This model analyzes various user attributes, including profile information, communication patterns, and linguistic markers to estimate gender with reasonable accuracy.

Each tweet and reply collected for this study was analyzed to determine both its emotional tone and the demographic characteristics of the users who produced it. To ensure methodological rigor, a combination of deep learning models specifically optimized for Persian-language data and multilingual user inference was employed. All textual content was classified into one of three sentiment categories—negative, neutral, or positive—using a Long Short-Term Memory (LSTM) neural network model trained on Persian-language corpora. The LSTM architecture, a type of recurrent neural network (RNN), is designed to capture long-term dependencies in sequential data, allowing it to account for contextual nuances such as negations, sarcasm, and idiomatic expressions. This feature makes LSTM particularly effective for sentiment analysis in Persian, where meaning is often context-dependent and heavily influenced by word order and morphological complexity. The model generated probabilistic sentiment scores for each tweet, which were then categorized according to the dominant sentiment polarity (*See: Hochreiter & Schmidhuber, 1997*).

For users in the replies dataset, gender was inferred using the M3 model—a multimodal, multilingual, and multi-attribute deep learning framework developed for demographic inference on social media. The M3 model integrates multiple input signals, including profile metadata (e.g., username and display name), linguistic patterns, and interaction behavior to estimate demographic attributes with high accuracy. By combining textual and non-textual cues, the model allows for scalable demographic classification without requiring self-reported information. This approach enables consistent gender estimation across the dataset while minimizing bias associated with manual or name-based coding (*See: Wang et al., 2019*).

Together, these two analytic components—sentiment classification and demographic inference—enabled a multi-layered analysis of online political communication, capturing both the emotional tone of discourse and the social characteristics of participants. This methodological integration allowed for robust testing of hypotheses related to negativity bias, ideological alignment, and gender differences in online engagement during the 2021 and 2024 Iranian presidential elections.

For the 2021 election data, I estimated political orientation of users using Correspondence Analysis based on following patterns. This approach works by analyzing which political figures a user follows on Twitter(X) and using those patterns to position the user on a political spectrum. For example, users who predominantly follow reformist political figures are likely to have reformist leanings themselves. The model analyzes these following patterns and assigns each user a position on a continuous ideological scale ranging from -3 (strongly reformist) to +3 (strongly principlist/conservative). Due to API limitations imposed after (X)Twitter(X)'s ownership change, I could not perform this analysis for the 2024 datasets.

I structured the analysis into three distinct scenarios to account for the different electoral contexts. The 2021 Election Analysis covers the presidential election conducted in a single round, examining data from the registration day (May 10, 2021) until one week after the election (June 24, 2021). The 2024 Election, First Round Analysis examines the first round of the 2024 election, considering all six candidates who competed. The time period spans from registration day (May 31, 2024) until one week after the completion of the first round (July 6, 2024). The 2024 Election, Second Round Analysis focuses on the second round of the 2024 election, examining only the two candidates who advanced to this round. The time period spans from registration day (May 31, 2024) until one week after the completion of the second round (July 13, 2024).

6.4 Variable Definition and Measurement

This research employs computational text analysis methods that reflect recent advances in automated content analysis. While early studies of negative campaigning relied on labor-intensive manual coding of limited samples, contemporary computational approaches enable analysis of complete campaign communications at scale (Proksch et al., 2019; Rudkowsky et al., 2018). However, as recent cross-national research emphasizes (Nai, 2020; Nai & Maier, 2022), computational measurement must be adapted to specific linguistic and cultural contexts rather than directly transplanting methods developed for English-language content in Western democracies. Recent work demonstrates that automated sentiment analysis tools exhibit strong language bias, having been developed and validated predominantly with English-language data (Mohammad, 2016; Haselmayer et al., 2017), with performance degrading substantially when applied to other languages without careful adaptation.

My approach addresses this challenge through Persian-specific model training that captures culturally and linguistically distinctive expressions of negativity. Recent methodological work (King et al., 2017) demonstrates that computational approaches to analyzing political communication in authoritarian contexts require particular attention to strategic manipulation and state intervention, considerations that inform our analytical approach. The development of my ParsBERT-based models represents efforts to extend computational text analysis infrastructure beyond its original English-language context, though significant methodological barriers remain for studying negative campaigning in non-Western languages (van Atteveldt et al., 2021).

I employ a comprehensive set of variables to test the hypotheses regarding negative campaigning in Iranian presidential elections. These variables capture the characteristics of tweet content, including the central dependent variable of negativity (whether a tweet contains negative messaging), types of attacks (character or political), and various structural elements such as length, hashtags, and mentions.

I measured the most important content variable—negativity—using a specialized deep learning model based on ParsBert. I trained this model on a manually labeled dataset of Persian political tweets where human coders had identified negative content. The model achieves a macro F1-score of 70%, which indicates good performance in accurately classifying tweets as negative or non-negative. In practice, this means that given 100 tweets, the model correctly identifies approximately 70 tweets as either containing or not containing negativity.

Similarly, I measured character attacks and political attacks using specialized classification models. The character attack detection model has a macro F1-score of 69%, while the political attack detection model achieves 66%. These slightly lower scores reflect the greater

complexity in distinguishing between different types of negative content compared to simply identifying negativity in general.

I measured additional content variables such as tweet length, hashtag count, mention count, and URL count through direct counting of these elements in each tweet. I identified person names and organization names using named entity recognition, a computational technique that identifies and classifies named entities in text into predefined categories.

User-related variables describe the characteristics of Twitter(X) users, including gender, political orientation, follower counts, and account age. I determined gender using the M3 model (Multimodal, Multilayer, and Multidemographic), a deep learning approach that analyzes profile information, linguistic patterns, and interaction behaviors to infer demographic attributes. This model has been shown to achieve approximately 85% accuracy in gender classification across diverse Twitter(X) populations.

I measured political orientation on a continuous scale ranging from -3 (strongly reformist) to +3 (strongly principlist/conservative) using Correspondence Analysis of following patterns. This approach works by first identifying key political figures clearly associated with various political factions in Iran. Then, for each user, the model analyzes which of these political figures they follow and calculates a weighted average position based on these following patterns. For example, a user who follows predominantly reformist figures would be assigned a negative score, while one following mostly principlist figures would receive a positive score.

For analysis purposes, I also classified users into binary categories (Reformist or Principlist) based on their continuous scores, with users scoring between 0.5 and 1.5 classified as conservatives/principlists and those scoring between -0.25 and -0.75 classified as reformists.

This binary classification facilitates certain analyses requiring categorical rather than continuous variables. I obtained account metrics such as follower count, following count, account age, and total tweet count directly from the Twitter(X) API.

Engagement variables measure user interactions with tweets, including likes, retweets, and sentiment of replies. These variables serve as key outcome measures for assessing the effectiveness and reception of negative messaging strategies. I obtained like count and retweet count directly from the Twitter(X) API. I measured sentiment of replies using an LSTM model trained specifically for Persian sentiment analysis. The model classifies each reply into one of three categories: negative (0), neutral (1), or positive (2). This sentiment classification achieves approximately 75% accuracy when compared to human coding.

Campaign-related variables identify the political positioning of users and tweets, including candidate status, factional affiliations, and targeting patterns. I determined binary variables such as “is_candidate” (whether the tweet author is a presidential candidate), “is_incumbent” (whether the author is associated with the current government), and “is_principalist” (whether the author is aligned with the principalist faction) through manual classification based on public information about each user’s political position. I determined targeting variables such as “has_incumbent_target” and “has_principalist_target” through content analysis of tweets. This analysis involved both automated entity recognition to identify which individuals or groups were mentioned in the tweet and manual coding to determine whether these mentions constituted targets of criticism.

Temporal variables capture when tweets were posted, including time of day, weekday/weekend distinctions, and chronological position in the campaign timeline. I derived all temporal variables from tweet timestamps obtained through the Twitter(X) API. I calculated

“Tweet_age” as the number of days between the tweet’s posting date and the end of the data collection period. I created binary variables such as “tweet_created_in_weekend,” “tweet_created_in_office_time,” and “tweet_created_at_night” by applying appropriate time filters to the timestamp data.

Table 6.1: Operationalization of Key Variables

Variable Category	Variable Name	Definition	Measurement	Source
Content Variables	Negativity	Whether a tweet contains criticism of opponents	Binary (0=Not Negative, 1=Negative)	ParsBert model (70% accuracy)
	Character Attack	Criticism targeting personal attributes	Binary (0=No, 1=Yes)	Specialized model (69% accuracy)
	Political Attack	Criticism targeting policy positions	Binary (0=No, 1=Yes)	Specialized model (66% accuracy)
	Tweet Length	Number of words in tweet	Count	Direct calculation
User Variables	Gender	User’s gender	Binary (Male/Female)	M3 model (85% accuracy)
	Political Orientation	Position on reformist-principlist spectrum	Continuous scale (-3 to +3)	Correspondence Analysis
	Is Candidate	Whether user is a presidential candidate	Binary (0=No, 1=Yes)	Manual classification
Engagement Variables	Like Count	Number of likes received	Count	Twitter(X) API
	Retweet Count	Number of retweets received	Count	Twitter(X) API
	Reply Sentiment	Sentiment of responses	Ordinal (0=Negative, 1=Neutral, 2=Positive)	LSTM model (75% accuracy)
Campaign Variables	Government Target	Whether tweet targets government	Binary (0=No, 1=Yes)	Content analysis
	Principlist Target	Whether tweet targets principlists	Binary (0=No, 1=Yes)	Content analysis

Variable Category	Variable Name	Definition	Measurement	Source
Temporal Variables	Tweet Age	Days since posting	Continuous	Calculated from timestamp
	Created on Weekend	Whether tweet posted on weekend	Binary (0=No, 1=Yes)	Derived from timestamp

6.5 Methodology

I employ three main types of regression models to test the proposed hypotheses. I use Negative Binomial Regression for analyzing count-dependent variables such as the number of retweets or likes. Negative binomial regression is particularly appropriate for social media engagement metrics because these data typically exhibit overdispersion—where the variance is substantially larger than the mean. Standard Poisson regression, which assumes equal mean and variance, would underestimate standard errors in such cases, potentially leading to false positive results. Negative binomial regression addresses this issue by including an additional parameter to model the overdispersion. For example, when testing whether negative tweets receive more engagement (Hypothesis F), I use negative binomial regression with like count or retweet count as the dependent variable and negativity as the primary independent variable, while controlling for other factors such as account characteristics and tweet features.

I use Logistic Regression for binary dependent variables such as whether a tweet contains negativity (1) or not (0). Logistic regression models the probability of an event occurring as a function of various predictors. Unlike linear regression, which can produce predicted values outside the 0-1 range, logistic regression guarantees that predicted probabilities remain within this range by using the logistic function. For example, when testing whether government-affiliated candidates are the primary targets of negative messages (Hypothesis A), I use logistic

regression with tweet negativity as the dependent variable and government target as the primary independent variable, while controlling for other factors.

I employ Ordinary Least Squares (OLS) regression when appropriate for the nature of the variables and research question. OLS is suitable for continuous dependent variables with approximately normal distributions. In this study, I primarily use OLS for exploratory analyses and for situations where the dependent variable can be reasonably approximated by a continuous measure. For instance, when examining factors that predict the overall negativity level in a candidate's communications, I can use OLS with the proportion of negative tweets as the dependent variable.

These statistical approaches align with recent methodological standards in computational political communication research. While advanced machine learning techniques enable pattern detection at scale, the interpretability of traditional regression models remains valuable for theory testing (Grimmer & Stewart, 2013). Recent work on social media analysis (Theocharis & Lowe, 2016) demonstrates that combining computational measurement with theoretically-grounded statistical models provides robust insights into political engagement patterns. This hybrid approach—using computational tools for measurement while employing transparent statistical models for hypothesis testing—balances analytical sophistication with interpretive clarity.

For significance testing, I primarily use a p-value threshold of 0.01 ($p < 0.01$) to identify statistically significant relationships, though in some analyses, I also consider a threshold of 0.05 ($p < 0.05$). I clearly indicate these significance levels in the regression tables in the appendices using asterisks: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

I employ network analysis to examine relational patterns in the Twitter(X) data. For both the 2021 and 2024 elections, I constructed reply networks to visualize how users interact with candidates and each other. In these networks, each node represents a Twitter(X) user (either a candidate or someone commenting on candidates' tweets), and each edge (connection) from user X to user Y indicates that user X has commented on a tweet posted by user Y. The size of each node is proportional to the number of connections it has, with larger nodes representing users who received more comments.

I use several network analysis techniques. I employ Community Detection Algorithms to identify clusters of users that interact more densely with each other than with the rest of the network. I apply the Louvain community detection method using the Gephi software package to identify distinct communities within the reply networks. This method works by optimizing modularity—a measure that compares the density of connections within communities to the density of connections between communities. For example, in the 2021 election network analysis, I identified seven distinct communities, each corresponding to supporters of different presidential candidates. I color-coded these communities in the network visualization to show how the online political conversation was segmented along candidate lines.

I calculate various centrality metrics, including degree centrality, betweenness centrality, and eigenvector centrality, to identify the most influential nodes in the network. The most important centrality measure I use is Page Rank, which identifies central nodes based on both the quantity and quality of connections they receive. Higher Page Rank scores typically corresponded to presidential candidates and other major political figures.

I visualize the networks using force-directed layout algorithms in Gephi, which position nodes based on their connections, with connected nodes pulled closer together and disconnected

nodes pushed apart. The resulting visualizations are color-coded according to the community detection results, creating clear visual representations of how the political conversation was structured. In the 2021 election network visualization, I identified seven communities, each color-coded to represent different candidate support groups: orange for Abdolnaser Hemmati, purple for Saeed Jalili, fluorescent for Mohsen Rezaei, turquoise for Ebrahim Raisi, blue for Alireza Zakani, pink for Amir-Hossein Ghazizadeh, and green for Mohsen Mehralizadeh.

For the first round of the 2024 election, I identified six communities, color-coded as: green for Masoud Pezeshkian, purple for Saeed Jalili, blue for Mostafa Pourmohammadi, orange for Alireza Zakani, pink for Amir-Hossein Ghazizadeh Hashemi, and yellow for Mohammad-Baqer Qalibaf. For the second round of the 2024 election, the network naturally separated into two distinct communities, color-coded as: purple for the group associated with Saeed Jalili and green for the group associated with Masoud Pezeshkian. These network visualizations provide valuable insights into how political discourse was structured during the elections, showing how different communities formed around candidates and how these community structures evolved between electoral phases.

I evaluate the regression models in this study using standard statistical metrics including log-likelihood, coefficients, p-values, z-values, standard errors, and confidence intervals. These metrics enable me to assess relationships between variables and test specific hypotheses about negative campaigning patterns. I provide the complete regression results for all hypothesis tests in the appendices: Appendix A (Tables A1-A11) contains regression parameters for the 2021 presidential election; Appendix B (Tables B1-B8) contains regression parameters for the first round of the 2024 election; and Appendix C (Tables C1-C7) contains regression parameters for

the second round of the 2024 election. These tables present detailed information sorted in ascending order by standard error for better interpretation.

6.6 Methods for Testing Specific Hypotheses

I test each hypothesis proposed in the theoretical framework using specific analytical approaches tailored to the nature of the hypothesis and the available data. To test supply-side hypotheses about candidates' negative campaigning strategies, I use several approaches.

For Hypothesis A (Government Target), I examine the relationship between the variable `has_incumbent_target` and the negativity of tweets from non-governmental candidates. I use logistic regression, with tweet negativity as the dependent variable and `has_incumbent_target` as the primary independent variable, while controlling for other factors such as tweet characteristics and user attributes. For example, in the 2021 election analysis (Table A1, Appendix A), the coefficient for `has_incumbent_target` is 0.896 ($p < 0.01$), indicating a strong positive relationship between a tweet targeting government-affiliated candidates and the likelihood of that tweet containing negativity. I conduct similar analyses for the 2024 first round (Table B1) and second round (Table C1).

For Hypothesis B (Challenger Strategy), I compare negativity rates across candidates with different polling positions. This analysis involves calculating the proportion of negative tweets for each candidate and relating these proportions to the candidates' competitive positions based on pre-election polling data. Due to the limited number of candidates, this analysis relies primarily on descriptive statistics rather than formal regression modeling.

For Hypothesis C (Third-Place Targeting), I analyze the distribution of attacks across candidates with different polling positions. This analysis involves identifying which candidates

are targeted in negative tweets and calculating the frequency with which each candidate is targeted. I then compare these frequencies to the candidates' competitive positions to determine whether third-place candidates receive fewer attacks than would be expected based on their prominence.

For Hypothesis D (Principalist Attacks), I examine the relationship between the variable `has_principalist_target` and the negativity of tweets from principalist candidates. I use logistic regression, with tweet negativity as the dependent variable and `has_principalist_target` as the primary independent variable, while controlling for other factors. For example, in the 2021 election analysis (Table A2, Appendix A), the coefficient for `has_principalist_target` is 0.776 ($p = 0.052$), indicating a marginally significant positive relationship. In the 2024 first round analysis (Table B2), the coefficient is -0.2 ($p < 0.01$), indicating a significant negative relationship.

For Hypothesis E (Overall Negativity), I compare the overall rates of negative and positive messages across candidates and examine the relationship between being a candidate (`is_candidate`) and tweet negativity using binary logistic regression. I include `is_candidate` as the primary independent variable, with tweet negativity as the dependent variable, while controlling for various other factors. The detailed results are presented in Table A3 (2021 election), Table B3 (2024 first round), and Table C2 (2024 second round).

To test demand-side hypotheses about how voters respond to negative campaigning, I use different analytical approaches. For Hypothesis F (Negativity Bias), I examine the relationship between tweet negativity and engagement metrics (likes and retweets) using negative binomial regression. This model is appropriate given the count nature of the dependent variables and their typical overdispersion. The regression analysis includes tweet negativity as the primary

independent variable, with like count or retweet count as the dependent variable, while controlling for factors such as account characteristics and tweet features. The detailed results are presented in Tables A4-A5 (2021 election), Tables B4-B5 (2024 first round), and Tables C3-C4 (2024 second round).

For Hypothesis G (Boomerang Effect), I analyze the relationship between tweet negativity and the sentiment of replies using logistic regression. This approach allows me to determine whether negative tweets are more likely to generate negative responses than positive tweets. The regression analysis includes tweet negativity as the primary independent variable, with reply sentiment as the dependent variable, while controlling for various other factors. The detailed results are presented in Table A6 (2021 election), Table B6 (2024 first round), and Table C5 (2024 second round).

For Hypothesis H (Negative Selective Exposure), I examine how ideology alignment affects sentiment responses to negative content. This analysis requires data on users' political orientations, which were only available for the 2021 election. The regression analysis includes `ideology_alignment` (whether the replier and the tweet author share the same political orientation) as the primary independent variable, with reply sentiment as the dependent variable, while controlling for other factors. The detailed results are presented in Table A7 (2021 election). Due to API limitations following Twitter(X)'s ownership change, I could not test this hypothesis for the 2024 elections.

For Hypothesis I (Ideology Alignment), I analyze the interaction between tweet negativity, political alignment, and reply sentiment. This approach allows me to determine whether political alignment moderates the relationship between message negativity and response sentiment. The regression analysis includes both tweet negativity and `ideology_alignment` as

independent variables, along with their interaction term, with reply sentiment as the dependent variable. The detailed results are presented in Tables A8-A9 (2021 election). As with Hypothesis H, I could not test this hypothesis for the 2024 elections due to API limitations.

For Hypothesis L (Gender Differences), I examine how gender moderates responses to negative political messaging. I conduct this analysis using both the full dataset and a filtered dataset of replies to negative tweets. The regression analysis includes `user_gender` as the primary independent variable, with reply sentiment as the dependent variable, while controlling for various other factors. The detailed results are presented in Tables A10-A11 (2021 election), Tables B7-B8 (2024 first round), and Tables C6-C7 (2024 second round).

6.7 Limitations of the Methodology

While this research offers valuable insights into negative campaigning in Iran's presidential elections, several important limitations must be acknowledged. Twitter(X) data, while valuable for studying political communication, has representativeness limitations in the Iranian context. Twitter(X) is officially filtered in Iran, meaning users must employ VPNs or other circumvention tools to access the platform. This creates potential sampling biases based on technical knowledge, political motivation, and risk tolerance. The platform's user base in Iran skews toward urban, educated, and more politically engaged citizens, potentially underrepresenting rural, less educated, and politically disengaged populations.

The demographic imbalance in our data—76-78% male and 22-23% female across all datasets—indicates significant gender disparities in political participation on Twitter(X) in Iran. This imbalance limits our ability to generalize findings across gender groups and may particularly affect analyses of gender differences in response to negative campaigning. The

political orientation distribution in our sample also shows substantial imbalance. In the 2021 dataset, among users for whom political orientation could be determined, there were 3,167 conservative users compared to just 302 reformist users. This 10:1 ratio suggests either a genuine predominance of conservative voices on Iranian Twitter(X) or methodological limitations in the orientation detection algorithm. Either way, this imbalance must be considered when interpreting findings related to ideological effects.

Several technical challenges affected our methodology. API restrictions imposed after Twitter(X)'s ownership change significantly limited data collection for the 2024 datasets, preventing political orientation estimation and other analyses that were possible for the 2021 data. These restrictions reflect broader challenges facing social media researchers as platform policies evolve. While the deep learning models for detecting negativity, character attacks, and political attacks performed well, they are not perfect. The reported accuracy rates—70% for negativity detection, 69% for character attack detection, and 66% for political attack detection—indicate that misclassifications occur in approximately 30-34% of cases. These errors introduce noise into the analysis that may affect the precision of our findings.

These performance metrics align with contemporary standards for computational text analysis in political communication. As Grimmer and Stewart (2013) emphasize, no globally best method exists for automated text analysis—rather, different methods suit different quantities of interest and data structures. Recent validation studies (van Atteveldt et al., 2021) demonstrate that while automated approaches can identify basic sentiment polarity with reasonable accuracy, they struggle with more complex variables central to political communication research, often underperforming compared to human coding for sophisticated judgments. Our F1 scores of 66-70% for nuanced negativity detection represent solid performance for non-English political text

analysis, though they underscore the continued need for method development in under-resourced languages.

The Persian language presents specific challenges for computational analysis, including multiple forms of negation and culturally specific expressions. While our specialized models were designed to address these challenges, they may still miss subtle forms of negativity or misclassify certain expressions based on contextual nuances that machine learning algorithms struggle to capture. While our regression models control for many factors that might influence negative campaigning, unobserved variables could still affect the relationships we identify. The potential for omitted variable bias is a limitation of all observational studies, including this one. Additionally, while we can identify correlational relationships between variables, establishing definitive causal relationships remains challenging due to the non-experimental nature of the study. Finally, the politically sensitive nature of studying electoral politics in Iran potentially influences what people are willing to say publicly on social media. Self-censorship and strategic communication choices may affect the observable patterns of negative campaigning, creating discrepancies between public discourse and private opinions.

Chapter 7: Supply-Side Results: Strategic Use of Negative Campaigning

This chapter presents the empirical findings related to the supply-side hypotheses of negative campaigning across the 2021 and 2024 Iranian presidential elections. By examining each hypothesis across both electoral contexts, this analysis identifies consistent patterns and contextual variations in how candidates deployed negative messaging strategies. Table 1 presents detailed metrics on candidate Twitter(X) activity during the 2021 election, revealing interesting patterns in content production and audience engagement.

Table 1: Tweets and replies related to tweets of presidential candidates from May 11 to June 25, 2021

	Mohsen Mehralizadeh	A.M. Ghazizadeh	Alireza Zakani	Ebrahim Raeesi	Abdolnaser Hemmati	Mohsen Rezaee	Saeed Jalili
Number of Tweets	38	66	76	88	92	214	592
Number of Replies	7,454	6,431	9,896	11,706	43,524	22,722	23,006
Percentage of Negativity in Tweets	18.4%	16.7%	39.5%	29.5%	29.3%	14%	23.3%
Percentage of Negativity in Replies	11.6%	5.1%	5%	7.8%	23.8%	5.5%	3.1%

Although Saeed Jalili produced the highest number of tweets (592), Abdolnaser Hemmati’s 92 tweets generated the highest number of replies (43,524), demonstrating his content’s significant engagement despite a much lower volume. The highest percentage of negativity in tweets was found in Alireza Zakani’s content (39.5%), while Hemmati’s tweets received the highest percentage of negative replies (23.8%). This asymmetry between production and reception of negativity highlights the complex dynamics of how negative messaging resonates differently across candidates and audiences.

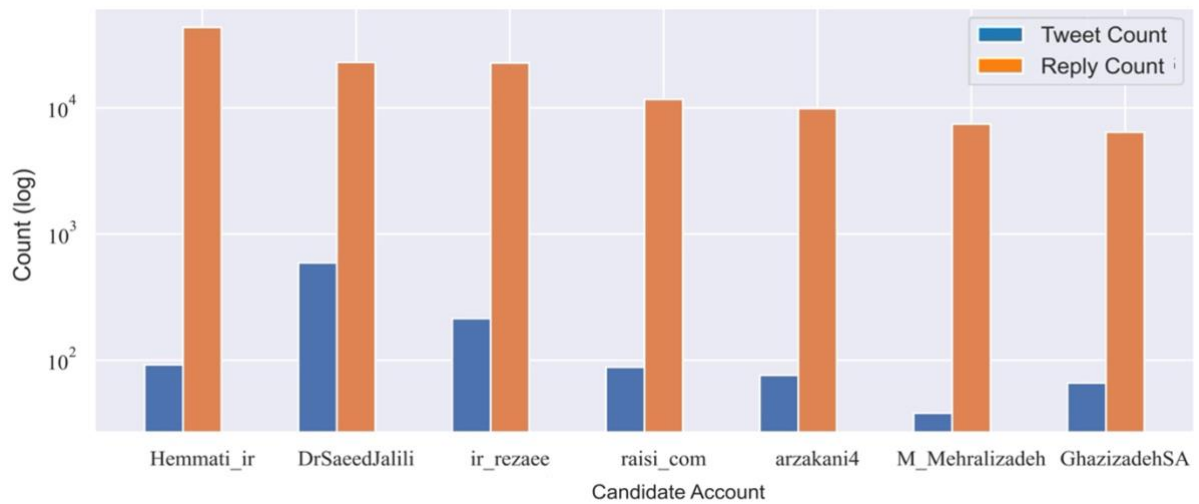


Figure 1: Tweet and Replies Count for each Candidate in 2021

In 2024, the shift in engagement patterns during the runoff phase is illustrated in Table 2.

Table 2: Tweets and replies related to tweets of presidential candidates from May 31 to July 5, 2024

	A.M. Ghazizadeh	Alireza Zakani	M.B. Ghalibaf	Mostafa Pourmohammadi	Masoud Pezeshkian	Saeed Jalili
Number of Tweets	53	44	31	200	158	528

Number of Replies	5,076	8,520	6,058	16,258	28,189	53,594
Percentage of Negativity in Tweets	9.4%	36.3%	41.5%	29%	48.1%	29.9%
Percentage of Negativity in Replies	31.3%	26.1%	28.9%	31.8%	28.7%	28.1%

As observed in Table 1, Saeed Jalili produced the highest number of tweets (528) and received the highest number of replies (53,594). However, Masoud Pezeshkian demonstrated the highest percentage of negativity in tweets (48.1%), while Pourmohammadi’s tweets received the highest percentage of negative replies (31.8%). Regarding demographic distribution, our analysis identified 78% of users as male and 22% as female during the first round, which is very similar to the gender distribution observed in the 2021 election.

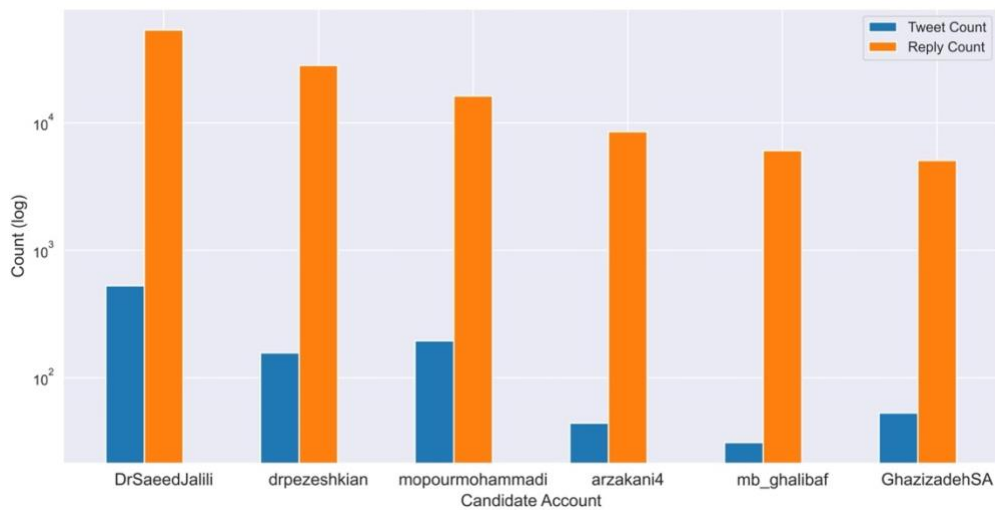


Figure 2: Tweet and replies Count for each candidate in the first-round of 2024 election

The shift in engagement patterns during the runoff phase is illustrated in Table 3. During this period, Jalili maintained his high volume of tweet production (540) and received the highest number of replies (56,013). However, Pezeshkian employed significantly higher negativity in his tweets (47.2% compared to Jalili’s 29.4%), while the percentages of negative replies were nearly identical for both candidates (28.5% and 27.7% respectively).

Table 3: Tweets and replies related to tweets of the two presidential candidates from May 31 to July 12, 2024

	Masoud Pezeshkian	Saeed Jalili
Number of Tweets	161	540
Number of Replies	28,815	56,013
Percentage of Negativity in Tweets	47.2%	29.4%
Percentage of Negativity in Replies	28.5%	27.7%

This convergence in negative reply percentages suggests that once the election moved to a binary choice, audience response patterns became more similar despite continued differences in candidate messaging strategies.

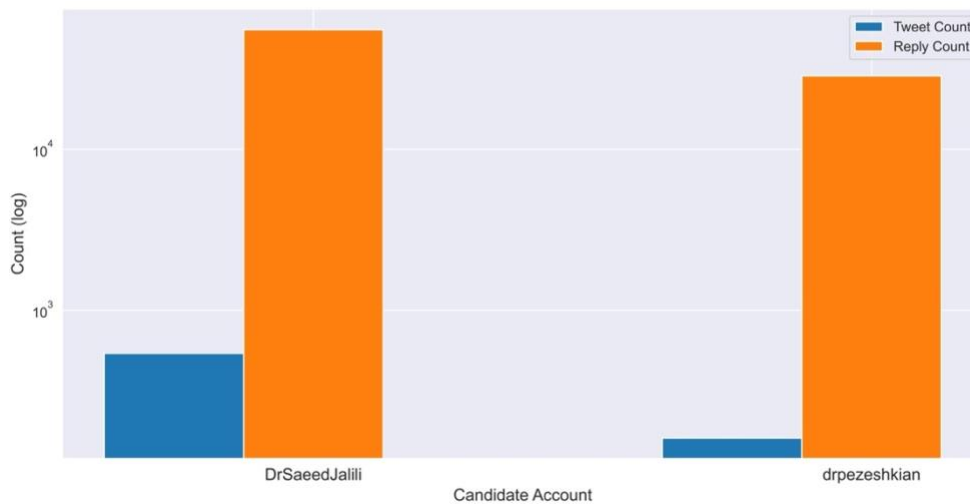


Figure 3: Tweet and replies Count for each candidate in the second-round of 2024 election

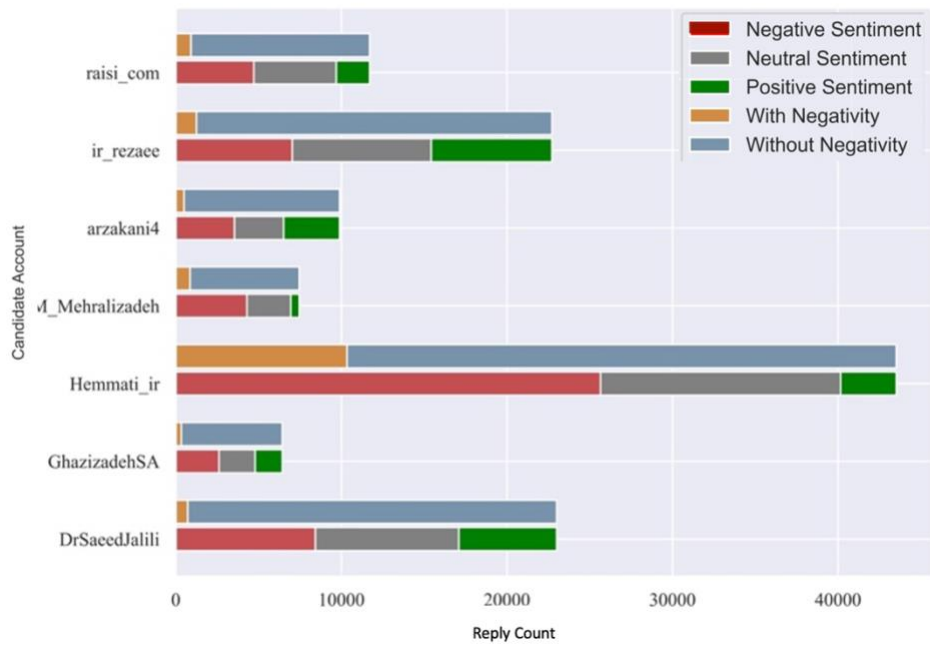
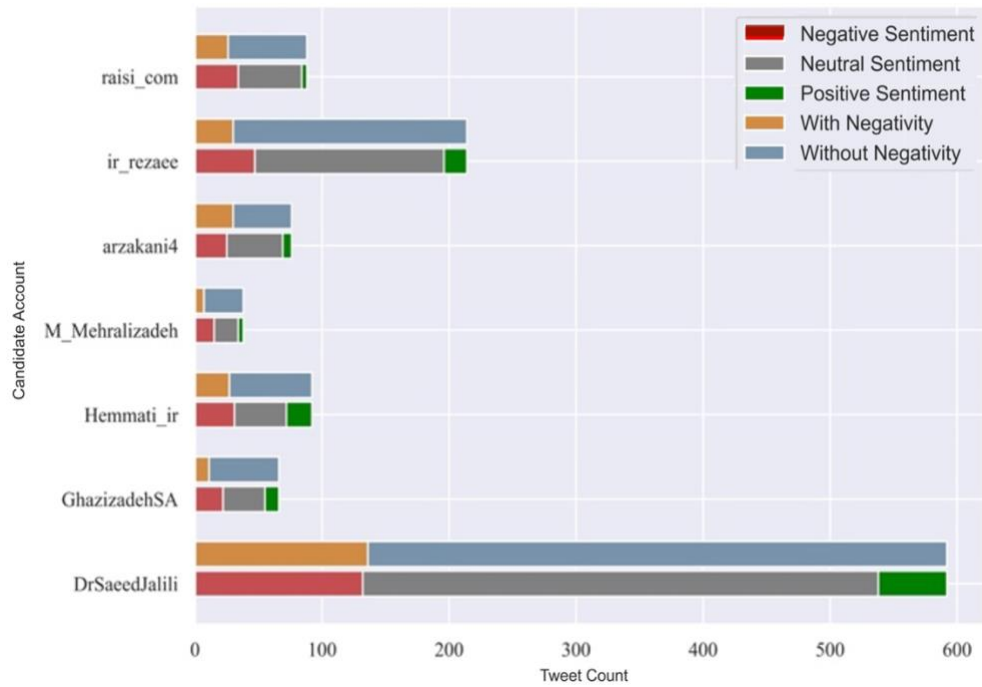


Figure 4: Percentage of negativity and sentiment analysis of A) tweets and B) replies of tweets from candidates in 2021 election

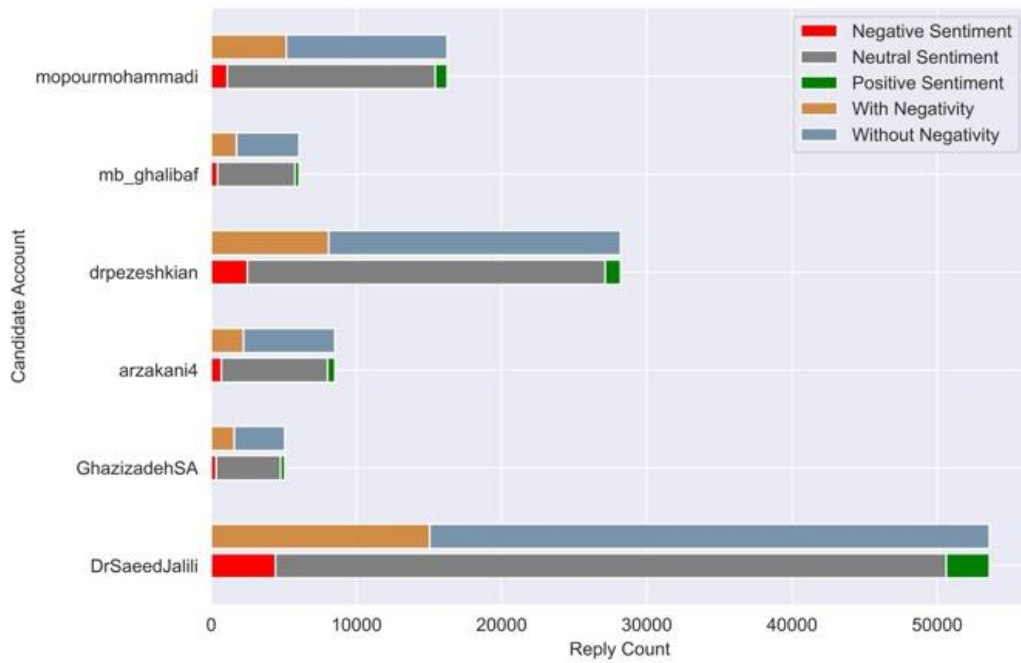
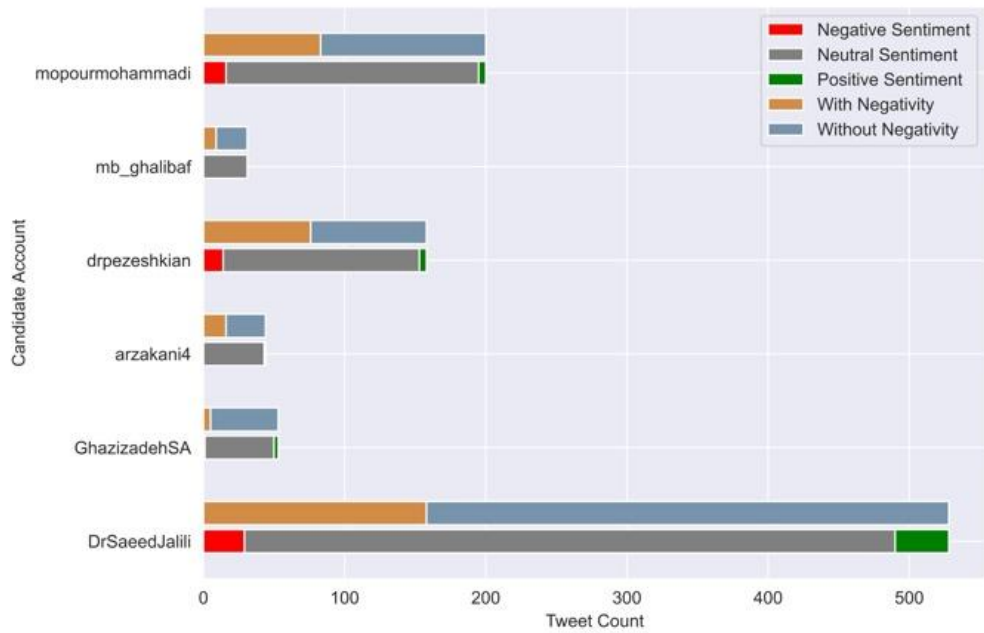


Figure 5: Percentage of negativity and sentiment analysis of A) tweets and B) replies of tweets from candidates in the first round of the 2024 election

7.1 Government-Affiliated Targeting (Hypothesis A)

The regression analysis provides strong support for Hypothesis A across both elections. In the 2021 election, there was a robust, statistically significant relationship between government affiliation and criticism targeting (coefficient = 0.896, $p < 0.01$), as shown in Table A1 (Appendix A). This pattern continued in the 2024 election, with significant relationships observed in both the first round (coefficient = 0.27, $p < 0.01$, Table B1) and second round (coefficient = 0.222, $p < 0.01$, Table C1). Despite the substantial contextual differences between elections—with 2021 representing a typical end-of-term transition and 2024 occurring following President Raisi’s unexpected death—the incumbent targeting pattern remained consistent. This persistence suggests that government-affiliated targeting represents a structural feature of negative campaigning in Iran’s electoral politics that transcends specific candidates or electoral circumstances.

While the statistical significance of government targeting remained consistent across elections, the intensity of this relationship showed some variation. The 2021 election demonstrated a notably stronger coefficient (0.896) compared to both rounds of the 2024 election (0.27 and 0.222 respectively). This variation suggests that while the fundamental targeting pattern remained consistent, its intensity was potentially moderated by the unique circumstances of the 2024 election. The reduced coefficient in 2024 aligns with our prediction that “the intensity of negative attacks against government-affiliated candidates will be lower in the 2024 election following Raisi’s death compared to the 2021 election.” The national mourning period and the unexpected succession context likely created normative constraints that moderated the intensity of government criticism while maintaining its statistical significance.

The consistent support for Hypothesis A across both elections provides evidence that the accountability function of negative campaigning operates in Iran's hybrid regime similarly to patterns observed in Western democracies. Candidates consistently directed criticism toward government-affiliated targets despite institutional constraints and varying electoral contexts. These findings challenge simplistic characterizations of non-Western elections as merely performative, demonstrating that genuine accountability dynamics can function within hybrid regimes, albeit with distinctive parameters and constraints. The persistent statistical significance of government targeting across both elections suggests that this accountability mechanism represents a fundamental feature of electoral politics that transcends specific institutional arrangements.

7.2 Challenger Strategy (Hypothesis B)

The analysis of negative messaging distribution across candidates reveals unexpected patterns that challenge conventional competitive positioning theory, providing only partial and contextually-modified support for Hypothesis B. While traditional models predict that challengers should employ more negativity than frontrunners, the empirical evidence from both Iranian elections demonstrates a more complex reality where frontrunners often matched or exceeded challenger negativity levels, though for distinctive strategic reasons rooted in Iran's unique political context. In the 2021 election, the frontrunner Ebrahim Raisi employed surprisingly high negativity (29.5% of his Twitter(X) content), nearly identical to the challenger Abdolnaser Hemmati's 29.3%. This pattern contradicts theoretical expectations that leaders should avoid risks associated with attack politics. However, the target of this negativity reveals crucial contextual factors: Raisi's attacks focused almost exclusively on the outgoing Rouhani administration rather than his electoral opponents. This strategic orientation allowed him to simultaneously maintain

frontrunner dignity while establishing clear policy differentiation from the incumbent government. As the principlist candidate challenging years of reformist/moderate governance, Raisi effectively positioned himself as a "challenger to the system" despite his frontrunner electoral status.

The remaining 2021 candidates demonstrated varying negativity patterns. Alireza Zakani showed the highest negativity rate at 39.5%, though his distant polling position limited his strategic impact. Hemmati, the actual challenger in second place, employed 29.3% negativity focused primarily on criticizing Raisi and the broader principlist agenda. Saeed Jalili used 23.3% negativity, while Mehralizadeh (18.4%), Ghazizadeh (16.7%), and Rezaei (14%) showed lower rates, generally aligning with their more distant competitive positions.

In the 2024 first round, an even more dramatic inversion of theoretical expectations emerged. Frontrunner Masoud Pezeshkian demonstrated the highest negativity rate among all candidates at 48.1%, substantially exceeding challenger Saeed Jalili's 29.9%. This pattern persisted into the second round, where Pezeshkian maintained 47.2% negativity compared to Jalili's 29.4%. The conventional competitive positioning theory would predict the opposite: that Jalili, as the challenger seeking to close the gap with the frontrunner, should have employed more aggressive negative messaging. This reversal reflects the distinctive political dynamics of the 2024 election. Pezeshkian, despite his frontrunner polling position, occupied an isolated structural position as the sole reformist-oriented candidate facing multiple principlist competitors. More significantly, he positioned himself as a challenger to the incumbent government system—the very system that Jalili and other principlist candidates represented as continuations of Raisi's presidency. This positioning was reinforced, perhaps inadvertently, by principlist campaign messaging that explicitly connected their candidates to Raisi's legacy, believing such association would attract

voters but inadvertently reinforcing Pezeshkian's narrative that he represented change while they represented continuity.

The 2024 election occurred in the extraordinary context of President Raisi's unexpected death, creating a unique opportunity for Pezeshkian to frame the election as a referendum on the previous administration's policies. Even though the presidency had become vacant through tragedy rather than term completion, Pezeshkian successfully positioned his opponents—particularly Jalili—as representatives of the incumbent system. Campaign advertisements from principlist candidates that highlighted their connections to Raisi's government, intended to capitalize on any residual support, paradoxically strengthened Pezeshkian's argument that a vote for Jalili meant continuing the policies that many voters wished to change.

The targeting of attacks reveals this dynamic most clearly. In 2021, Raisi's negativity focused overwhelmingly on the Rouhani administration (the actual incumbent government), allowing him to campaign as an agent of change despite his frontrunner status. Most other candidates similarly directed substantial criticism toward the outgoing administration, recognizing that anti-government sentiment represented a crucial mobilization opportunity. This pattern explains why Raisi, despite polling consistently ahead, employed negativity levels comparable to the challenger Hemmati—both were, in effect, challenging the incumbent administration rather than each other as the primary strategic focus. In 2024, Pezeshkian employed his substantial negativity (48.1% in the first round, 47.2% in the second round) primarily to attack what he characterized as the failed policies of the Raisi administration and to position his principlist opponents as continuations of those policies. His campaign successfully framed Jalili and others not as fresh alternatives but as representatives of the incumbent system. This framing transformed

Pezeshkian's frontrunner status into that of an insurgent challenger to the system, even as he led in polls.

Other candidates in the 2024 first round showed varied negativity rates: Mohammad-Baqer Ghalibaf employed 41.5%, Alireza Zakani 36.3%, Mostafa Pourmohammadi 29%, and Amir-Hossein Ghazizadeh 9.4%. Notably, Jalili's relatively modest 29.9% negativity rate may reflect strategic calculation that, as a principlist candidate in a principlist-dominated field, excessive attacks risked alienating potential supporters across factional lines needed for a runoff victory. His campaign may have also recognized the risk of confirming Pezeshkian's narrative that the election represented a choice between change and continuity if he appeared too closely aligned with defending the previous administration.

These patterns reveal how the concept of 'challenger' cannot be understood purely through polling positions in Iran's hybrid regime context. The distinction between frontrunner and challenger in conventional competitive positioning theory assumes a relatively level playing field where electoral standing alone determines strategic positioning. However, in Iran's factional system, the relationship to incumbent governance structures creates a separate and often more salient dimension of competitive positioning. Candidates affiliated with or perceived as representing incumbent governance face distinctive constraints and opportunities regardless of their polling positions. When such candidates occupy frontrunner positions, they may still employ substantial negativity if directing it toward previous administrations or framing themselves as reformers of the existing system. Conversely, candidates polling second but affiliated with incumbent structures may moderate negativity to avoid reinforcing opposition narratives that frame the election as a referendum on the status quo. The findings demonstrate how universal strategic calculations interact with context-specific factors in Iran's unique electoral environment.

While the general insight that competitive positioning shapes messaging strategy remains valid, the application of competitive positioning theory requires substantial modification in contexts where:

1. Factional asymmetry creates structural imbalances: When one faction dominates the candidate field (five principlist candidates versus one reformist-oriented candidate in 2024), the numerical frontrunner may face different strategic imperatives than predicted by models assuming more balanced competition.

2. Incumbent affiliation crosses polling positions: A frontrunner perceived as representing incumbent governance may face different strategic calculations than a frontrunner positioned as an outsider or challenger to the system, regardless of polling standing.

3. Regime legitimacy concerns moderate negativity: In hybrid regimes where electoral legitimacy remains contested, candidates may face countervailing pressures—the need to energize supporters through criticism while maintaining respect for institutional boundaries that excessive negativity might transgress.

4. Target selection matters more than volume: The empirical evidence suggests that who candidates attack may matter more than how much they attack. Raisi's high negativity in 2021 did not contradict frontrunner strategy when understood as primarily attacking the outgoing administration rather than electoral opponents. Similarly, Pezeshkian's high negativity in 2024 served strategic purposes when framing principlist opponents as incumbent continuity candidates. The comparative evidence across both elections demonstrates that while challenger strategies operate in Iran's presidential elections, they manifest through more complex mechanisms than conventional competitive positioning theory predicts. The key insight is not that challengers necessarily employ more negativity than frontrunners, but rather that candidates' strategic

positioning relative to incumbent governance structures—their status as ‘system challengers’ or ‘system representatives’—shapes messaging strategies in ways that may align with or cut across their polling positions. This finding has important implications for understanding negative campaigning in hybrid regimes and other non-Western contexts where incumbent governance structures, factional identities, and regime legitimacy concerns create multiple dimensions of competitive positioning beyond simple polling standings. The traditional challenger-frontrunner distinction, while useful, requires substantial theoretical refinement to capture the strategic complexities of electoral competition in such environments.

7.3 Third-Place Targeting (Hypothesis C)

The analysis provides qualified support for Hypothesis C in the 2021 election but offers limited testing opportunities in the 2024 election due to polling data limitations. In 2021, Mohsen Rezaei, who consistently placed third in pre-election polling, received notably less negative attention (approximately 7% of candidate-directed criticism) than either frontrunner Raisi or challenger Hemmati, despite his significant name recognition as a former Revolutionary Guards commander. Similarly, the lower-polling candidates Mehralizadeh, Zakani, and Ghazizadeh Hashemi each received minimal negative attention (collectively accounting for less than 15% of candidate-directed criticism), despite representing distinct factional positions. This pattern aligns with the strategic expectation that candidates focus attack resources on their primary competitors rather than distributing them evenly across all opponents. For the 2024 election, limited reliable polling data prior to the first round made definitive testing of this hypothesis more challenging. However, descriptive statistics suggest that Pourmohammadi, who showed minimal electoral support (eventually receiving only 0.88% in the first round), received substantially less negative attention than the leading candidates Pezeshkian, Jalili, and Ghalibaf.

The 2021 election provided clearer evidence for the third-place targeting hypothesis, likely due to the more established competitive hierarchy established through pre-election polling and the clear frontrunner status of Raisi. The 2024 election's compressed timeline and more volatile polling environment created less definitive competitive positioning prior to voting, making strategic targeting calculations less predictable. The different electoral formats between elections also influenced targeting patterns. The 2021 single-round outcome eliminated potential runoff considerations, while the 2024 two-round system potentially influenced first-round targeting strategies based on anticipated second-round dynamics.

The findings regarding third-place targeting generally align with strategic resource allocation theories developed in Western campaign contexts. The pattern suggests that even within Iran's distinctive electoral environment, campaigns make rational calculations about concentrating critical resources on their most significant competitors rather than peripheral opponents. This alignment between Iranian and Western patterns suggests that resource optimization represents a universal campaign imperative that transcends specific institutional arrangements or cultural contexts. However, the qualified nature of the findings for the 2024 election highlights how contextual factors like compressed timelines and electoral format can influence targeting clarity and precision.

7.4 Principalist Attacks (Hypothesis D)

The analysis of intra-principalist criticism patterns reveals strong support for Hypothesis D across both elections, though the manifestation of this coordination evolved between the two electoral contexts. Hypothesis D predicted that negative attacks among principalist candidates would be minimal, reflecting factional coordination and solidarity despite competition for the same

office. In the 2021 election, the empirical evidence demonstrates the strongest possible support for this hypothesis: attacks among principlist candidates were virtually absent from the campaign discourse. Despite fielding five principlist candidates (Raisi, Jalili, Zakani, Rezaei, and Ghazizadeh Hashemi) competing for the presidency, these candidates refrained almost entirely from criticizing one another. The regression analysis examining the relationship between principlist factional identity and targeting patterns yielded a coefficient of 0.776 ($p = 0.052$, Table A2), which falls just outside conventional significance levels. However, this statistical result should be interpreted cautiously in light of the descriptive reality: the lack of statistical significance likely reflects insufficient variation in the dependent variable rather than an absence of coordination. When attacks among principlists are zero or near-zero, statistical tests struggle to identify relationships due to the lack of variance, even though the substantive finding—complete or near-complete factional restraint—provides the strongest possible support for the hypothesis. This near-total absence of intra-principlist attacks in 2021 represents remarkable factional discipline. Multiple principlist candidates competed for votes from overlapping constituencies, faced pressure to differentiate themselves, and operated within a compressed campaign timeline—all factors that typically incentivize negative messaging toward direct competitors. Yet they maintained solidarity, focusing their criticism instead on the outgoing Rouhani administration and the lone reformist-aligned candidate, Hemmati. This pattern reflects sophisticated factional coordination where individual candidates subordinated personal ambitions to collective principlist interests.

By the 2024 first round, this pattern showed some evolution while maintaining overall support for the hypothesis. The statistical analysis revealed a clear negative relationship between principlist affiliation and being targeted by other principlists (coefficient = -0.2, $p < 0.01$, Table

B2). This negative coefficient indicates that being a principlist candidate significantly reduced the likelihood of receiving criticism from other principlist candidates, providing strong statistical support for Hypothesis D. The achievement of conventional statistical significance in 2024 reflects the presence of slightly more variation in the data—that is, while intra-principlist attacks remained very limited, they were no longer virtually zero as in 2021. This evolution from near-total restraint in 2021 to very limited but slightly increased attacks in 2024 likely reflects the distinctive circumstances of each election rather than a fundamental breakdown in factional coordination. Several contextual factors help explain this pattern:

First, the 2024 election's unexpected nature following President Raisi's death created a more fluid competitive environment. Without a clear factional hierarchy established through pre-campaign positioning, principlist candidates may have engaged in modest levels of differentiation while maintaining overall restraint. The compressed timeline following the unexpected succession intensified competition for rapid voter mobilization, potentially creating pressure for sharper distinctions among principlist alternatives. Second, the presence of a more viable and threatening reformist-aligned candidate in 2024 (Pezeshkian) compared to 2021 (Hemmati) created a paradoxical dynamic. While this external threat should theoretically strengthen factional solidarity, Pezeshkian's genuine competitiveness and ultimate advancement to the runoff may have created anxiety among principlist candidates about being eliminated, leading to marginally increased willingness to differentiate from factional competitors. The fact that Pezeshkian led polling throughout the first round meant that multiple principlist candidates were competing for the second runoff position, potentially intensifying their need to distinguish themselves from one another. Third, the specific competitive dynamics differed between elections. In 2021, Raisi's clear frontrunner status from early in the campaign created strong incentives for other principlist

candidates to coordinate behind him or withdraw (as several ultimately did). The 2024 election lacked this clear principlist hierarchy in the first round, with multiple candidates (Jalili, Ghalibaf, Zakani) holding plausible claims to representing the principlist mainstream. This ambiguity may have created space for limited differentiation that would have been inappropriate in 2021's clearer hierarchy. Fourth, the 2024 campaign witnessed notable intra-principlist competition focused particularly on Mohammad-Baqer Ghalibaf. As discussed in Chapter 2, Ghalibaf faced criticism not only from reformist opponents but also from supporters of Jalili, with observers noting that no one in the Islamic Republic has been subjected to as much accusation, lies, and destruction as Ghalibaf. This intra-factional targeting, while still limited in scope, represented a departure from the near-total restraint observed in 2021. The attacks on Ghalibaf may have reflected his particular vulnerability as a principlist candidate with a long political record and previous presidential campaigns, making him a target for differentiation by other principlist competitors seeking to position themselves as fresher alternatives.

Despite these contextual variations and the slight increase in intra-principlist attacks in 2024, the fundamental pattern remained one of substantial factional coordination across both elections. Even in 2024, the level of intra-principlist criticism remained far below what would be expected based on Western competitive positioning theory, which predicts that ideologically similar candidates should attack each other intensively to differentiate themselves within shared constituencies. The negative coefficient in 2024 demonstrates that principlist candidates still exercised significant restraint toward factional allies compared to their criticism of non-principlist opponents. The runoff phase of 2024 provided perhaps the clearest evidence of underlying principlist coordination despite first-round variations. When the field narrowed to Pezeshkian versus Jalili, all eliminated principlist candidates uniformly endorsed Jalili, demonstrating strong

factional discipline. This unified support occurred despite whatever limited criticism may have occurred during the first round, suggesting that any intra-principalist attacks represented tactical positioning rather than fundamental factional breakdown. The quick consolidation of principalist support behind Jalili in the runoff indicates that factional identity remained the dominant organizing principle despite competitive pressures during the first round.

The comparative findings regarding principalist coordination support broader theories of factional politics in hybrid regimes. The pattern aligns with Slater's (2010) theory of "authoritarian Leviathans," where elite groups subordinate individual ambitions to collective factional interests when facing potential threats to system control. Reuter and Gandhi's (2011) work on authoritarian power-sharing similarly emphasizes how ruling coalition members maintain cooperative relationships despite internal competition to preserve collective dominance. In Iran's hybrid system, these coordination mechanisms operate through what Tezcür (2012) describes as elite networking and factional bargaining, creating distinctive campaign dynamics that balance limited internal differentiation with strong external solidarity. The slight weakening of coordination from 2021 to 2024 suggests that factional discipline represents a strategic resource deployed with varying intensity based on contextual calculations rather than a fixed institutional constraint. When circumstances permit (as in 2021's clear hierarchy and less threatening opposition), coordination can approach perfection. When circumstances create ambiguity or heightened competitive pressure (as in 2024's unexpected succession and viable reformist challenger), some tactical differentiation may occur while maintaining fundamental factional alignment. This flexibility demonstrates sophisticated strategic adaptation rather than coordination failure. Importantly, even the slightly increased intra-principalist attacks in 2024 remained dramatically constrained compared to Western electoral norms. Research on ideological proximity in Western contexts (Downs, 1957; Walter et

al., 2014) predicts that candidates occupying similar ideological positions should focus substantial negativity on each other to secure overlapping constituencies. By contrast, Iranian principlist candidates in both elections directed the overwhelming majority of their criticism toward non-principlist targets—the outgoing government in 2021 and reformist-aligned candidates in 2024—while maintaining substantial restraint toward factional allies despite direct competition for principlist votes.

The evolution of principlist coordination patterns also illuminates the relationship between electoral format and factional dynamics. The 2021 single-round outcome, resulting from Raisi's decisive victory, allowed principlist candidates to maintain near-perfect coordination throughout. The 2024 two-round system, by contrast, created distinctive first-round incentives where multiple principlist candidates needed to compete for runoff advancement while preparing for potential second-round consolidation. This structural difference helps explain why limited differentiation occurred in 2024's first round while strong coordination quickly reasserted itself in the runoff phase. These findings have important implications for understanding negative campaigning in factional versus party-based systems. While Western party primaries often feature intense intra-party attacks (Ridout & Holland, 2010), Iran's factional system demonstrates how elite coordination can moderate such attacks even absent formal party structures to enforce discipline. The mechanism appears to operate through shared identity, elite networking, and collective strategic calculations rather than institutional party constraints. This pattern suggests that factional systems in hybrid regimes may actually facilitate coordination in ways that party systems in democracies sometimes struggle to achieve, particularly when factional elites perceive external threats to collective interests.

The sustained principlist coordination across both elections, despite varying levels of perfection, challenges simplistic characterizations of Iranian elections as merely performative exercises. If elections lacked genuine competitive significance, factional coordination would be unnecessary—candidates would simply follow scripts without concern for strategic positioning. The very existence of sophisticated coordination mechanisms, and their contextual adaptation, indicates that electoral outcomes matter sufficiently to warrant strategic factional discipline. This finding aligns with broader scholarship on hybrid regimes (Schedler, 2013; Gandhi & Lust-Okar, 2009) emphasizing how elections can serve both legitimizing and competitive functions simultaneously. In summary, Hypothesis D received strong support across both elections, with the 2021 evidence providing the strongest possible empirical confirmation through the virtual absence of intra-principlist attacks, and the 2024 evidence maintaining strong statistical support despite modest increases in such attacks. The evolution between elections demonstrates that factional coordination represents a flexible strategic resource rather than a fixed constraint, with principlists demonstrating sophisticated adaptation to varying electoral circumstances while maintaining fundamental solidarity. This pattern reveals how factional politics in hybrid regimes can create distinctive campaign dynamics that differ substantially from both Western party primaries and from competitions where institutional constraints preclude meaningful strategic choice.

7.5 Overall Negativity (Hypothesis E)

The analysis of overall negativity levels across both elections provides qualified support for Hypothesis E, revealing a complex pattern that combines descriptive validation with unexpected evolutionary dynamics and varying statistical relationships across electoral contexts. Examining the descriptive distribution of message sentiment provides initial support for Hypothesis E's prediction that candidates would use fewer negative messages than positive ones.

In the 2021 election, negative messaging constituted approximately 28% of campaign-related content from candidates, while positive messaging accounted for 52% and neutral informational content represented 20%. This distribution clearly demonstrates that positive messaging dominated over negative messaging by a substantial margin (52% vs. 28%), confirming the hypothesis's core expectation regarding the relative prevalence of positive versus negative content. The 2024 first round showed evolution in these proportions while maintaining the fundamental pattern predicted by the hypothesis. Negativity increased to approximately 39% of campaign content—representing an almost 40% relative increase from 2021. Despite this increase, positive messaging continued to exceed negative messaging, though with a narrower margin than observed in 2021. The exact positive and neutral percentages for 2024 varied across candidates, but the aggregate pattern maintained the predicted direction of more positive than negative content. The second round of 2024 continued this pattern, with candidates maintaining higher levels of positive messaging compared to negative messaging despite the intensified binary competition.

The substantial increase in negativity from 28% in 2021 to 39% in 2024 directly contradicts the hypothesis's secondary prediction that negativity would be "more pronounced" (i.e., lower) in the 2024 election due to the national mourning period following President Raisi's death and the associated normative constraints. This unexpected increase likely reflects several countervailing factors that overrode mourning-period constraints: the compressed 2024 campaign timeline created pressure for rapid voter persuasion; the higher stakes of potential factional transition from principlist to reformist control intensified competitive imperatives; and the presence of a more viable reformist-aligned challenger (Pezeshkian) generated greater strategic necessity for principlist differentiation. Importantly, the increase in negativity manifested primarily through policy-focused criticism rather than personal attacks. Explicit personal character attacks remained

limited at approximately 4% of content in 2021 and 6% in 2024. This pattern suggests that while overall criticism boundaries expanded between elections, fundamental normative constraints on personal attacks remained operative. Candidates focused their increased negativity on governance performance, economic outcomes, and policy positions while continuing to exercise substantial restraint regarding personal character assassination—indicating that religious and cultural norms continued to shape the form if not the volume of critical discourse. Beyond examining the descriptive distribution of positive versus negative messaging, the analysis employed logistic regression to test whether candidates' negativity levels differed systematically from other political users participating in campaign discourse. This additional analytical layer addresses the question: do candidates, given their official status and potential vulnerability to normative sanctions, exercise greater restraint in negative messaging compared to other political actors in the campaign environment?

The regression analysis for 2021 found no statistically significant relationship between candidate status and tweet negativity (coefficient = 0.0197, $p = 0.839$, Table A3). This non-significant result indicates that candidates did not differ meaningfully from other political users in their propensity to employ negative messaging. Both candidates and other political users engaged in negative campaigning at similar rates when controlling for other factors such as tweet characteristics, account attributes, and temporal patterns. This finding suggests that whatever normative constraints operate on negative campaigning in Iran's electoral context apply relatively equally across different types of political actors. Candidates did not demonstrate the heightened restraint that might be expected given their greater visibility, accountability to Guardian Council vetting, and vulnerability to Supreme Leader pronouncements discouraging negative campaigning. The similar negativity levels between candidates and other users indicate that campaign dynamics

create pressures toward criticism that affect all participants relatively uniformly, regardless of official candidate status.

The 2024 first round maintained the pattern observed in 2021, with no statistically significant relationship emerging between candidate status and tweet negativity (coefficient = 0.135, $p = 0.312$, Table B3). Despite the overall increase in negativity levels compared to 2021, candidates continued to exhibit negativity rates similar to other political users rather than demonstrating distinctive restraint or aggression. The positive direction of the coefficient (0.135) suggests a slight tendency toward higher candidate negativity, but this relationship lacked statistical significance and could easily reflect random variation rather than systematic difference. This continuity across elections despite varying contexts—normal succession in 2021 versus crisis succession in 2024—suggests that the relationship between candidate status and negativity represents a stable structural feature of Iranian electoral discourse. Whether facing routine electoral competition or extraordinary circumstances following presidential death, candidates appear to calculate negative messaging strategies using similar frameworks as other political users, without systematic differentiation based on their official status.

A notable change emerged in the second round, where a statistically significant relationship appeared between candidate status and negativity at the $p < 0.05$ level (coefficient = 0.408, $p = 0.031$, Table C2). This positive coefficient indicates that in the runoff phase, candidates employed significantly more negativity than other political users, representing the first instance across both elections where candidate status systematically predicted higher negativity levels. This finding reveals how electoral format moderates the relationship between candidate status and negativity. The binary competition of the runoff created distinctive strategic imperatives absent from multi-candidate contexts. With only two candidates remaining and the presidency hanging in direct

balance, both Pezeshkian and Jalili faced intensified pressure to differentiate themselves and mobilize their respective factional coalitions. The focused competition eliminated strategic ambiguity inherent in first-round dynamics—candidates could no longer maintain flexible positioning or avoid direct confrontation. This structural change apparently liberated candidates to employ negativity levels exceeding those of other political users, who lacked similar imperatives for aggressive differentiation. The emergence of significant candidate negativity specifically in the runoff phase suggests that electoral format represents a crucial moderating variable in understanding negative campaigning patterns. Multi-candidate contexts create incentives for various participants—both candidates and other users—to engage in negativity at similar rates, with candidates showing no systematic differentiation. Binary competition, however, creates asymmetric pressure that increases candidate negativity beyond levels observed among other political users. This electoral format effect operates independently of other contextual factors like national mourning or succession circumstances, demonstrating the powerful influence of competitive structure on campaign behavior.

The patterns observed in Hypothesis E testing reveal several important theoretical insights. First, the persistent predominance of positive over negative messaging (despite increasing negativity) demonstrates that religious and cultural norms establish meaningful boundaries on political discourse in Iran's electoral context. While these boundaries proved more flexible than the hypothesis predicted—allowing substantial negativity increases between elections—they continued to channel criticism primarily toward policy and governance performance rather than personal character. Second, the general absence of significant differences between candidates and other users (except in the 2024 runoff) challenges assumptions about distinctive candidate incentives for restraint. Theoretical models developed in Western contexts often predict that

candidates, facing greater accountability and visibility, should exercise more caution than non-candidate political actors. The Iranian evidence suggests that campaign dynamics create relatively uniform pressures toward negativity across different types of actors, with official candidate status providing neither systematic protection against nor encouragement toward negative messaging—except when binary competition creates distinctive strategic imperatives. Third, the emergence of significant candidate-user differences specifically in the runoff phase highlights the conditioning role of electoral format. Theories of negative campaigning must account for how competitive structure—not just competitive intensity—shapes strategic calculations. Binary competition creates qualitatively different decision environments than multi-candidate contexts, generating distinctive patterns of negative messaging that cannot be reduced to simple functions of closeness or stakes. Fourth, the evolution from 2021 to 2024 demonstrates that cultural constraints on negativity operate dynamically rather than statically. The substantial increase in overall negativity occurred despite consistent religious leadership pronouncements against mudslinging and seemingly intensified normative pressures during the 2024 mourning period. This suggests that cultural boundaries represent negotiated rather than fixed parameters, capable of shifting in response to competitive pressures, strategic learning, and changing campaign technologies. The continued restraint on personal attacks alongside increasing policy criticism indicates selective evolution rather than wholesale abandonment of traditional constraints. The findings regarding overall negativity levels challenge simplistic characterizations of Iranian electoral discourse as either purely constrained by religious norms or unconstrained like Western democracies. Instead, they reveal a complex middle ground where meaningful normative boundaries shape the form and focus of criticism while permitting substantial evolution in its volume and intensity. This pattern aligns with theoretical frameworks emphasizing "bounded contestation" in hybrid regimes, where

criticism operates within carefully calibrated parameters that permit genuine political competition while maintaining core system stability. The statistical finding that candidates generally do not differ from other users in negativity levels (except in runoff contexts) further illuminates the nature of these boundaries. Rather than creating special constraints on official candidates, Iranian electoral norms appear to establish parameters that apply relatively uniformly across political discourse participants. This uniform application suggests that normative boundaries derive from broader cultural and religious frameworks rather than specific institutional rules governing candidate behavior.

The analysis of Hypothesis E reveals qualified support characterized by descriptive confirmation, unexpected contextual evolution, and complex statistical relationships varying across electoral formats. The fundamental prediction that positive messaging would exceed negative messaging found consistent support across both elections despite substantial increases in overall negativity. The hypothesis's secondary prediction regarding more pronounced positivity in 2024 due to mourning constraints failed, with negativity instead increasing substantially demonstrating how competitive imperatives can override even seemingly powerful normative pressures. The statistical analysis examining candidate-user differences revealed that official candidate status generally does not predict distinctive negativity levels, suggesting relatively uniform application of whatever normative boundaries exist in Iranian electoral discourse. However, the emergence of significantly higher candidate negativity specifically in the 2024 runoff phase demonstrates how electoral format creates distinctive strategic environments that modify standard patterns. These findings advance understanding of how religious and cultural norms interact with political competition in hybrid regimes. Rather than operating as fixed constraints, normative boundaries demonstrate flexibility and strategic responsiveness while

maintaining directional influence on the form and focus of political criticism. The evidence supports models of "bounded" rather than "unbounded" critical discourse, where meaningful constraints shape political communication without precluding genuine competitive dynamics or strategic adaptation across varying electoral circumstances.

7.7 Summary and Conclusions

The comparative analysis of supply-side hypotheses across the 2021 and 2024 Iranian presidential elections reveals both consistent patterns and contextual variations in negative campaigning strategies. Table 4 summarizes these findings.

Table 4: Summary of Supply-Side Hypothesis Testing

Hypothesis	Description	2021 Result	2024 First Round	2024 Second Round	Pattern
A: Government Target	Government-affiliated candidates are primary targets of negative messages	Supported (coef=0.896, p<0.01)	Supported (coef=0.27, p<0.01)	Supported (coef=0.222, p<0.01)	Consistent support across all electoral contexts
B: Challenger Strategy	Challengers use more negative messages than frontrunners	NOT Supported (Raisi 29.5% ~ Hemmati 29.3%)	NOT Supported (Pezeshkian 48.1% > Jalili 29.9%)	NOT Supported (Pezeshkian 47.2% > Jalili 29.4%)	Hypothesis contradicted: frontrunners used equal/More negativity targeting incumbent government
C: Third-Place Targeting	Candidates in third place receive fewer attacks	Supported (Rezaei ~7%; others <15%)	Limited Testing	Not Applicable	Support when testable
D: Principlist Attacks	Minimal negative attacks among principlist candidates	Strongly Supported (near-zero attacks);	Supported (coef=-0.2, p<0.01)	Not Applicable	Perfect coordination in 2021 (near-zero attacks); Strong coordination in 2024 (significantly restrained attacks)
E: Overall Negativity	Candidates use fewer negative than positive messages	DESCRIPTIVE: Supported (28%<52%); REGRESSION: Not sig.	DESCRIPTIVE: Supported (39%<pos); REGRESSION: Not sig.	DESCRIPTIVE: Supported; REGRESSION: Sig. (coef=0.408, p=0.031)	Descriptive consistently supported; candidates similar to users except in runoff

The findings reveal three distinct patterns in supply-side hypotheses testing:

1. **Consistent Support:** Hypotheses regarding government targeting (A) demonstrated strong, significant support across all electoral phases, suggesting fundamental accountability mechanisms that operate regardless of specific electoral circumstances. This pattern provides evidence that government-affiliated candidates remain primary targets of criticism across varying contexts, reflecting a structural feature of electoral politics in Iran's hybrid regime.

2. **Evolving Relationships:** Several hypotheses showed changing patterns between elections, though not always in theoretically predicted directions. Principlist attack patterns (D) demonstrated the strongest factional coordination in 2021 with near-zero attacks among principlist candidates, followed by slightly weakened but still strong coordination in 2024 with very limited intra-factional attacks. This evolution suggests that factional solidarity represents a flexible strategic resource that can be deployed with varying intensity based on contextual calculations, with the 2021 election showing nearly perfect coordination and 2024 maintaining strong coordination despite more competitive pressures. The challenger strategy hypothesis (B) revealed consistent contradiction of theoretical predictions across both elections, with frontrunners employing equal or greater negativity than challengers due to their strategic positioning as "system challengers" targeting incumbent government rather than electoral opponents.

3. **Contextual Dependency:** Some hypotheses demonstrated significant contextual sensitivity based on electoral format and competitive structure. Overall negativity levels (E) increased substantially between elections (from 28% to 39%), contradicting predictions that religious constraints and mourning context would reduce negativity in 2024. More significantly, the relationship between candidate status and negativity levels varied by electoral format:

candidates showed no significant difference from other political users in negativity levels during multi-candidate contexts (2021 and 2024 first round), but employed significantly more negativity than other users during the binary competition of the 2024 runoff phase. This format-specific pattern suggests that the structure of competition—not just its intensity—fundamentally shapes strategic messaging calculations.

These patterns demonstrate that negative campaigning in Iran's hybrid regime reflects a complex interaction between universal strategic calculations and context-specific adaptations. While certain fundamental mechanisms—like accountability-oriented criticism of government-affiliated candidates—appear to transcend specific electoral circumstances, others demonstrate significant adaptation or outright contradiction of Western-derived theoretical predictions. The unexpected finding that frontrunners consistently used more negativity than challengers, combined with the format-dependent relationship between candidate status and negativity, highlights how Iran's distinctive factional system and hybrid regime characteristics create strategic imperatives that diverge from conventional competitive positioning theory. Similarly, the evolution from near-perfect to strong-but-slightly-weakened principlist coordination demonstrates dynamic strategic adaptation rather than static factional constraints. This nuanced understanding of supply-side dynamics, encompassing consistent patterns (government targeting), reversed predictions (challenger strategy), strategic flexibility (principlist coordination), and format-dependent relationships (overall negativity), provides the foundation for examining how voters responded to negative messaging across these distinctive electoral contexts, which will be explored in Chapter 8.

Chapter 8: Demand-Side Results: Audience Reception of Negative Campaigning

This chapter presents the empirical findings related to the demand-side hypotheses of negative campaigning across the 2021 and 2024 Iranian presidential elections. Following the comparative approach established in Chapter 7, this chapter examines each hypothesis across both electoral contexts to identify consistent patterns and contextual variations in how voters processed and responded to negative campaign messages. While the supply-side analysis focused on candidates' strategic deployment of negative messaging, this demand-side analysis examines how Iranian citizens engaged with, evaluated, and responded to such content. By analyzing these response patterns across different electoral contexts, we can identify which aspects of audience reception represent universal psychological mechanisms versus those that demonstrate contextual sensitivity in Iran's distinctive political environment.

Content analysis of campaign communications on Twitter(X) reveals several significant patterns regarding negativity prevalence across the 2021 election. Using the computational methods detailed in Chapter 6 (section 6.4), tweets were classified according to three dimensions: general negativity, character attacks, and political attacks. These classifications revealed that negative messaging constituted approximately 28% of campaign-related content from candidates themselves, with considerable variation between candidates as shown in Table 6.1.

Analysis of the broader Twitter(X) dataset containing 2,665,084 tweets posted by 126,596 unique users reveals that political discourse was dominated by criticism of the Rouhani administration. Topic modeling identified 25 distinct topics within the election discourse, with approximately 12% of all content focused specifically on general objections to President Rouhani and his government's performance, and another 12% focused on candidate disqualifications. The

remaining content addressed specific policy domains including negotiations, livelihood problems, COVID-19, economic issues, and institutional criticisms.

Sentiment analysis of this broader dataset confirms the prevalence of negativity while revealing important nuances. As shown in Figure 6, while the majority of tweets maintained a neutral emotional charge throughout the campaign period, negative content increased noticeably as the election date approached.

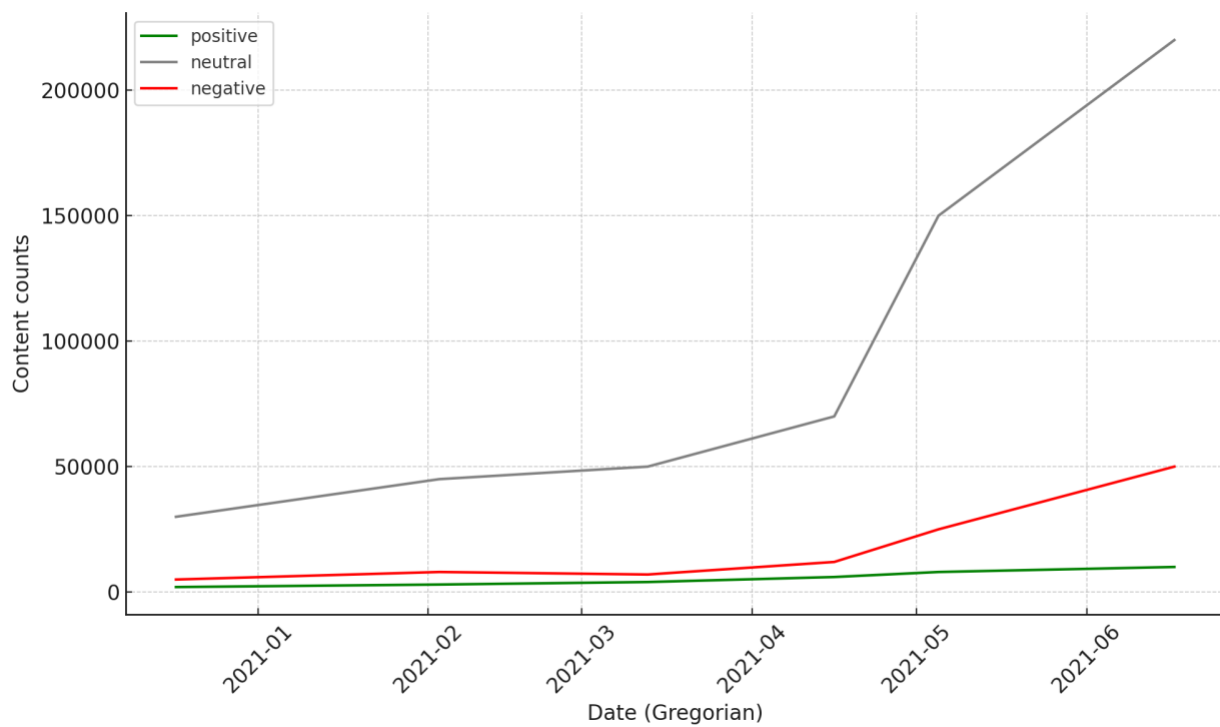


Figure 6: Content sentiment analysis over time

This temporal pattern aligns with established theory suggesting that time pressure intensifies negative campaigning as candidates face decreasing opportunity to persuade voters before election day. Hashtag analysis (Figure 7) provides additional insight into discourse themes, with the most frequent hashtags relating to the election itself (#انتخابات, #انتخابات_1400), expressions of electoral intent (#ما_منتظر_انتخاباتیم, #رأی_میدهم), and references to President Rouhani (#روحانی).

Notably, hashtags promoting election boycotts (رای_بی_رای, #رای_من_سرنگونی) also appeared among the most frequent, indicating significant anti-participation sentiment within the Twitter(X) discourse.



Figure 7: Most used hashtags by users

Demographic analysis reveals significant variations in how different population segments responded to negative campaigning. The comprehensive Twitter(X) analysis provides valuable additional context regarding the demographic composition of the online discourse. Both our primary analysis and the broader Twitter(X) study revealed a substantial gender imbalance in the Twitter(X) user population, with approximately 76% of users identified as male and only 23% as female. This persistent imbalance suggests structural patterns in political participation in digital spaces in the Iranian context that transcend specific electoral circumstances. The factional distribution of users reveals additional demographic insights. The comprehensive Twitter(X) analysis (Figure 8) shows that approximately 40% of users were categorized as officials and

supporters of the regime, 20% as Pahlavi supporters, 20% as media people and general public, 11% as reformists, and 4% as MEK supporters, with smaller percentages in other groups. This distribution demonstrates the dominance of system-supporting voices in the online discourse, at least in terms of user numbers, though not necessarily in terms of content production.

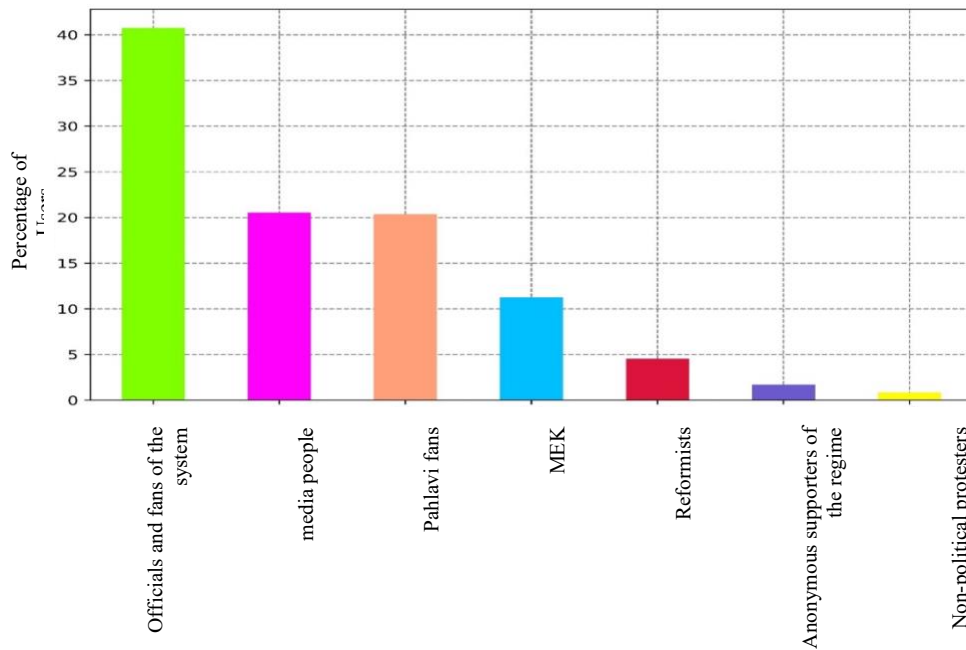


Figure 8: Percentage of users in groups

The factional sentiment analysis (Figure 9) provides additional nuance regarding demographic response patterns. While neutral content dominated across all groups, there were significant differences in negativity levels across factional lines. The MEK opposition group demonstrated the highest proportion of negative content, followed by reformists, while the group of anonymous regime supporters showed the highest proportion of positive content. These variations suggest that factional identity significantly moderated emotional response patterns to campaign discourse.

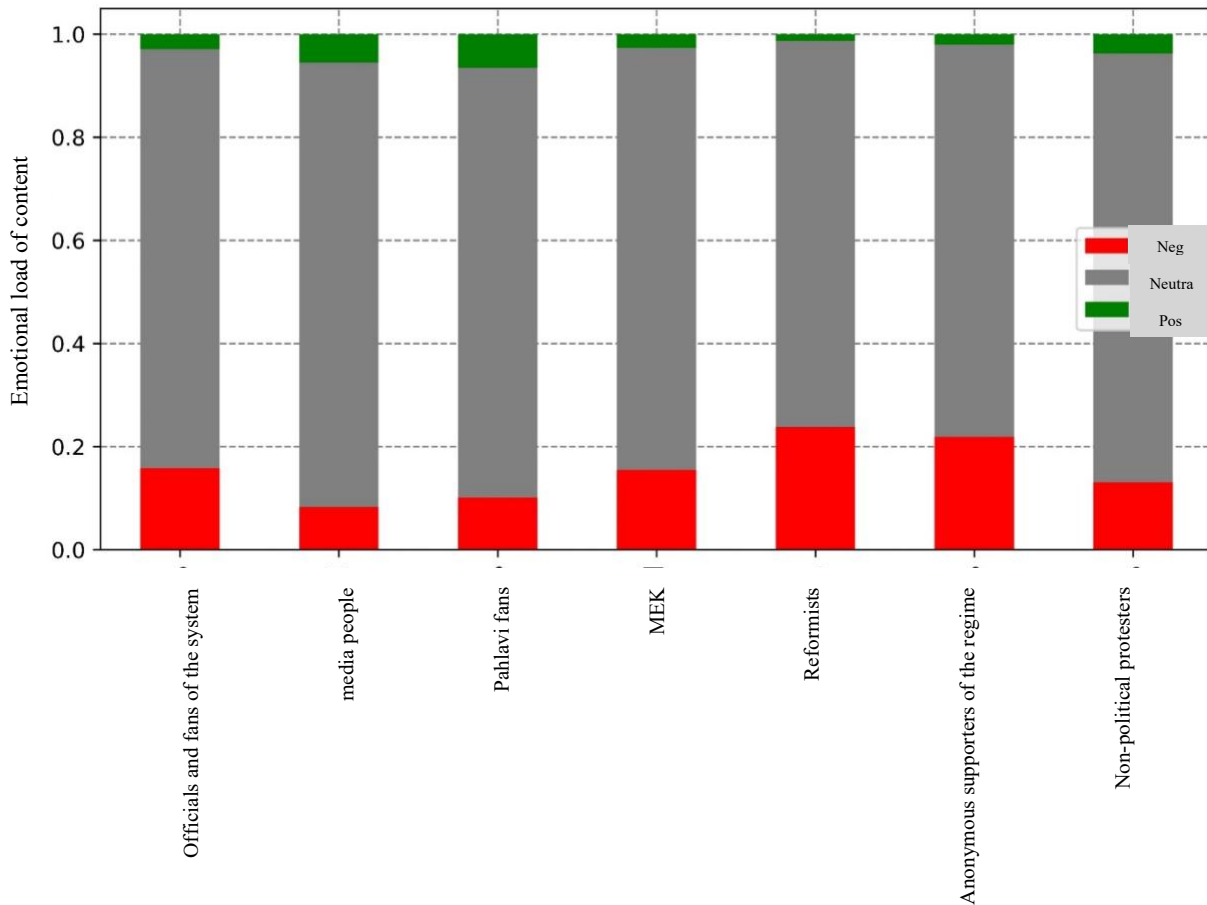


Figure 9: The percentage of emotional content of tweets by groups

Political orientation analysis revealed a significant imbalance in our sample. Among users whose political orientation could be determined, there were 3,167 conservative users compared to just 302 reformist users. These users posted 31,821 and 2,506 replies respectively, indicating not only a numerical advantage for conservative users but also higher engagement levels per user. This imbalance is important to consider when interpreting engagement patterns, as it suggests the online discourse may have been dominated by conservative perspectives.

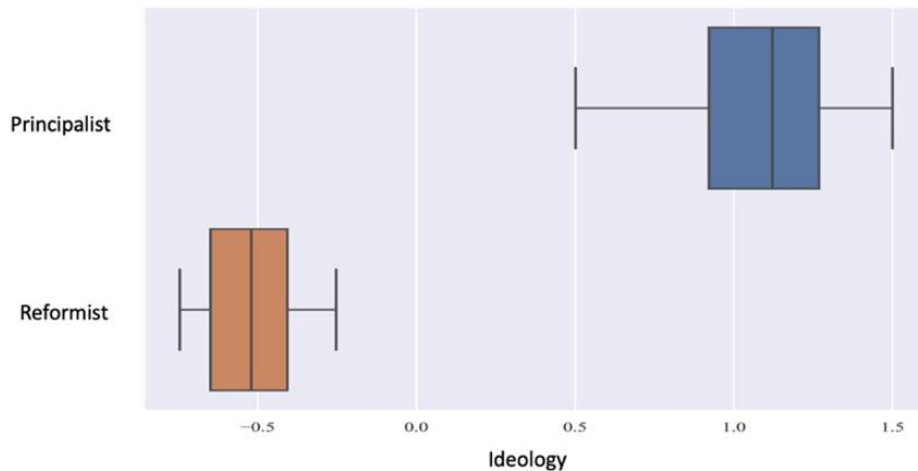


Figure 10: Box Plot of Users' Political Orientation Scores

8.1 Negativity Bias (Hypothesis F)

The analysis reveals an interesting evolution in the relationship between negativity and engagement metrics across the two elections. In 2021, there was significant support for negativity bias, particularly regarding message sharing. Regression analysis showed a statistically significant relationship between tweet negativity and retweet count (coefficient = 0.1121, $p = 0.002$, Table A5), though the relationship with likes was only marginally significant (coefficient = 0.090, $p = 0.028$, Table A4). This pattern changed notably in the 2024 first-round election, where no significant relationship was found between negativity and either likes (coefficient = -0.086, $p = 0.172$, Table B4) or retweets (coefficient = 0.045, $p = 0.307$, Table B5). During the second round, a potential re-emergence of negativity bias appeared for retweets (coefficient = 0.099, $p = 0.058$, Table C4), approaching statistical significance at the $p < 0.05$ level, though no significant relationship was found for likes (coefficient = -0.110, $p = 0.164$, Table C3).

The diminishing relationship between negativity and engagement from 2021 to 2024 suggests significant contextual evolution rather than a universal psychological constant. Several factors may explain this shift: First, **Audience Adaptation**: As negativity became more prevalent in the 2024 campaign (39% compared to 28% in 2021), its attention-capturing advantage may have diminished through habituation. Second, **Crisis Context**: The 2024 election's extraordinary context following President Raisi's unexpected death likely influenced audience information processing in ways that modified standard negativity bias patterns. The national mourning period may have created distinctive emotional dynamics that affected how citizens engaged with campaign messages.

The marginal re-emergence of negativity bias in the 2024 second round suggests that electoral format potentially moderates the relationship between message negativity and engagement. The binary competition of the runoff phase, with its heightened stakes and clearer factional contrast, may have reactivated attention advantages for negative content that had diminished in the more distributed first-round environment. The evolution in negativity bias findings challenges universalist psychological theories that assume constant mechanisms across contexts. While negativity bias appeared to function as predicted in 2021, its disappearance in the 2024 first round and marginal re-emergence in the second round suggests that this psychological mechanism operates conditionally rather than universally in political communication. This conditional functioning aligns with recent cross-cultural research suggesting that while negativity bias represents a fundamental psychological tendency, its manifestation in political contexts is significantly shaped by information environment characteristics, audience expectations, and electoral circumstances. The findings highlight the importance of distinguishing between the existence of psychological mechanisms and their

variable expression across different contexts. While negativity bias likely represents a universal psychological tendency, its manifestation in engagement metrics appears significantly moderated by contextual factors in ways that challenge simplistic universal models.

8.2 Boomerang Effect (Hypothesis G)

The regression analysis provides consistent, strong support for Hypothesis G across both elections. In 2021, there was a robust, statistically significant relationship between tweet negativity and negative sentiment in replies (coefficient = 0.3884, $p < 0.01$, Table A6). This pattern continued in the 2024 election, with even stronger relationships observed in both the first round (coefficient = 0.697, $p < 0.01$, Table B6) and second round (coefficient = 0.633, $p < 0.01$, Table C5). These findings consistently demonstrate that negative campaign messages generated significantly more negative responses than positive messages across all electoral phases, supporting the boomerang effect hypothesis. The increased coefficient magnitude in 2024 compared to 2021 suggests that the boomerang effect actually intensified rather than diminished between elections, despite other changing patterns.

While the statistical significance of the boomerang effect remained consistent across elections, the intensity of this relationship showed interesting variation. The substantially stronger coefficients in 2024 (0.697 and 0.633) compared to 2021 (0.3884) suggest that audience sensitivity to negativity increased rather than decreased over time, contrasting with the declining engagement advantage observed in Hypothesis F testing. This intensification may reflect several contextual factors:

1. **Increasing Negativity Prevalence:** As negative messaging became more common in 2024, audience tolerance may have decreased, generating stronger negative reactions to

such content. This would represent a normative backlash against perceived campaign incivility.

2. **Crisis Context:** The 2024 election's extraordinary circumstances following President Raisi's death may have created heightened audience sensitivity to perceived inappropriately negative messaging during a period of national mourning.
3. **Intensity Variation:** While the 2024 election showed more overall negativity, its character may have evolved in ways that triggered stronger normative sanctions from audiences, particularly if perceived as crossing boundaries of appropriate discourse.

The network visualization analysis provides additional context for understanding these response patterns. As shown in Figures 11, 12, the factional clustering of social media users became increasingly pronounced between elections, with the 2024 runoff phase showing particularly clear binary community division. As illustrated in Figure 11, the 2021 election Twitter(X) conversation organized into seven distinct communities, each corresponding to a presidential candidate: Abdolnaser Hemmati (orange cluster), Saeed Jalili (purple cluster), Mohsen Rezaei (fluorescent cluster), Ebrahim Raisi (turquoise cluster), Alireza Zakani (blue cluster), Amir-Hossein Ghazizadeh (pink cluster), and Mohsen Mehralizadeh (green cluster). This visualization provides clear evidence of how selective exposure manifested in community formation patterns, with limited cross-community engagement despite the seemingly open digital environment. The network structure from the 2024 first round, shown in Figure 12, demonstrates similar community segmentation with six distinct clusters forming around each candidate:

Masoud Pezeshkian (green), Saeed Jalili (purple), Mostafa Pourmohammadi (blue), Alireza Zakani (orange), Amir-Hossein Ghazizadeh Hashemi (pink), and Mohammad-Baqer Qalibaf (yellow). These clear community boundaries visually represent the selective exposure patterns confirmed in our regression analysis, where users predominantly engaged with ideologically aligned content.

The evolution of community structure becomes particularly evident in Figure 13, where the second-round network consolidates into just two dominant clusters organized around the remaining candidates: Pezeshkian (green) and Jalili (purple). This binary polarization illustrates how the factional division intensified during the runoff phase, with even clearer boundaries between communities than observed in earlier electoral stages.

This intensifying community structure may have amplified negative responses to out-group criticism through strengthened group identity processes. The consistent, strengthening boomerang effect across elections provides robust support for theories regarding normative constraints on political discourse in Iran's unique cultural and religious context. Unlike negativity bias, which showed contextual variation, the backlash against negative messaging demonstrated persistent and intensifying patterns across different electoral contexts. This finding suggests that while engagement metrics showed audience adaptation to increasing negativity, normative judgments about such content remained consistent or even strengthened. This intensification of the boomerang effect between elections particularly aligns with what religious scholars have termed the "dignity preservation function" in Islamic political discourse, where perceived violations of appropriate communication norms trigger increasingly strong social sanctions as such violations become more common.

The candidate-centered clustering visible in Figures 11 and 12 reflects a fundamental characteristic of Iranian factionalism that distinguishes it from Western partisan politics. In Iran's non-party system, factional competition manifests through personal coalitions organized around individual candidates rather than through institutionalized party structures (Section 1.4.2). This candidate-centered appearance does not contradict the factional interpretation but rather demonstrates how factionalism operates during the primary phase of electoral competition, when multiple candidates from the same faction compete for support. Importantly, the network structure reveals that users do not interact exclusively with a single preferred candidate but rather engage with multiple candidates—both allies sharing their factional orientation and opponents from rival factions—creating overlapping communication patterns that make factional boundaries less visually distinct than the clear binary polarization observed in Western partisan networks. The relatively diffuse clustering in these first-round networks also reflects practical visualization constraints: with seven candidates in 2021 and six in the 2024 first round, and substantial numbers of users distributed across these candidacies, the network structure captures multiple simultaneous conversations rather than the binary factional division that becomes visually apparent when competition narrows to two candidates. The factional underpinnings of these candidate-centered networks emerge through complementary evidence rather than visual structure alone: principlist candidates demonstrated systematic coordination by avoiding attacks on co-factional competitors despite electoral rivalry (Hypothesis D, Section 7.4, coefficient = -0.2, $p < 0.01$), eliminated candidates uniformly endorsed factional allies in the runoff phase, and as Figure 13 will show, these candidate-centered clusters consolidated into two clearly defined factional blocs during the second round when the field narrowed and visualization constraints diminished. The evolution from diffuse candidate-centered clustering to binary factional

polarization thus illustrates both the staged nature of factional mobilization in Iran's electoral system and how network visualization clarity depends on the number of competing candidates, with underlying factional alignments revealed through behavioral coordination patterns (targeting strategies, endorsement decisions, and support migration) rather than merely through visual clustering alone.

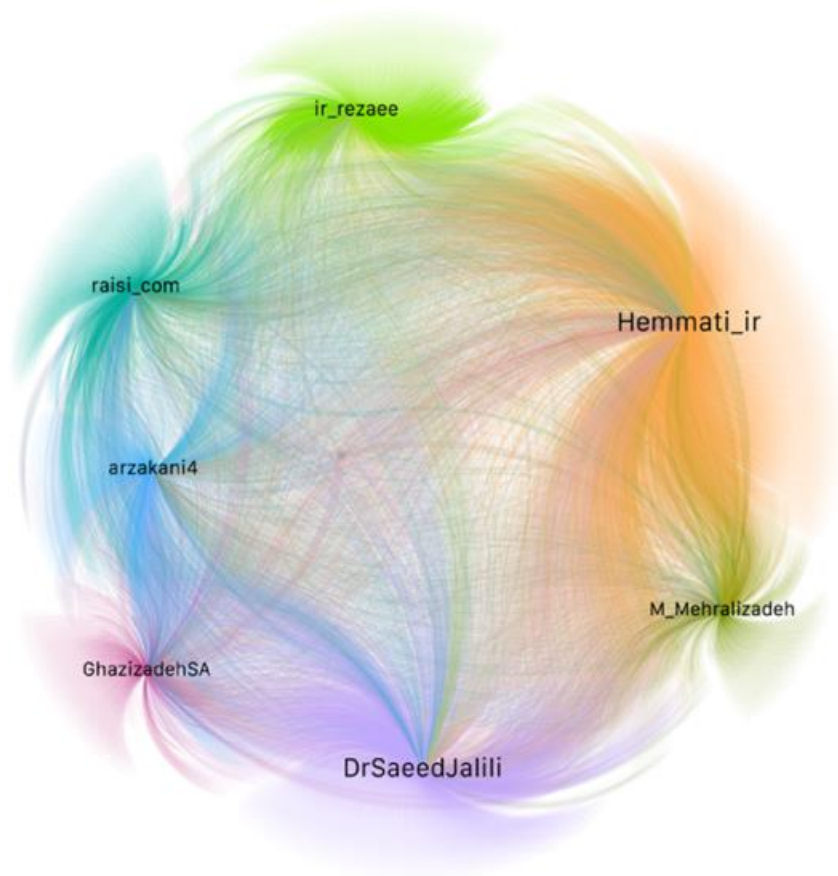


Figure 11: The reply network of users commenting on the tweets of presidential candidates in 2021

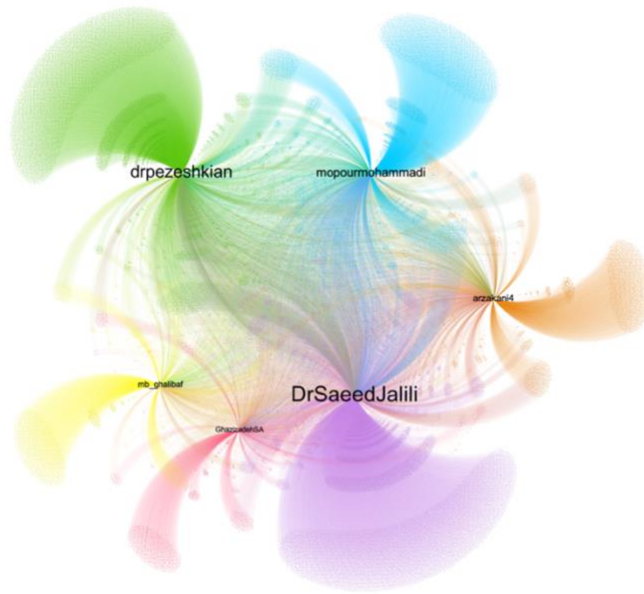


Figure 12: The reply network of users commenting on the tweets of candidates in the first round of the 2024 presidential election between May 31 and July 6, 2024.

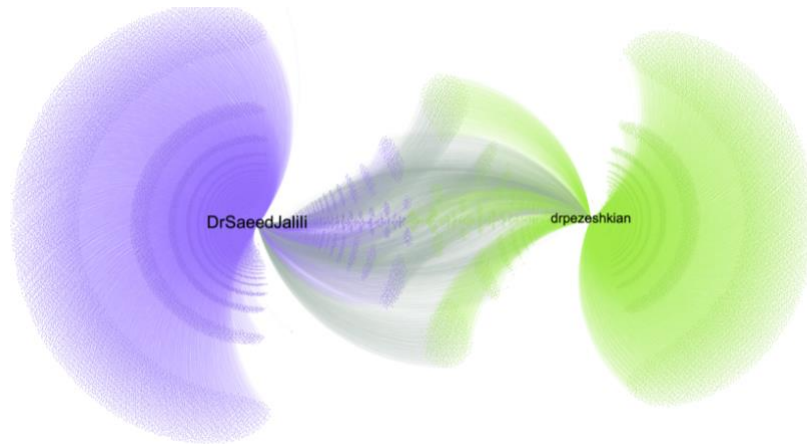


Figure 13: The reply network of users commenting on the tweets of the two candidates who advanced to the second round of the presidential election between May 31 and July 13, 2024.

8.3 Negative Selective Exposure (Hypothesis H)

The analysis of selective exposure in Iran's factional political environment reveals complex patterns that operate across multiple dimensions of engagement. Hypothesis H predicted that individuals would selectively engage with negative political messages aligned with their political views, a phenomenon fundamental to understanding information processing in politically divided contexts. Regression analysis from the 2021 election provides evidence for selective exposure operating through distinct mechanisms. The network visualizations clearly demonstrate the first dimension: users selectively choose which candidates' communications to engage with based on ideological alignment. As illustrated in Figure 4, the 2021 election Twitter(X) conversation segmented into seven distinct communities, each organized around a different presidential candidate, with limited cross-community engagement. These discrete community boundaries provide visual evidence of selective exposure at the level of attention allocation—users predominantly engaged with candidates aligned with their political orientation, creating what media scholars term "echo chambers" where information circulates primarily within ideologically homogeneous groups.

The regression analysis examining reply sentiment reveals a second, more nuanced dimension of this selective engagement. The data shows a statistically significant relationship between ideology alignment and sentiment response (coefficient = -0.261, $p < 0.01$, Table A7). However, the negative coefficient indicates that when users from aligned ideological backgrounds engaged with candidates' tweets, they actually left less positive (or more negative/critical) replies compared to baseline patterns. This counterintuitive finding requires careful interpretation within Iran's multi-candidate factional context. Rather than responding with unconditional positive support, aligned users demonstrated more critical engagement with co-

factional candidates' communications. This pattern reflects several important dynamics of Iran's factional political competition. First, the measurement of ideology alignment captures factional orientation (principlist versus reformist) rather than support for specific candidates within those factions. During competition phases when multiple candidates from the same faction compete, supporters of one principlist candidate may engage critically with other principlist candidates, and similarly, supporters of one reformist candidate may critique other reformist candidates. This intra-factional competition creates conditions where ideologically aligned users—sharing the same broad factional orientation—nonetheless engage in critical discourse as they advocate for their preferred candidate within the factional camp. Second, aligned users may hold co-factional candidates to higher standards of accountability, expecting better performance from candidates representing their political tendency. Third, users may feel more license to offer constructive criticism to candidates from their own faction, perceiving such critique as improving their faction's competitive position rather than undermining it. Fourth, aligned users may engage more analytically and substantively with content they take seriously from candidates whose political positioning matters to them, while maintaining more passive or dismissive responses to opposing candidates' communications. In contrast, users' more passive or dismissive responses to misaligned candidates' tweets may indicate lower engagement intensity despite occasional exposure—they may ignore, scroll past, or respond with brief dismissals rather than sustained critical engagement.

For the 2024 election, API restrictions implemented after Twitter(X)'s ownership change prevented collection of comprehensive follower data, making it impossible to implement the political orientation algorithm that was successfully applied to the 2021 dataset. This limitation prevented direct testing of the sentiment dimension of Hypothesis H for the 2024 election

through regression analysis. Despite this limitation, the network visualizations from the 2024 election provide valuable insights regarding the continuing operation of selective exposure at the attention allocation level. The network visualizations from the 2024 election (Figures 12 and 13) suggest these community boundaries became even more pronounced than in 2021, particularly during the second round where the network clearly divided into two dominant clusters organized around Pezeshkian and Jalili. The candidate-centered clustering visible in these network visualizations merits careful interpretation within Iran's distinctive political context. Unlike Western partisan systems where party institutions structure exclusive engagement patterns, Iranian users demonstrate more fluid interaction behaviors: they follow and engage with their preferred candidate, consider alternative co-factional candidates, and also interact with factional opponents through criticism and debate. This cross-cutting pattern of engagement creates overlapping communication networks where individual users may appear connected to multiple candidate-centered clusters, making factional boundaries less visually distinct in multi-candidate competitions than the binary polarization characteristic of two-party systems. Additionally, the relative diffuseness of these first-round network structures partly reflects practical visualization constraints inherent in representing networks with seven candidates (2021) or six candidates (2024 first round), where substantial user populations are distributed across multiple simultaneous candidacies. The factional underpinnings of these apparently candidate-centered patterns emerge through complementary analytical approaches rather than visual structure alone: principlist candidates systematically avoided attacking co-factional competitors despite competing for votes (Hypothesis D, Section 7.4), eliminated candidates uniformly endorsed factional allies in the runoff phase, and as the 2024 second-round network demonstrates, these candidate-centered clusters consolidated into two clearly defined factional blocs when

competition narrowed to two candidates. The evolution from diffuse multi-candidate clustering to binary factional polarization thus illustrates how Iranian factionalism operates through fluid engagement patterns during primary phases, with underlying factional alignments revealed through behavioral coordination (targeting strategies, endorsement decisions, and support migration) rather than through exclusive organizational structures characteristic of Western party systems.

The findings from 2021 provide nuanced support for selective exposure theories in Iran's factional political context. The evidence supports selective exposure operating at two distinct levels: first, at the level of attention and engagement target selection (who users choose to interact with), as demonstrated by clear community clustering in network visualizations; and second, at the level of engagement quality (how users respond when they do engage), as revealed by the sentiment analysis showing more critical responses from aligned users. Unlike party-based selective exposure observed in Western democracies, Iran's factional environment creates what might be termed "factional filtering," where information is processed primarily through alignment with different factional orientations rather than formal party affiliations. However, this factional filtering does not produce uncritical acceptance of aligned messages. Instead, it creates conditions for what might be called "critical engagement within factional boundaries"—a pattern shaped significantly by intra-factional competition where supporters of different candidates within the same ideological camp engage in competitive advocacy and mutual critique during primary phases. This dynamic differs fundamentally from Western partisan selective exposure, where party primary voters typically soften criticism to avoid damaging their party's general election prospects. In Iran's system, where multiple principlist and reformist candidates compete simultaneously without formal primary structures, factional co-partisans engage more freely in

critical discourse, believing such competition strengthens rather than weakens their faction's overall position. Aligned users selectively attend to co-factional candidates but maintain analytical distance in their responses, potentially reflecting not only higher expectations but also strategic positioning within intra-factional competition. This factional filtering appears to function similarly to partisan selective exposure documented in Western contexts in terms of attention patterns, despite the different institutional organization of political competition and the qualitatively different nature of engagement it produces. The community structures observed in network visualizations across both elections suggest that these selective exposure dynamics represent persistent features of Iran's digital political landscape rather than election-specific patterns. The consistent community formation around factional lines demonstrates how social media platforms facilitate "identity-protective cognition" across diverse political systems, even when the specific manifestation of that protection takes unexpected forms—in this case, critical evaluation and intra-factional competition rather than defensive support of all aligned sources.

8.4 Ideology Alignment (Hypothesis I)

The analysis of the 2021 election data revealed complex results regarding the interaction between negativity and political ideology. Hypothesis I predicted that aligned users would respond more positively to negative messages from ideologically aligned sources, representing a form of partisan motivated reasoning where source credibility shields negative content from backlash. When examining the relationship between ideology alignment and positive sentiment in replies, both ideology alignment (coefficient = -1.7638, $p < 0.01$) and tweet negativity (coefficient = -0.3593, $p < 0.01$) showed significant but negative relationships (Table A8). When examining the three-class sentiment variable (Table A9), negativity remained significant (coefficient = -0.1209, $p < 0.01$), but ideology alignment was not statistically significant

(coefficient = -0.0149, $p = 0.370$). These findings contradict Hypothesis I, suggesting that negativity generally elicits negative responses regardless of ideological alignment, though the strength of this response varies based on factional affiliation. As with Hypothesis H, direct testing for the 2024 election was not possible due to API restrictions that prevented political orientation determination.

The contradiction of Hypothesis I in the 2021 data requires careful interpretation in light of Iran's multi-candidate factional system. As discussed in Section 8.3, the negative coefficient for ideology alignment partly reflects intra-factional competition dynamics, where supporters of different candidates within the same faction engage critically with alternative co-factional candidates during primary competition phases. However, Hypothesis I tests a distinct mechanism from Hypothesis H: rather than examining general response patterns to co-factional sources (Hypothesis H), Hypothesis I specifically examines whether aligned users respond MORE POSITIVELY to NEGATIVE content from aligned sources. The expectation was that when a co-factional candidate engages in negative campaigning against an opponent, aligned users would support or defend this negative messaging, viewing attacks on factional opponents as strategically beneficial. The negative coefficients for both ideology alignment and negativity demonstrate that this protective filtering does not occur—even when negative messages come from ideologically aligned sources and target factional opponents, users respond negatively to the negativity itself. This pattern indicates that Iranian social media users demonstrated "content primacy" over "source primacy" in their responses—the negative content characteristics influenced sentiment more strongly than source alignment, even in cases where users might have strategic or identity-based motivations to support negative attacks from their faction. While intra-factional competition explains critical responses to co-factional candidates generally (Hypothesis

H), it cannot explain the failure to support negative attacks against opposing factions (Hypothesis I).

While direct comparison with 2024 was not possible, the intensified boomerang effect observed in Hypothesis G testing suggests that content primacy likely continued or even strengthened in the 2024 election, with users responding negatively to negative content regardless of source alignment. The increasing boomerang effect coefficient from 2021 (0.3884) to 2024 first round (0.697) and second round (0.633) indicates growing audience sensitivity to negative messaging that appears to transcend factional boundaries. The findings challenge assumptions about how political identity shapes response patterns to negative content in several important ways. While selective exposure theory correctly predicted exposure patterns based on ideological alignment (as demonstrated in network clustering patterns in Section 8.3), it did not accurately predict response valence—users still responded negatively to negative content from aligned sources, even when that negative content targeted factional opponents. This pattern suggests that in Iran's political context, normative expectations regarding appropriate political discourse may transcend factional differences and strategic considerations. The cultural and religious norms that discourage excessive negativity appear to operate across factional boundaries, creating what religious scholars term "trans-factional communication norms" that shape discourse evaluation regardless of political alignment or strategic advantage. Users' consistent negative responses to negative content—whether from aligned or opposing sources, whether targeting co-factional or opposing candidates—demonstrates that normative evaluations of campaign civility override both identity-based filtering and strategic reasoning in Iran's political discourse. These findings align with recent cross-cultural research suggesting that in societies with stronger collectivist orientation and religious ethical frameworks, normative

constraints on discourse may transcend political divisions more powerfully than in highly individualistic contexts where partisan identity operates as a dominant social identity. The failure of Hypothesis I, when interpreted alongside the intensifying boomerang effect (Hypothesis G) and the patterns of critical engagement within factional boundaries (Hypothesis H), reveals a distinctive configuration of political communication norms in Iran where factional identity structures attention and engagement patterns but does not override normative evaluations of appropriate discourse.

8.5 Gender Differences (Hypothesis L)

The analysis reveals interesting evolution in gender effects across the two elections. In 2021, regression analysis showed a statistically significant relationship between gender and negative sentiment in responses to campaign content, but in the opposite direction from what was predicted (coefficient = -0.2187, $p < 0.01$, Table A10). Contrary to Hypothesis L, female users demonstrated less negative engagement with campaign content than male users. When limiting the analysis to replies made only on negative tweets from candidates (Table A11), the gender effect remained significant (coefficient = -0.1213, $p < 0.01$), confirming that women consistently showed less negative engagement than men across all types of campaign content. In the 2024 election, however, this pattern changed notably. Regression analysis for both the first round (Tables B7 and B8) and second round (Tables C6 and C7) found no statistically significant relationship between gender and negative sentiment in responses to campaign content. This shift indicates that the gender difference observed in 2021 did not persist into the 2024 election. The evolution from a reverse gender effect in 2021 to no significant effect in 2024 suggests important contextual dynamics in how gender shapes political communication patterns. Several factors might explain this shift:

1. **Crisis Context:** The extraordinary circumstances of the 2024 election following President Raisi's death may have created distinctive emotional dynamics that modified gender-based response patterns observed in more typical electoral contexts.
2. **Community Evolution:** The network analysis shows increasingly polarized factional communities between elections, potentially overriding gender-based communication differences with stronger factional alignment effects.
3. **Changing Participation Patterns:** Though the gender distribution remained similar across elections (76-78% male, 22-23% female), the composition of these groups may have shifted in ways not captured by simple demographic categorization.

An important contextual constant was the substantial gender imbalance in Twitter(X) participation across both elections. This persistent participation gap suggests structural patterns in political engagement that transcend specific electoral circumstances, reflecting broader societal factors shaping digital political participation in Iran. The findings regarding gender effects challenge simplistic assumptions about universal gender differences in political communication. The reverse effect observed in 2021—where women showed less negative engagement than men—contradicts Western research suggesting women's greater sensitivity to political negativity. This contradiction highlights the importance of cultural context in understanding how gender shapes political communication. The disappearance of significant gender effects in 2024 further suggests that gender-based response patterns may be context-dependent rather than representing universal psychological differences.

Another important limitation of this analysis is that it examines sentiment only among users who chose to reply to campaign content. The dependent variable measures the negativity of replies made, but does not capture whether women were more or less likely to engage with negative content in the first place. The observed pattern—where women demonstrated less negative sentiment in their replies—could reflect either (1) women engaging with negative content but responding more moderately, or (2) women selectively avoiding negative content altogether, with only those who do engage leaving less negative replies. Distinguishing between these mechanisms would require analysis of reply propensity rates by gender, which future research could explore by examining the ratio of views-to-replies or follower-to-engagement patterns across demographic groups.

8.6 Summary and Conclusions

The comparative analysis of demand-side hypotheses across the 2021 and 2024 Iranian presidential elections reveals both persistent psychological mechanisms and contextual variations in how citizens processed and responded to negative campaign messages. Table 5 summarizes these findings. The findings reveal three distinct patterns in demand-side hypotheses testing:

1. Consistent Support: The boomerang effect (Hypothesis G) demonstrated strong, significant support across all electoral phases, with an intensifying relationship between message negativity and negative response sentiment (coefficients increasing from 0.3884 in 2021 to 0.697 and 0.633 in 2024). This consistency suggests that normative evaluations of negative messaging represent a fundamental feature of political communication in Iran that transcends specific electoral contexts. The strengthening effect over time indicates growing audience sensitivity to negative content, reflecting what might be termed "normative fatigue" where increased exposure to negativity amplifies rather than dulls negative reactions.

Table 5: Summary of Demand-Side Hypothesis Testing

Hypothesis	Description	2021 Result	2024 First Round	2024 Second Round	Pattern
F: Negativity Bias	People engage more with negative messages	Partially supported (retweets: coef=0.1121, p=0.002; likes: coef=0.090, p=0.028)	Not supported (retweets: coef=0.045, p=0.307; likes: coef=-0.086, p=0.172)	Marginally supported (retweets: coef=0.099, p=0.058; likes: coef=-0.110, p=0.164)	Declining support suggesting contextual evolution
G: Boomerang Effect	Users react negatively to negative messages	Supported (coef=0.3884, p<0.01)	Supported (coef=0.697, p<0.01)	Supported (coef=0.633, p<0.01)	Consistent strong support with increasing effect size
H: Negative Selective Exposure	People selectively engage with content from aligned sources and demonstrate critical engagement within factional boundaries	Nuanced support (coef=-0.261, p<0.01): Network analysis confirms selective attention; sentiment analysis shows critical engagement reflecting intra-factional competition	Not Tested	Not Tested	Nuanced support when testable: Selective attention (who) confirmed; critical engagement (how) reflects intra-factional dynamics
I: Ideology Alignment	Users engage positively with negativity aligned with their ideology	Not supported - Contradicted (coef=-1.7638, p<0.01): Even aligned users respond negatively to negative content, showing content primacy over source primacy	Not Tested	Not Tested	Clearly contradicted when testable: Normative constraints transcend factional alignment
L: Gender Differences	Women have more negative engagement with negative messages than men	Not supported - Reverse pattern (coef=-0.2187, p<0.01): Women showed less negative engagement than men	Not supported (no significant effect)	Not supported (no significant effect)	Consistently unsupported with evolving pattern; Note: Analysis measures sentiment among those who replied, not propensity to engage

2. Nuanced and Context-Dependent Patterns: Several hypotheses revealed complex patterns requiring careful interpretation. Selective exposure (Hypothesis H) demonstrated nuanced support operating at two distinct levels: network analysis confirmed that users selectively attend to ideologically aligned candidates (the "who" of engagement), while sentiment analysis revealed critical rather than supportive responses (the "how" of engagement). The negative coefficient (coef=-0.261, $p<0.01$) reflects intra-factional competition dynamics, where supporters of different candidates within the same faction engage critically with alternative co-factional candidates during primary competition phases. This pattern illustrates how Iran's multi-candidate factional system creates distinctive engagement dynamics that differ from Western partisan selective exposure, where primary voters typically soften criticism to protect their party's general election prospects.

Negativity bias (Hypothesis F) showed declining support from partial significance in 2021 to non-significance in 2024, suggesting audience adaptation to increasing negativity levels. As negative content became more prevalent (increasing from 28% in 2021 to 39% in 2024), its capacity to generate distinctive engagement patterns diminished, potentially reflecting normalization of critical discourse within Iran's digital political sphere. Gender effects (Hypothesis L) evolved from a reverse pattern in 2021 (where women demonstrated less negative engagement than men, coef=-0.2187, $p<0.01$) to no significant effect in 2024. This evolution may reflect the crisis context of Raisi's death temporarily suspending normal gendered communication patterns, or the intensification of factional polarization overriding demographic moderators. It should be noted that this analysis examines sentiment among users who chose to reply to campaign content, capturing how negatively different groups respond when they engage,

but not differential propensities to engage with negative content in the first place—an important distinction for future research.

3. Clear Theoretical Contradictions: Ideology alignment (Hypothesis I) was directly contradicted by the empirical findings. The hypothesis predicted that aligned users would respond more positively to negative messages from co-factional sources, particularly when those messages targeted factional opponents. However, both ideology alignment (coef=-1.7638, $p<0.01$) and negativity (coef=-0.3593, $p<0.01$) showed significant negative relationships with positive sentiment. Even accounting for intra-factional competition dynamics discussed in Hypothesis H, this finding reveals that aligned users do not shield or defend negative attacks from their faction against opponents. This demonstrates "content primacy" over "source primacy"—the negative content characteristics influenced sentiment more strongly than source alignment, even when users might have strategic or identity-based motivations to support attacks on factional opponents. This pattern suggests that normative expectations regarding appropriate political discourse transcend factional boundaries in Iran's political context, with cultural and religious norms that discourage excessive negativity operating across factional lines to create what might be termed "trans-factional communication norms."

4. Theoretical Integration: These diverse patterns demonstrate that citizen responses to negative campaigning in Iran's hybrid regime reflect complex interactions between universal psychological mechanisms and context-specific adaptations. While some mechanisms—particularly normative backlash against negativity (Hypothesis G)—appear to function consistently and even strengthen across electoral contexts, others demonstrate significant contextual dependency (Hypothesis F) or operate through distinctive mechanisms shaped by Iran's factional system (Hypothesis H). Most notably, the failure of ideology alignment to

moderate responses to negative content (Hypothesis I) challenges fundamental assumptions about partisan motivated reasoning, suggesting that in contexts with strong collectivist orientations and religious ethical frameworks, normative constraints on discourse may transcend political divisions more powerfully than in highly individualistic Western contexts.

The network visualization analysis further demonstrates how digital political communication in Iran organizes into distinctive community structures that shape how negative messaging circulates and influences public discourse. These factional communities create conditions for selective exposure at the level of attention allocation (who users engage with), while maintaining critical evaluative standards that cross factional boundaries (how users respond to content). The candidate-centered clustering observed in network visualizations reflects Iran's distinctive factional politics, where users interact with multiple candidates simultaneously—engaging with preferred candidates, considering co-factional alternatives, and debating with factional opponents—creating overlapping networks rather than exclusive partisan clusters. The underlying factional structure emerges through behavioral evidence including targeting strategies (Hypothesis D), with principlist candidates systematically avoiding attacks on co-factional competitors, and through consolidation patterns visible in the 2024 second-round network where candidate-centered clusters merged into two clearly defined factional blocs.

Collectively, these findings reveal that while certain psychological principles—particularly normative evaluations of negative communication—may operate across diverse political systems, their specific manifestations are significantly shaped by Iran's unique institutional arrangements, cultural context, and evolving digital landscape. The interaction between universal mechanisms (like negativity bias and boomerang effects) and context-specific factors (like intra-factional competition and trans-factional normative constraints) produces patterns of political

communication that both resemble and diverge from those documented in Western democracies, demonstrating the importance of extending political communication research beyond its traditional geographic and institutional boundaries. This nuanced understanding provides the foundation for a broader comparative discussion of negative campaigning in Iran's hybrid regime, which will be explored in Chapter 9.

Chapter 9: Comparative Analysis and Theoretical Implications

9.1 Framework for Cross-Election Analysis

This chapter provides an integrated analysis of negative campaigning across Iran's 2021 and 2024 presidential elections, synthesizing the supply-side and demand-side findings to develop broader theoretical insights about political communication in hybrid regimes. The comparative approach developed in this research holds significant relevance for understanding how electoral communication functions in non-Western contexts, extending the predominantly Western-focused scholarship on negative campaigning into new institutional and cultural territory.

The comparison offers unique analytical leverage by examining two distinctive electoral contexts within the same institutional framework. The 2021 election represented a typical end-of-term transition following President Rouhani's completion of his second term, while the 2024 election occurred following President Raisi's unexpected death in a helicopter crash. This natural setting enables identification of which negative campaigning patterns represent stable features of Iran's political system versus those that demonstrate contextual adaptation. This distinction is crucial for developing more sophisticated theories of political communication that move beyond the Western liberal democratic model to recognize how universal mechanisms interact with specific institutional arrangements in hybrid regimes.

Examining the supply-side and demand-side hypotheses across both elections reveals three distinct patterns: consistent support across contexts, evolving relationships, and consistently unsupported predictions. These patterns provide valuable insights into negative campaigning's nature in Iran's hybrid regime and contribute to broader theoretical debates about political communication across diverse institutional settings.

9.2 Cross-Electoral Patterns in Hypothesis Testing

Certain mechanisms demonstrated remarkable stability across both elections despite their different contexts. Government-affiliated targeting (Hypothesis A) showed consistent statistical significance in both elections (coefficient=0.896, $p<0.01$ in 2021; coefficient=0.27, $p<0.01$ in 2024 first round; coefficient=0.222, $p<0.01$ in 2024 second round). This persistence suggests that accountability orientation represents a fundamental feature of negative campaigning that transcends specific electoral circumstances. Similarly, the boomerang effect (Hypothesis G) showed consistent significance across all electoral phases, with negative messages reliably generating negative response sentiment (coefficient=0.3884, $p<0.01$ in 2021; coefficient=0.697, $p<0.01$ in 2024 first round; coefficient=0.633, $p<0.01$ in 2024 second round). This stability indicates that psychological responses to perceived negativity operate consistently regardless of electoral context.

Other mechanisms showed significant evolution between elections, reflecting contextual adaptation rather than structural constants. The relationship between principlist factional identity and targeting patterns (Hypothesis D) evolved from marginal significance in 2021 (coefficient=0.776, $p=0.052$) to strong significance in 2024 (coefficient=-0.2, $p<0.01$). This shift suggests that factional coordination represents a flexible strategic resource rather than a fixed constraint, with principlist candidates demonstrating stronger solidarity in the crisis context of 2024. Similarly, negativity bias (Hypothesis F) showed declining support from partial significance in 2021 (coefficient=0.1121, $p=0.002$ for retweets) to non-significance in 2024, suggesting potential audience adaptation as negativity became more common and expected. Some hypothesized relationships remained consistently unsupported across elections, challenging theoretical expectations derived from Western contexts. Overall negativity levels

(Hypothesis E) consistently failed to show evidence that candidates used fewer negative than positive messages, contrary to expectations based on Iran's distinctive religious and cultural constraints. [it should be noted that the descriptive results confirmed the hypothesis, but not statistical models]. Gender differences in response to negativity (Hypothesis L) also defied expectations, showing either reverse patterns (women demonstrating less negative engagement than men in 2021) or no significant effects (2024). These consistent departures from theoretical predictions highlight the importance of contextual adaptation in applying Western-derived theories to Iran's unique political environment.

Other mechanisms revealed nuanced patterns requiring careful interpretation. Selective exposure (Hypothesis H) demonstrated support operating at two distinct levels: network analysis confirmed selective attention to ideologically aligned candidates, while sentiment analysis revealed critical rather than supportive engagement reflecting intra-factional competition dynamics where supporters of different candidates within the same faction engage critically during the election. Similarly, ideology alignment (Hypothesis I) was clearly contradicted, with aligned users failing to shield negative content from co-factional sources, demonstrating content primacy over source primacy in response patterns. These findings suggest that while factional identity structures attention allocation (who users engage with), normative constraints on negative discourse transcend factional boundaries (how users respond to content).

9.3 Content and Structure of Negative Campaigning Across Elections

Beyond these hypothesis-specific patterns, several broader trends emerged from the comparative analysis. Overall negativity levels increased substantially from 28% in 2021 to 39% in 2024, despite the potentially moderating effect of national mourning following Raisi's death. This increase manifested primarily through more sophisticated policy criticism rather than

increased personal attacks, with explicitly personal attacks remaining limited at approximately 4% of content in 2021 and 6% in 2024. This pattern suggests gradual normalization of critical discourse within established parameters, with candidates focusing criticism on governance performance and policy positions while maintaining traditional restraint regarding personal character. Content analysis revealed remarkable consistency in the thematic priorities of negative messaging. Economic criticism dominated in both elections (47% in 2021, 52% in 2024 first round), followed by international engagement criticism (23% in 2021, 27% in 2024 first round), and administrative capability concerns (18% in 2021, 14% in 2024 first round). This thematic stability across different electoral circumstances suggests that negative campaign content in Iran's presidential elections reflects fundamental strategic calculations about effective criticism dimensions rather than merely contextual or candidate-specific factors.

The network analysis visualizations revealed increasingly polarized factional communities between elections, confirming the selective attention dimension of selective exposure (Hypothesis H) where users predominantly engage with ideologically aligned candidates. While both elections showed clear community segmentation organized around candidate-centered clusters, the 2024 second round displayed particularly pronounced binary division between reformist and principlist support networks as multiple candidate clusters consolidated into two factional blocs. However, this selective attention at the network level coexists with critical engagement within factional boundaries, as sentiment analysis revealed that aligned users respond more critically to co-factional candidates due to intra-factional competition dynamics. This polarization intensification likely influenced how negative messaging functioned and was received during the runoff phase, potentially explaining the intensified boomerang effect observed in 2024.

9.3.1 The Government-People Divide: A Fundamental Context for Negative Campaigning in Iran

The comparative analysis of negative campaigning across Iran's 2021 and 2024 elections reveals patterns that cannot be fully understood without recognizing a deeper structural feature of Iranian politics: the fundamental divide between the government (حکومت) and the nation (ملت). This fundamental divide can be understood through the lens of competing discursive systems that organize political meaning differently. The reformist discourse articulates signifiers such as “freedom, democracy, rule of law, civil society, religious tolerance, human rights, and having free and friendly relations with the entire world” around the central signifier of “republicanism or people.” Conversely, the principlist discourse organizes “justice, security, resistance, values, and cultural invasion” around the central signifier of “Islamism or velayat-e faqih” (Soltani, 2012, p. 153). When candidates deploy negative messaging in electoral campaigns, they are not simply criticizing specific policies or personalities, but often engaging in a more fundamental contest over these competing meaning systems. This explains why negative campaigning in Iran frequently moves beyond conventional policy disagreements to questions about candidates' commitment to revolutionary ideals or religious values. This historical cleavage provides essential context for interpreting negative campaigning dynamics in Iran's hybrid regime. As Homayoun Katouzian has theorized, Iran's political history features a persistent pattern of state-society disconnect where the state operates with considerable autonomy from social forces. Unlike European states that emerged from and represented dominant social classes, the Iranian state historically stood above society, creating what Katouzian terms a “state-society dichotomy.” This historical pattern has continued into the Islamic Republic era, albeit with different manifestations.

While the early revolutionary period (1979-1989) featured strong popular support and minimal government-people tension, this divide progressively widened in subsequent decades.

The 1997 presidential election marked a watershed moment when this divide became explicitly politicized. In that election, Khatami's unexpected victory over establishment candidate Nateq-Nouri represented what observers described as "a vote against the system" rather than merely a choice between individual candidates. This pattern has continued through subsequent electoral cycles, with each election functioning partly as a referendum on the system itself.

The 2021 election provided a particularly stark example of this phenomenon, as one of the most influential campaigns was the 'non-participation campaign.' Calls for 'active' and 'targeted' boycotts increased significantly compared to previous periods, with many social media users joining virtual campaigns under hashtags like "I will not vote" (Euronews Persian, 2021, June 3). Official responses to these boycott calls were mixed. State television and pro-establishment media attempted to normalize low turnout by comparing it to Western countries, while judicial and law enforcement officials threatened to "deal with" those calling for boycotts. Ayatollah Khamenei addressed the issue directly, claiming that "enemies are trying to make it seem that people's presence has no benefit because it's clear who will be elected" (Euronews Persian, 2021, June 3). This tension between boycott campaigns and official responses illustrates the increasingly contested nature of electoral participation itself as a site of state-society negotiation. This structural feature fundamentally shapes negative campaigning in Iran in ways that differ from Western democratic contexts. As our empirical findings demonstrate, candidates perceived as regime outsiders consistently deploy negative messaging that extends beyond criticism of their immediate electoral opponents to implicitly challenge aspects of the broader power structure. Simultaneously, establishment candidates focus their negative messaging on defending core regime principles while attacking opponents as potential threats to stability and revolutionary values.

The 2021 and 2024 elections demonstrate this pattern with remarkable consistency despite their different contexts. In 2021, despite severe vetting that eliminated most reformist candidates, Hemmati attempted to position himself as representing societal demands against the system, adopting increasingly radical positions that challenged not just Raisi but aspects of the regime's foreign and domestic policies. Similarly, in 2024, despite the somberness following President Raisi's death, Pezeshkian's campaign evolved into a vehicle for expressing dissatisfaction with the established order, with his supporters deploying negative messaging that implicitly challenged systemic constraints rather than merely criticizing his electoral opponents. This underlying government-people divide helps explain several findings from our empirical analysis that might otherwise seem puzzling. The intensifying boomerang effect observed across elections (Hypothesis G) reflects not merely psychological reactions to negative campaigning tactics but deeper societal dynamics where voters increasingly view elections as opportunities to voice systemic dissatisfaction. The diminishing relationship between negativity and engagement from 2021 to 2024 (Hypothesis F) similarly reflects evolving citizen responses to a political system perceived as unresponsive to public demands.

The government-people divide also explains the distinctive network structures observed in our analysis of digital political communication. The clear community boundaries with minimal cross-community engagement reflect not merely factional political differences but deeper societal polarization regarding the legitimacy and responsiveness of the political system itself. This polarization intensified between 2021 and 2024, with network visualizations showing increasingly pronounced binary divisions that transcend specific electoral contexts.

9.3.2 Strategic Adaptation and Bounded Criticism in a Hybrid Regime

Our comparative analysis demonstrates how the government-people divide creates distinctive patterns of “bounded criticism” within Iran’s hybrid regime. Unlike Western democracies where negative campaigning typically focuses on opponent vulnerabilities, Iranian candidates operate within a dual strategic framework: demonstrating sufficient independence to appeal to an increasingly alienated electorate while avoiding transgressing fundamental red lines that might trigger disqualification or system backlash. The empirical evidence from both elections reveals sophisticated strategic adaptation by candidates navigating this complex terrain. In 2021, Hemmati progressively radicalized his rhetoric as the campaign progressed, criticizing not just Raisi but systemic constraints like the Guardian Council’s vetting procedures and foreign policy orientations—yet carefully avoiding direct challenges to core religious authority structures. Similarly, in 2024, Pezeshkian balanced reformist appeals with explicit affirmations of system loyalty, demonstrating what can be termed “strategic ambiguity” in his negative messaging.

This pattern of bounded criticism offers important theoretical insights into how negative campaigning functions in hybrid regimes more broadly. Rather than viewing such systems as merely imposing top-down constraints on political discourse, our findings suggest a more dynamic process where electoral competition creates spaces for limited but meaningful criticism that simultaneously serves accountability functions while reinforcing system legitimacy through procedural engagement. This bounded criticism is particularly evident in the moderate discourse that emerged under figures like Hashemi Rafsanjani and later Rouhani and Pezeshkian. The Moderation and Development Party, which institutionalized this approach, “emphasized moderation, unity, and national solidarity,” arguing that “neither the reformist nor the principlist

currents alone have all the necessary capacities to achieve a development-oriented government, and if the government is controlled by one of these two currents, the country will be deprived of some of its capabilities” (Shargh Newspaper, 2005, January 27). This trans-factional positioning enables a form of negative campaigning that criticizes excesses of both dominant factions while maintaining system legitimacy. In both the 2021 and 2024 elections, moderate-aligned candidates criticized principlist economic management and international isolation while simultaneously distancing themselves from what they characterized as reformist radicalism, creating a distinctive middle path in their negative messaging strategy.

The consistent finding that government-affiliated candidates are primary targets of negative messaging (Hypothesis A) across both elections demonstrates how this bounded criticism operates in practice. By focusing on government performance failures rather than challenging fundamental regime legitimacy, candidates can appeal to public dissatisfaction while remaining within acceptable parameters. This creates what might be termed “safety valve politics” where elections channel dissent into controlled venues that ultimately reinforce rather than threaten system stability.

However, the declining participation rates observed across elections—from 48.8% in 2021 to 39.9% in 2024—suggest the limitations of this bounded criticism model. When significant segments of the population perceive the government-people divide as unbridgeable through electoral politics, they may withdraw from participation entirely. This non-participation itself becomes a form of negative campaigning, with abstention functioning as what one Iranian analyst termed “the most successful negative campaign” in recent elections. This evolution reflects the aftermath of repeated cycles of unfulfilled expectations. Following the protests of December 2017, November 2019, and particularly the “Woman, Life, Freedom” movement of

2022, large segments of the population came to view the electoral process itself as incapable of addressing fundamental grievances.

9.3.3 Theoretical Implications for Understanding Negative Campaigning in Hybrid Regimes

The distinctive patterns of negative campaigning observed across Iran’s 2021 and 2024 elections contribute to theoretical understanding of political communication in hybrid regimes more broadly. Three key theoretical insights emerge from our comparative analysis:

First, the concept of “dual target criticism” offers a framework for understanding how negative campaigning functions in hybrid regimes. While Western models typically focus on direct opponent criticism, our findings demonstrate how Iranian candidates simultaneously target immediate electoral opponents and implicit system constraints. This dual targeting allows candidates to appeal to public dissatisfaction while maintaining plausible deniability regarding system criticism. This pattern was evident in both elections, though with varying intensity based on contextual factors.

Second, our findings support a “cyclical disillusionment” theory regarding citizen engagement with negative messaging in hybrid regimes. The diminishing relationship between negative content and engagement metrics from 2021 to 2024 suggests not adaptation to negativity but progressive withdrawal from electoral politics as a meaningful avenue for change. This contrasts with Western democratic contexts where negative campaigning often mobilizes participation despite creating cynicism about specific candidates.

Third, our research advances understanding of what might be termed “asymmetric factional negativity” in hybrid regimes. The disproportionate targeting of government-affiliated candidates across both elections reflects not merely universal incumbent vulnerability but a

structural feature of hybrid regimes where criticism of performance is permitted while criticism of fundamental structures is constrained. This creates distinctive incentive structures for different factional orientations, with reform-oriented candidates employing more extensive negative messaging than establishment figures.

These theoretical insights suggest that negative campaigning in hybrid regimes like Iran's serves distinct functions from those observed in Western democracies. While negativity in democratic contexts primarily aims to persuade voters to choose between competing alternatives, negativity in hybrid regimes often serves to negotiate the boundaries of acceptable criticism, demonstrate limited independence from establishment positions, and channel public dissatisfaction within controlled parameters.

This functional distinction helps explain several patterns observed across both elections, including the persistence of government-affiliated targeting despite changing candidates, the evolution of factional coordination dynamics, and the increasingly pronounced community structures in digital political communication. These patterns suggest that negative campaigning in Iran's hybrid regime operates not merely as an electoral strategy but as a complex negotiation of political boundaries within a system characterized by deep government-people division.

At a theoretical level, this negotiation can be understood as a discursive process where discourses always try to protect the meaning of "self" and reject the meaning of "other." From this perspective, many of Iran's social and political events in recent years have been the result of efforts by reformist and principlist discourses to preserve the meaning of "self" and reject the meaning of "other." These semantic disputes and the events that followed can be sought in the attempt to provide different interpretations for signifiers such as velayat, supervision, law, and freedom (Tajik & Roozkhoosh, 2008, p. 109). The negative campaigning observed across both

elections represents the practical manifestation of these semantic disputes, with candidates attempting to stabilize preferred meanings of contested political concepts while delegitimizing alternative interpretations. This theoretical framework helps explain why negative campaigning in Iran's hybrid regime serves both electoral competition and broader discursive struggle over the fundamental meaning of the Islamic Republic itself.

9.4 Theoretical Implications

These comparative findings yield several theoretical implications that advance our understanding of negative campaigning in hybrid regimes, engaging directly with existing theoretical frameworks from both political communication and comparative politics.

First, the consistent government-affiliated targeting across both elections provides robust support for theories regarding the accountability function of negative campaigning. Despite Iran's hybrid regime characteristics, presidential elections demonstrate persistent criticism of governance performance that resembles patterns in Western democracies. This aligns with Hansen and Pedersen's (2008) argument that negative campaigning serves accountability functions across diverse political systems, while extending these insights to the previously unexamined context of a religious-influenced hybrid regime. This accountability mechanism suggests that even in contexts with significant democratic limitations, negative campaigning can facilitate meaningful performance evaluation that transcends specific institutional arrangements.

Second, the evolving relationship between factional identity and targeting patterns supports Slater's (2010) theory of "authoritarian Leviathans," where elite groups subordinate individual ambitions to collective factional interests when facing potential threats to system control. The strengthening of principlist coordination in 2024 demonstrates dynamic adaptation to changing circumstances, supporting Reuter and Gandhi's (2011) work on authoritarian power-

sharing while revealing the strategic flexibility of factional coordination mechanisms. These findings challenge static conceptions of authoritarian elite dynamics by demonstrating how factional strategy represents a dynamic resource deployed with varying intensity based on contextual calculations.

Third, the increasing negativity between elections without system destabilization supports refinements to Brumberg's (2001) "competitive authoritarianism theory." The data suggest that criticism parameters can expand incrementally while maintaining core constraints, enabling both genuine political competition and system stability. This pattern defies Schedler's (2013) characterization of hybrid regimes as merely performative facades, revealing more complex dynamics where criticism serves both accountability and system-reinforcing functions. This dual functionality advances understanding of how hybrid regimes integrate meaningful contestation with authoritarian maintenance, extending work by Gandhi and Lust-Okar (2009) on the legitimizing functions of electoral processes in non-democratic contexts.

Fourth, the diminishing relationship between negativity and engagement metrics challenges universalist applications of negativity bias theory. While negativity bias appeared to function as predicted in 2021, its disappearance in 2024 suggests that this psychological mechanism operates conditionally rather than universally in political communication. This finding extends recent cross-cultural research by Soroka et al. (2019) and Fournier et al. (2020), suggesting that while negativity bias represents a fundamental psychological tendency, its manifestation in political contexts is significantly shaped by information environment characteristics, audience expectations, and electoral circumstances. This contextual conditioning of psychological mechanisms contributes to growing recognition of how universal theories require adaptation across diverse cultural settings.

Fifth, the nuanced patterns of selective exposure observed in Hypothesis H advance theoretical understanding of how political identity structures information consumption in multi-candidate factional systems. Rather than the uniform supportive responses predicted by Western partisan selective exposure theory, Iran's factional environment produces 'two-level selective exposure' where users selectively attend to co-factional sources (the 'who' of engagement, confirmed through network clustering) while maintaining critical evaluative standards (the 'how' of engagement, revealed through sentiment analysis). This pattern reflects distinctive dynamics of intra-factional competition where supporters of different candidates within the same faction engage in competitive advocacy without formal party structures to coordinate messaging. This finding extends selective exposure theory beyond Western partisan contexts to demonstrate how this fundamental mechanism operates differently in non-party-based factional systems, suggesting that selective exposure represents a universal tendency to filter information through ideological lenses while its specific manifestation—whether supportive or critical—depends on institutional configurations structuring political competition.

Sixth, the clear contradiction of Hypothesis I—where aligned users failed to respond more positively to negative content from co-factional sources—reveals the operation of what might be termed 'trans-factional normative constraints' in Iran's political culture. Even when users might have strategic incentives to support negative attacks by their faction against opponents, normative evaluations of discourse appropriateness override such motivations, demonstrating 'content primacy over source primacy' in response patterns. This finding challenges fundamental assumptions of partisan motivated reasoning theory developed in Western contexts, where partisan identity typically shapes not only information selection but also evaluation, leading supporters to defend or rationalize negative tactics by co-partisan sources.

The operation of discourse norms that transcend factional boundaries suggests that in contexts with strong collectivist orientations and religious ethical frameworks—what can be termed 'normatively bounded hybrid regimes'—cultural constraints on political communication may operate more powerfully than partisan identity in shaping response patterns. This theoretical insight has implications beyond Iran for understanding political communication in other contexts where religious or cultural norms create shared standards for appropriate discourse that transcend political divides.

Seventh, the network analysis findings align with and extend Chadwick's (2017) concept of "hybrid media systems," where different information environments create distinctive communication dynamics. The increasingly polarized factional communities observed in the 2024 election support Michaelsen's (2018) work on "parallel information ecosystems" in Iran's digital landscape, while demonstrating how these patterns intensify during electoral periods. The clear factional structuring of digital discourse challenges Western models of political communication that assume greater message heterogeneity and cross-cutting exposure, suggesting that digital platforms may reinforce rather than transcend existing social divisions in Iran's distinctive political environment.

9.4.1 Comparative Contextualization

These findings reveal both universal patterns and Iran-specific adaptations when compared to negative campaigning research in liberal democracies. The accountability-based targeting of government-affiliated candidates (Hypothesis A) and boomerang effects against negativity (Hypothesis G) align with patterns documented in Western democracies, suggesting these mechanisms transcend regime type. However, Iran's overall negativity levels (28-39%) fall

substantially below U.S. presidential campaigns where negativity constitutes 75-87% of campaign content (Geer, 2006), supporting our prediction that religious-cultural norms constrain attack intensity. Similarly, the predominance of policy-focused over personal attacks in Iran contrasts with Western campaigns where character attacks constitute 35-50% of negative content (Lau & Rovner, 2009). While definitive assessment of generalizability requires systematic comparison across other Middle Eastern hybrid regimes—including Morocco, Jordan, and Kuwait where electoral competition operates within similar authoritarian constraints—these patterns suggest that fundamental psychological mechanisms (negativity bias, selective exposure) operate across contexts while their political expression is profoundly shaped by institutional boundaries and cultural norms. Future research should examine whether the factional restraint patterns (Hypothesis D) observed in Iran characterize other non-party-based systems in the region, particularly Lebanon and Iraq, to clarify which findings reflect hybrid regime universals versus Iran-specific factors.

The selective exposure patterns (Hypothesis H) reveal both parallels and distinctions from Western findings. While network clustering around ideologically aligned sources aligns with echo chamber research in Western social media (Barberá et al., 2015), the critical engagement within factional boundaries diverges sharply from Western partisan selective exposure where co-partisans typically provide supportive responses to avoid damaging electoral prospects. This distinction reflects Iran's multi-candidate factional system without formal primary structures, contrasting with Western party systems where primary coordination incentivizes supportive rather than critical engagement. Similarly, the contradiction of ideology alignment effects (Hypothesis I) diverges from robust findings in Western contexts where partisan motivated reasoning leads supporters to shield co-partisan sources from criticism (Taber

& Lodge, 2016). The operation of trans-factional normative constraints in Iran—where discourse norms override partisan motivated reasoning—suggests that strong cultural-religious ethical frameworks may moderate or even override the motivated reasoning effects reliably documented in more individualistic Western societies.

9.5 Practical Implications

The findings from this comparative analysis have significant practical implications for diverse stakeholders engaged with Iran’s political landscape. For candidates and campaign strategists within hybrid regimes, the documented backlash against personal attacks compared to policy criticism suggests strategic advantages for focusing negativity on governance performance and policy positions rather than personal characteristics. The consistent statistical significance of government-affiliated targeting across both elections indicates that focusing criticism on incumbent performance represents an efficient negative messaging strategy that resonates with voters across factional lines. Additionally, the findings regarding selective exposure and ideology alignment offer strategic insights for campaign communication. While factional identity successfully draws attention (confirmed through network clustering), campaign strategists should not assume that aligned audiences will automatically support negative messaging, even when directed at factional opponents. The critical engagement patterns within factions and the trans-factional operation of discourse norms suggest that negative campaign tactics risk backlash regardless of source-audience alignment. Candidates may therefore benefit from emphasizing positive policy proposals and constructive criticism over aggressive negative attacks, even when targeting opposing faction candidates.

For civil society organizations promoting democratic values within hybrid regimes, the research provides nuanced understanding of how criticism functions within constrained

environments. The documented bounded contestation patterns demonstrate how substantive critical discourse can occur within established parameters, suggesting strategic opportunities for advancing accountability mechanisms without triggering systemic resistance.

For international observers and policymakers, this research contributes to a more sophisticated understanding of Iran's electoral processes, moving beyond simplistic narratives of either complete authoritarianism or genuine democracy to capture the complex reality of political competition in this hybrid system. The findings document how genuine electoral contestation occurs within defined parameters, where candidates engage in substantive policy debate and face accountability pressure through criticism of their records, even as the system maintains fundamental constraints through candidate vetting and media controls.

For media organizations covering elections in hybrid regimes, this research offers a framework for understanding and contextualizing negative campaign tactics within their specific institutional environments. The findings reveal how factional dynamics, religious norms, and institutional constraints shape campaign communication patterns in ways that differ from Western electoral models, providing a more nuanced analytical lens for interpreting electoral discourse in Iran and potentially other hybrid regimes.

9.6 Future Research Directions

This research establishes several promising directions for future investigation of negative campaigning in non-Western contexts. Longitudinal extension beyond two elections would enable identification of long-term evolutionary trends rather than potentially idiosyncratic changes between specific elections. Particularly valuable would be tracking how negativity levels and targeting patterns evolve across multiple electoral cycles to determine whether the

increased negativity observed from 2021 to 2024 represents a continuing trend or merely context-specific variation.

The distinctive findings regarding selective exposure and ideology alignment suggest several specific research directions. First, comparative research examining intra-factional competition dynamics across different multi-candidate systems (including Lebanon, Iraq, and primary elections in Western democracies) could clarify whether the critical engagement patterns observed in Iran represent factional system universals or Iran-specific phenomena. Second, experimental research manipulating both source alignment and message negativity could disentangle the mechanisms underlying the failure of ideology alignment effects, testing whether normative constraints operate primarily through conscious evaluation or automatic affective responses. Third, longitudinal analysis tracking the same users across multiple electoral cycles could reveal whether critical engagement within factions represents stable individual tendencies or contextual responses to specific competitive dynamics.

Cross-regime comparison with other hybrid regimes (such as Russia, Turkey, or Venezuela) would help distinguish Iran-specific patterns from broader hybrid regime characteristics. Particularly valuable would be comparative analysis of how religious versus secular hybrid regimes manage criticism boundaries, expanding on the insights developed in this study. Such comparative work could advance theoretical understanding of how different hybrid regime configurations shape political discourse and electoral dynamics.

Methodological innovation represents another promising research direction. The computational tools developed for this study, including specialized deep learning models for Persian political discourse, could be adapted for additional languages and political contexts, expanding the analytical toolkit available for studying political communication across diverse

settings. These innovations would help address the methodological gaps that have limited comparative political communication research in non-Western contexts.

9.7 Conclusion

This research demonstrates that negative campaigning in Iran's presidential elections represents a distinctive hybrid phenomenon combining elements of universal political communication with contextually specific adaptations. The findings challenge both Western-centric theories that assume universal psychological mechanisms and simplistic characterizations of non-Western elections as merely performative. By documenting how negative campaigning simultaneously provides accountability pressure and system-reinforcing discourse within Iran's hybrid regime, this study contributes to a more globally comprehensive understanding of political communication that recognizes diverse institutional configurations beyond the Western liberal democratic model.

The consistent targeting of government-affiliated candidates across both elections demonstrates how accountability functions operate despite institutional constraints, while the intensifying boomerang effect reveals how normative evaluations of negative messaging transcend specific electoral contexts. The evolving patterns of factional coordination and audience adaptation to negative content highlight the dynamic nature of both strategic calculation and psychological response, challenging static models of political communication.

The cross-electoral comparison offers particularly valuable insights by distinguishing between stable patterns that represent fundamental features of Iran's political system versus those that demonstrate contextual adaptation to specific electoral circumstances. This approach yields more sophisticated theoretical understanding of how universal mechanisms interact with specific

institutional and cultural contexts to produce distinctive hybrid configurations with their own internal logics and evolutionary pathways.

This nuanced understanding has important implications not only for theories of political communication but also for practical engagement with hybrid political systems across the contemporary global landscape. By moving beyond binary characterizations to recognize the complex dynamics of bounded contestation, this research contributes to more effective analysis of political communication in the diverse institutional arrangements that characterize much of the contemporary world.

Appendix A: Regression Parameters for 2021 Presidential Election

Table A1: Logistic Regression Results for Government-Affiliated Targeting (Hypothesis A)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)

N=1,447

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
has_incumbent_target*	0.896*	0.026	34.163	0.000	0.844	0.947
tweet_urls_count***	-0.049***	0.016	-3.094	0.002	-0.080	-0.018
tweet_length_word***	0.008***	0.002	3.230	0.001	0.003	0.013
tweet_length_characters***	-0.002***	0.001	-3.134	0.002	-0.003	-0.001
tweet_age***	0.003***	0.001	2.851	0.004	0.001	0.005
following_count**	-0.012**	0.005	-2.535	0.011	-0.022	-0.003
follower_count*	-0.000*	0.000	-1.812	0.070	-0.000	0.000
tweets_count_by_username*	0.000*	0.000	1.945	0.052	-0.000	0.000
tweet_like_count	0.000	0.000	0.841	0.401	-0.000	0.000
tweet_retweet_count	-0.000	0.000	-0.053	0.958	-0.000	0.000
account_age	0.000	0.000	1.376	0.169	-0.000	0.000
organize_names_count	-0.016	0.010	-1.540	0.124	-0.036	0.004
tweet_hashtags_count	0.007	0.012	0.634	0.526	-0.016	0.031
person_names_count	0.005	0.015	0.358	0.720	-0.024	0.035
tweet_created_in_weekend	-0.028	0.020	-1.453	0.146	-0.067	0.010
tweet_created_in_officetime	0.013	0.022	0.592	0.554	-0.030	0.057
tweet_created_at_night	-0.009	0.028	-0.319	0.750	-0.063	0.046
is_retweet	-0.054	0.048	-1.109	0.268	-0.148	0.041
is_quote	-0.024	0.059	-0.403	0.687	-0.140	0.093
tweet_mention_count	-0.050	0.072	-0.695	0.487	-0.191	0.091
Constant**	-1.897**	0.763	-2.487	0.013	-3.395	-0.400

*Note: * p<0.1; ** p<0.05; *** p<0.01*

Table A2: Logistic Regression Results for Principlist Attacks (Hypothesis D)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)

N=1,447

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
has_principalist_target*	0.776*	0.399	1.946	0.052	-0.007	1.558
tweets_count_by_username	0.000	0.000	0.890	0.374	-0.000	0.000
follower_count*	-0.000*	0.000	-1.698	0.090	-0.000	0.000
tweet_like_count	-0.000	0.000	-0.286	0.775	-0.000	0.000
account_age	0.000	0.000	0.783	0.434	-0.000	0.000
tweet_retweet_count	0.000	0.000	1.455	0.146	-0.000	0.000
tweet_length_characters***	-0.003***	0.001	-3.252	0.001	-0.004	-0.001
tweet_age***	0.006***	0.002	3.509	0.000	0.002	0.009
tweet_length_word***	0.013***	0.004	3.254	0.001	0.005	0.020
following_count**	-0.018**	0.008	-2.336	0.020	-0.033	-0.003
organize_names_count	0.008	0.016	0.513	0.608	-0.023	0.040
tweet_hashtags_count	0.030	0.018	1.643	0.101	-0.006	0.066
person_names_count***	0.064***	0.023	2.720	0.007	0.018	0.110
tweet_urls_count***	-0.114***	0.024	-4.663	0.000	-0.162	-0.066
tweet_created_in_weekend	0.050	0.030	1.633	0.103	-0.010	0.109
tweet_created_in_officetime*	0.060*	0.034	1.737	0.083	-0.008	0.128
tweet_created_at_night	-0.018	0.043	-0.412	0.680	-0.103	0.067
is_retweet	0.018	0.075	0.234	0.815	-0.130	0.165
is_quote**	-0.217**	0.092	-2.362	0.018	-0.398	-0.037
tweet_mention_count	-0.104	0.112	-0.929	0.353	-0.324	0.116
Constant***	-3.567***	1.186	-3.009	0.003	-5.894	-1.240

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A3: Logistic Regression Results for Overall Negativity (Hypothesis E)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)
 N=1,447

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
is_candidate	0.0197	0.097	0.204	0.839	-0.170	0.209
tweet_like_count**	0.0001**	0.000	2.091	0.037	0.000	0.000
tweets_count_by_username*	0.0003*	0.000	1.760	0.078	-0.000	0.001
tweet_retweet_count	0.0000	0.000	0.246	0.805	-0.000	0.000
follower_count	0.0000	0.000	0.262	0.794	-0.000	0.000
tweet_age	-0.0001	0.000	-1.095	0.273	-0.000	0.000
account_age***	-0.0002***	0.000	-2.953	0.003	-0.000	-0.000
following_count***	0.0004***	0.000	7.438	0.000	0.000	0.001
tweet_length_characters**	0.0044**	0.002	2.237	0.025	0.001	0.008
tweet_length_word	0.0015	0.009	0.160	0.873	-0.017	0.020
tweet_hashtags_count*	0.0631*	0.034	1.832	0.067	-0.004	0.131
organize_names_count***	0.1348***	0.045	3.006	0.003	0.047	0.223
person_names_count***	0.2175***	0.068	3.219	0.001	0.085	0.350
tweet_urls_count***	-0.2654***	0.079	-3.368	0.001	-0.420	-0.111
tweet_created_in_weekend*	0.1356*	0.082	1.657	0.098	-0.025	0.296
tweet_created_in_officetime	0.0036	0.090	0.040	0.968	-0.172	0.179
tweet_created_at_night*	-0.1982*	0.107	-1.858	0.063	-0.407	0.011
tweet_mention_count***	-0.5057***	0.109	-4.632	0.000	-0.720	-0.292
swear_words_count	0.1146	0.170	0.675	0.500	-0.218	0.447
is_quote	-0.8513	2,170,000	-0.000	1.000	-4,250,000	4,250,000
is_retweet	-0.9426	2,170,000	-0.000	1.000	-4,250,000	4,250,000

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A4: Negative Binomial Regression Results for Negativity Bias (Hypothesis F) - Like Count

Dependent Variable: Number of Likes
N=1,447

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity **	0.090 *	0.041	2.199	0.028	0.010	0.171
tweet_retweet_count***	0.002***	0.000	32.306	0.000	0.002	0.002
tweets_count_by_username***	0.000***	0.000	5.287	0.000	0.000	0.001
account_age	0.000	0.000	0.199	0.842	-0.000	0.000
follower_count	-0.000	0.000	-1.119	0.263	-0.000	0.000
tweet_length_characters	-0.001	0.001	-0.599	0.549	-0.003	0.001
tweet_age***	-0.012***	0.002	-6.260	0.000	-0.016	-0.008
tweet_length_word	0.004	0.005	0.809	0.418	-0.005	0.013
following_count***	-0.048***	0.009	-5.226	0.000	-0.067	-0.030
swear_words_count	0.004	0.014	0.260	0.795	-0.023	0.030
organize_names_count	0.015	0.019	0.817	0.414	-0.022	0.052
person_names_count	-0.008	0.019	-0.448	0.654	-0.046	0.029
tweet_hashtags_count***	-0.081***	0.020	-3.987	0.000	-0.120	-0.041
tweet_urls_count***	-0.195***	0.027	-7.315	0.000	-0.247	-0.143
tweet_created_in_weekend	0.038	0.037	1.027	0.304	-0.034	0.109
tweet_created_in_officetime**	-0.096**	0.042	-2.301	0.021	-0.178	-0.014
tweet_created_at_night	-0.012	0.051	-0.244	0.807	-0.113	0.088
tweet_mention_count	0.117	0.161	0.723	0.470	-0.200	0.433
is_retweet***	5.283***	0.464	11.383	0.000	4.373	6.193
is_quote***	5.283***	0.464	11.383	0.000	4.373	6.193
Intercept***	5.283***	0.464	11.383	0.000	4.373	6.193

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A5: Negative Binomial Regression Results for Negativity Bias (Hypothesis F) - Retweet Count

Dependent Variable: Number of Retweets
N=1,447

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity*	0.1121*	0.036	3.153	0.002	0.042	0.182
tweet_like_count***	0.0003***	0.000	35.157	0.000	0.000	0.000
follower_count***	0.0000***	0.000	15.057	0.000	0.000	0.000
tweets_count_by_username***	-0.0007***	0.000	-8.743	0.000	-0.001	-0.001
account_age***	-0.0006***	0.000	-11.089	0.000	-0.001	-0.000
tweet_length_characters	0.0002	0.001	0.267	0.790	-0.001	0.002
tweet_age**	0.0033**	0.002	1.976	0.048	0.000	0.006
tweet_length_word	0.0019	0.004	0.475	0.635	-0.006	0.010
following_count*	0.0148*	0.008	1.828	0.068	-0.001	0.031
swear_words_count***	0.0463***	0.012	3.918	0.000	0.023	0.069
organize_names_count*	-0.0312*	0.016	-1.911	0.056	-0.063	0.001
person_names_count**	0.0395**	0.016	2.416	0.016	0.007	0.071
tweet_hashtags_count***	0.1129***	0.018	6.402	0.000	0.078	0.148
tweet_urls_count**	-0.0507**	0.023	-2.173	0.030	-0.096	-0.005
tweet_created_in_weekend	0.0135	0.032	0.427	0.669	-0.049	0.076
tweet_created_in_officetime	-0.0393	0.036	-1.083	0.279	-0.111	0.032
tweet_created_at_night	0.0207	0.044	0.467	0.641	-0.066	0.108
tweet_mention_count*	0.2657*	0.139	1.906	0.057	-0.008	0.539
is_retweet	0.5982	0.404	1.482	0.138	-0.193	1.389
is_quote	0.5982	0.404	1.482	0.138	-0.193	1.389
Intercept	0.5982	0.404	1.482	0.138	-0.193	1.389

*Note: * p<0.1; ** p<0.05; *** p<0.01*

Table A6: Logistic Regression Results for Boomerang Effect (Hypothesis G)

Dependent Variable: Negative Sentiment in Replies (Binary: 0=Not Negative, 1=Negative)
 N=124,739

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity*	0.3884*	0.015	25.465	0.000	0.359	0.418
tweet_like_count	-0.0005	0.000	-1.104	0.270	-0.001	0.000
following_count***	0.0000***	0.000	2.901	0.004	0.000	0.000
tweets_count_by_username	-0.0003	0.000	-1.211	0.226	-0.001	0.000
account_age***	0.0001***	0.000	12.706	0.000	0.000	0.000
follower_count***	-0.0000***	0.000	-3.871	0.000	-0.000	-0.000
tweet_age	-0.0013	0.001	-1.075	0.282	-0.004	0.001
tweet_length_characters***	0.0047***	0.001	8.238	0.000	0.004	0.006
tweet_length_word***	0.0321***	0.003	12.212	0.000	0.027	0.037
tweet_retweet_count**	-0.0081**	0.003	-2.486	0.013	-0.014	-0.002
tweet_hashtags_count***	-0.1052***	0.009	-11.829	0.000	-0.123	-0.088
person_names_count	-0.0103	0.010	-1.042	0.298	-0.030	0.009
tweet_created_in_weekend***	-0.0512***	0.016	-3.243	0.001	-0.082	-0.020
organize_names_count***	-0.1723***	0.017	-10.167	0.000	-0.206	-0.139
tweet_created_in_officetime**	0.0435**	0.018	2.384	0.017	0.008	0.079
tweet_created_at_night***	0.2007***	0.018	10.997	0.000	0.165	0.236
tweet_mention_count***	-0.3191***	0.024	-13.206	0.000	-0.366	-0.272
tweet_urls_count***	-1.1388***	0.029	-38.805	0.000	-1.196	-1.081
swear_words_count***	1.2481***	0.034	37.131	0.000	1.182	1.314
Constant	-0.2744	0.878	-0.313	0.755	-1.995	1.446

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A7: Logistic Regression Results for Negative Selective Exposure (Hypothesis H)

Dependent Variable: Reply Sentiment
N=124,739

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
ideology_alignment*	-0.261*	0.008	-31.342	0.000	-0.277	-0.245
tweet_like_count***	-0.001***	0.000	-4.577	0.000	-0.002	-0.001
following_count***	-0.000***	0.000	-2.746	0.006	-0.000	-0.000
tweet_length_characters**	0.001**	0.000	2.219	0.026	0.000	0.001
follower_count*	0.000*	0.000	1.927	0.054	-0.000	0.000
account_age**	0.000**	0.000	2.531	0.011	0.000	0.000
tweets_count_by_username	0.000	0.000	0.262	0.794	-0.000	0.000
tweet_age***	0.010***	0.001	14.246	0.000	0.009	0.012
tweet_length_word***	-0.010***	0.001	-7.283	0.000	-0.012	-0.007
tweet_retweet_count***	0.014***	0.003	4.528	0.000	0.008	0.019
person_names_count	-0.002	0.005	-0.366	0.714	-0.011	0.008
tweet_hashtags_count***	0.018***	0.005	3.887	0.000	0.009	0.027
tweet_created_in_weekend**	-0.020**	0.009	-2.171	0.030	-0.037	-0.002
organize_names_count***	0.065***	0.009	7.303	0.000	0.048	0.083
tweet_created_at_night***	0.062***	0.010	5.999	0.000	0.041	0.082
tweet_created_in_officetime***	0.050***	0.010	4.907	0.000	0.030	0.070
tweet_urls_count***	0.423***	0.012	34.370	0.000	0.399	0.447
swear_words_count***	-0.054***	0.013	-4.023	0.000	-0.080	-0.028
tweet_mention_count***	0.085***	0.015	5.562	0.000	0.055	0.115
Constant***	-6.282***	0.525	-11.958	0.000	-7.312	-5.253

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A8: Logistic Regression Results for Ideology Alignment (Hypothesis I) - 2-class sentiment

Dependent Variable: Positive Sentiment in Replies (Binary: 0=Not Positive, 1=Positive)
N=124,739

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
ideology_alignment*	-1.7638*	0.039	-45.531	0.000	-1.840	-1.688
negativity*	-0.3593*	0.040	-8.935	0.000	-0.438	-0.280
tweets_count_by_username	-0.0002	0.000	-0.608	0.543	-0.001	0.000
following_count*	0.0000*	0.000	1.733	0.083	-0.000	0.000
follower_count***	-0.0000***	0.000	-3.166	0.002	-0.000	-0.000
account_age***	-0.0001***	0.000	-2.630	0.009	-0.000	-0.000
tweet_length_characters***	-0.0042***	0.001	-2.947	0.003	-0.007	-0.001
tweet_like_count***	0.0073***	0.001	5.929	0.000	0.005	0.010
tweet_age	0.0010	0.003	0.326	0.744	-0.005	0.007
tweet_length_word	-0.0012	0.007	-0.174	0.862	-0.014	0.012
tweet_retweet_count***	-0.0768***	0.018	-4.318	0.000	-0.112	-0.042
person_names_count**	0.0559**	0.022	2.485	0.013	0.012	0.100
tweet_hashtags_count	-0.0374	0.023	-1.645	0.100	-0.082	0.007
tweet_created_in_weekend***	0.1116***	0.039	2.867	0.004	0.035	0.188
tweet_created_in_officetime***	-0.1560***	0.044	-3.567	0.000	-0.242	-0.070
tweet_created_at_night***	-0.2651***	0.045	-5.841	0.000	-0.354	-0.176
organize_names_count***	-0.1739***	0.053	-3.262	0.001	-0.278	-0.069
tweet_mention_count**	-0.1513**	0.067	-2.265	0.024	-0.282	-0.020
tweet_urls_count***	-0.9424***	0.075	-12.509	0.000	-1.090	-0.795
swear_words_count***	-0.7825***	0.111	-7.040	0.000	-1.000	-0.565
Constant	-0.5331	2.271	-0.235	0.814	-4.985	3.919

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A9: Logistic Regression Results for Ideology Alignment (Hypothesis I) - 3-class sentiment

Dependent Variable: Reply Sentiment (Ordinal: 0=Negative, 1=Neutral, 2=Positive)
 N=124,739

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity*	-0.1209*	0.009	-13.591	0.000	-0.138	-0.103
Ideology_alignment	-0.0149	0.017	-0.897	0.370	-0.047	0.018
following_count	0.0000	0.000	0.193	0.847	-0.000	0.000
follower_count*	0.0000*	0.000	1.720	0.085	-0.000	0.000
tweet_length_characters***	-0.0008***	0.000	-2.665	0.008	-0.001	-0.000
tweet_like_count	0.0002	0.000	0.896	0.370	-0.000	0.001
account_age***	-0.0000***	0.000	-2.979	0.003	-0.000	-0.000
tweets_count by username	-0.0000	0.000	-0.237	0.813	-0.000	0.000
tweet_age***	-0.0050***	0.001	-6.591	0.000	-0.007	-0.004
tweet_length_word***	-0.0105***	0.001	-7.358	0.000	-0.013	-0.008
tweet_retweet_count	0.0020	0.003	0.638	0.524	-0.004	0.008
tweet_hashtags_count**	0.0121**	0.005	2.495	0.013	0.003	0.022
person_names_count**	0.0123**	0.005	2.453	0.014	0.002	0.022
organize_names_count*	0.0180*	0.009	1.901	0.057	-0.001	0.037
tweet_created_in_weekend***	0.0570***	0.010	5.932	0.000	0.038	0.076
tweet_created_at_night***	-0.0919***	0.011	-8.450	0.000	-0.113	-0.071
tweet_created_in_officetime**	-0.0222**	0.011	-2.039	0.041	-0.044	-0.001
tweet_urls_count***	0.1206***	0.013	9.243	0.000	0.095	0.146
swear_words_count***	-0.2358***	0.014	-16.604	0.000	-0.264	-0.208
tweet_mention_count***	0.0892***	0.016	5.561	0.000	0.058	0.121
Constant***	3.6580***	0.559	6.542	0.000	2.562	4.754

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A10: Logistic Regression Results for Gender Differences (Hypothesis L)

Dependent Variable: Negative Sentiment in Replies (Binary: 0=Not Negative, 1=Negative)
 N=124,739

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
gender*	-0.2187*	0.017	-12.984	0.000	-0.252	-0.186
tweet_like_count**	-0.0012**	0.001	-2.318	0.020	-0.002	-0.000
tweets_count_by_username	-0.0003	0.000	-1.407	0.159	-0.001	0.000
following_count***	0.0000***	0.000	3.932	0.000	0.000	0.000
account_age***	0.0001***	0.000	12.548	0.000	0.000	0.000
follower_count***	-0.0000***	0.000	-3.268	0.001	-0.000	-0.000
tweet_length_characters***	0.0060***	0.001	10.587	0.000	0.005	0.007
tweet_age	-0.0014	0.001	-1.125	0.261	-0.004	0.001
tweet_retweet_count*	-0.0055*	0.003	-1.691	0.091	-0.012	0.001
tweet_length_word***	0.0260***	0.003	9.868	0.000	0.021	0.031
tweet_hashtags_count***	-0.1139***	0.009	-12.796	0.000	-0.131	-0.096
person_names_count	-0.0126	0.010	-1.277	0.202	-0.032	0.007
negativity***	0.3987***	0.015	26.112	0.000	0.369	0.429
tweet_created_in_weekend***	-0.0471***	0.016	-2.975	0.003	-0.078	-0.016
organize_names_count***	-0.1754***	0.017	-10.339	0.000	-0.209	-0.142
tweet_created_in_officetime**	0.0322**	0.018	1.765	0.078	-0.004	0.068
tweet_created_at_night***	0.1832***	0.018	10.030	0.000	0.147	0.219
tweet_mention_count***	-0.2056***	0.022	-9.156	0.000	-0.250	-0.162
tweet_urls_count***	-1.1428***	0.029	-38.932	0.000	-1.200	-1.085
swear_words_count***	1.2470***	0.034	37.064	0.000	1.181	1.313
Constant	-0.3101	0.879	-0.353	0.724	-2.034	1.414

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table A11: Logistic Regression Results for Gender Differences (Hypothesis L) - Negative Tweets Only

Dependent Variable: Negative Sentiment in Replies to Negative Tweets (Binary: 0=Not Negative, 1=Negative)
N=1,447 Negative Tweets

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
gender*	-0.1213*	0.031	-3.899	0.000	-0.182	-0.060
following_count**	0.0000**	0.000	2.452	0.014	0.000	0.000
tweets_count_by_username*	-0.0006*	0.000	-1.663	0.096	-0.001	0.000
account_age**	0.0000**	0.000	2.549	0.011	0.000	0.000
follower_count**	-0.0000**	0.000	-2.363	0.018	-0.000	-0.000
tweet_length_characters***	0.0066***	0.001	6.043	0.000	0.004	0.009
tweet_like_count	-0.0002	0.001	-0.144	0.886	-0.002	0.002
tweet_age	-0.0013	0.002	-0.562	0.574	-0.006	0.003
tweet_length_word***	0.0302***	0.005	5.969	0.000	0.020	0.040
tweet_retweet_count	-0.0099	0.009	-1.099	0.272	-0.028	0.008
tweet_hashtags_count***	-0.0831***	0.016	-5.148	0.000	-0.115	-0.051
person_names_count***	-0.0749***	0.017	-4.363	0.000	-0.109	-0.041
tweet_created_in_weekend***	-0.3330***	0.029	-11.407	0.000	-0.390	-0.276
organize_names_count***	-0.2019***	0.032	-6.274	0.000	-0.265	-0.139
tweet_created_in_officetime**	-0.0733**	0.033	-2.208	0.027	-0.138	-0.008
tweet_created_at_night	0.0190	0.033	0.582	0.561	-0.045	0.083
tweet_mention_count***	-0.2206***	0.043	-5.101	0.000	-0.305	-0.136
tweet_urls_count***	-1.3706***	0.050	-27.305	0.000	-1.469	-1.272
swear_words_count***	1.2463***	0.065	19.267	0.000	1.119	1.373
Constant	0.2059	1.701	0.121	0.904	-3.128	3.540

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix B: Regression Parameters for the First Round of 2024 Election

Table B1: Logistic Regression Results for Government-Affiliated Targeting (Hypothesis A)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)
N=2,519

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
has_incumbent_target*	0.270*	0.066	4.074	0.000	0.140	0.400
retweet_count***	0.001***	0.000	3.305	0.001	0.000	0.002
tweets_count_by_username	-0.000	0.000	-0.426	0.670	-0.000	0.000
follower_count	-0.000	0.000	-1.429	0.154	-0.000	0.000
like_count***	-0.000***	0.000	-3.461	0.001	-0.000	-0.000
account_age	-0.000	0.000	-1.634	0.103	-0.000	0.000
tweet_length_characters	0.001	0.002	0.643	0.520	-0.003	0.005
tweet_age	-0.005	0.004	-1.076	0.283	-0.013	0.004
tweet_length_word	-0.003	0.009	-0.378	0.705	-0.021	0.014
tweet_hashtags_count	0.026	0.026	0.977	0.329	-0.026	0.077
person_names_count***	0.135***	0.040	3.349	0.001	0.056	0.214
organize_names_count	-0.029	0.050	-0.582	0.561	-0.129	0.070
tweet_urls_count**	-0.136**	0.055	-2.472	0.014	-0.245	-0.028
tweet_created_in_officetime	-0.086	0.057	-1.524	0.128	-0.197	0.025
tweet_created_at_night*	0.109*	0.060	1.833	0.068	-0.008	0.226
tweet_created_in_weekend	-0.000	0.067	-0.005	0.996	-0.131	0.130
following_count**	0.278**	0.117	2.383	0.018	0.049	0.508
swear_words_count	0.066	0.158	0.419	0.675	-0.245	0.377
tweet_mention_count**	-0.596**	0.233	-2.562	0.011	-1.053	-0.138
Intercept**	0.219**	0.092	2.383	0.018	0.038	0.400

*Note: * p<0.1; ** p<0.05; *** p<0.01*

Table B2: Logistic Regression Results for Principlist Attacks (Hypothesis D)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)
 N=2,519

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
has_principalist_target*	-0.200*	0.060	-3.325	0.001	-0.318	-0.082
tweet_length_characters	-0.000	0.000	-0.351	0.726	-0.001	0.000
follower_count***	0.000***	0.000	61.751	0.000	0.000	0.000
like_count***	-0.000***	0.000	-5.016	0.000	-0.000	-0.000
account_age***	-0.000***	0.000	-28.630	0.000	-0.000	-0.000
tweets_count_by_username	0.000	0.000	0.546	0.585	-0.000	0.000
retweet_count***	0.000***	0.000	8.696	0.000	0.000	0.000
tweet_age**	0.001**	0.001	1.993	0.047	0.000	0.002
tweet_length_word	0.001	0.001	0.922	0.357	-0.002	0.004
tweet_hashtags_count***	0.015***	0.004	3.558	0.000	0.007	0.023
following_count***	0.138***	0.004	31.513	0.000	0.130	0.147
person_names_count***	0.017***	0.006	2.748	0.006	0.005	0.029
organize_names_count	0.011	0.008	1.393	0.164	-0.004	0.026
tweet_urls_count	0.009	0.009	1.066	0.287	-0.008	0.027
tweet_created_at_night	0.010	0.010	0.957	0.339	-0.011	0.031
tweet_created_in_officetime	0.007	0.010	0.650	0.516	-0.013	0.027
tweet_created_in_weekend	0.010	0.011	0.891	0.373	-0.012	0.031
swear_words_count	-0.008	0.025	-0.331	0.741	-0.057	0.040
tweet_mention_count	0.025	0.039	0.652	0.514	-0.051	0.101
Intercept**	-0.091**	0.036	-2.545	0.011	-0.162	-0.021

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table B3: Logistic Regression Results for Overall Negativity (Hypothesis E)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)
 N=2,519

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
is_candidate	0.135	0.134	1.011	0.312	-0.127	0.397
retweet_count***	0.000***	0.000	2.640	0.008	0.000	0.001
tweets_count by username*	-0.000*	0.000	-1.737	0.082	-0.001	0.000
following_count***	0.001***	0.000	2.742	0.006	0.000	0.001
follower_count***	-0.000***	0.000	-3.841	0.000	-0.000	-0.000
like_count	0.000	0.000	0.596	0.551	-0.000	0.000
account_age	0.000	0.000	1.340	0.180	-0.000	0.000
tweet_length_characters	-0.003	0.003	-1.083	0.279	-0.009	0.002
tweet_age	-0.002	0.005	-0.476	0.634	-0.012	0.008
tweet_length_word***	0.047***	0.013	3.489	0.000	0.020	0.073
tweet_hashtags_count**	-0.089**	0.044	-2.001	0.045	-0.175	-0.002
person_names_count***	0.336***	0.055	6.093	0.000	0.228	0.444
organize_names_count	-0.086	0.083	-1.048	0.295	-0.248	0.075
tweet_urls_count***	-1.154***	0.096	-11.995	0.000	-1.343	-0.965
tweet_created_in_officetime***	-0.353***	0.114	-3.094	0.002	-0.577	-0.129
tweet_created_at_night	0.060	0.116	0.520	0.603	-0.166	0.287
tweet_created_in_weekend***	-0.383***	0.118	-3.244	0.001	-0.614	-0.151
swear_words_count*	0.394*	0.213	1.849	0.064	-0.024	0.812
tweet_mention_count	-0.523	0.347	-1.505	0.132	-1.204	0.158
Intercept***	-1.246***	0.323	-3.855	0.000	-1.880	-0.613

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table B4: Negative Binomial Regression Results for Negativity Bias (Hypothesis F) - Like Count

Dependent Variable: Number of Likes
N=2,519

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity	-0.086	0.063	-1.365	0.172	-0.211	0.038
tweets_count_by_username	0.000	0.000	0.614	0.539	-0.000	0.000
is_retweet	0.000	0.000	1.187	0.235	-0.000	0.000
follower_count***	-0.000***	0.000	-9.712	0.000	-0.000	-0.000
account_age***	0.000***	0.000	5.293	0.000	0.000	0.000
retweet_count***	0.002***	0.000	22.890	0.000	0.002	0.002
tweet_length_characters	-0.003	0.002	-1.581	0.114	-0.007	0.001
tweet_age	0.005	0.004	1.225	0.221	-0.003	0.013
tweet_length_word	0.014	0.010	1.411	0.158	-0.005	0.033
tweet_hashtags_count	-0.043	0.028	-1.537	0.124	-0.097	0.012
following_count***	-0.107***	0.030	-3.627	0.000	-0.165	-0.049
person_names_count	0.048	0.041	1.182	0.237	-0.032	0.128
organize_names_count	-0.084	0.052	-1.621	0.105	-0.186	0.018
tweet_urls_count***	-0.246***	0.059	-4.193	0.000	-0.361	-0.131
tweet_created_in_officetime	0.022	0.069	0.318	0.750	-0.113	0.157
tweet_created_at_night	0.038	0.070	0.536	0.592	-0.100	0.176
tweet_created_in_weekend	-0.033	0.074	-0.446	0.656	-0.178	0.112
is_quote***	3.604***	0.119	30.166	0.000	3.370	3.838
swear_words_count	-0.008	0.167	-0.051	0.960	-0.335	0.318
tweet_mention_count	-0.092	0.260	-0.353	0.724	-0.600	0.417
Intercept***	3.604***	0.119	30.166	0.000	3.370	3.838

*Note: * p<0.1; ** p<0.05; *** p<0.01*

Table B5: Negative Binomial Regression Results for Negativity Bias (Hypothesis F) - Retweet Count

Dependent Variable: Number of Retweets
N=2,519

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity	0.045	0.044	1.022	0.307	-0.041	0.131
is_retweet	-0.000	0.000	-0.801	0.423	-0.000	0.000
follower_count***	0.000***	0.000	16.564	0.000	0.000	0.000
like_count***	0.000***	0.000	44.136	0.000	0.000	0.000
account_age	0.000	0.000	0.636	0.525	-0.000	0.000
tweets_count by username	0.000	0.000	0.124	0.901	-0.000	0.000
tweet_length_characters	-0.001	0.001	-0.725	0.468	-0.004	0.002
tweet_age**	0.006**	0.003	1.989	0.047	0.000	0.011
tweet_length_word	0.011	0.007	1.590	0.112	-0.003	0.024
tweet_hashtags_count	0.012	0.019	0.602	0.547	-0.026	0.050
following_count	-0.002	0.021	-0.081	0.935	-0.042	0.039
person_names_count***	0.091***	0.028	3.225	0.001	0.036	0.147
organize_names_count	-0.017	0.036	-0.477	0.633	-0.088	0.054
tweet_urls_count***	0.193***	0.041	4.703	0.000	0.113	0.274
tweet_created_in_officetime	-0.014	0.048	-0.289	0.773	-0.108	0.080
tweet_created_at_night	-0.044	0.049	-0.890	0.373	-0.139	0.052
tweet_created_in_weekend	-0.023	0.051	-0.451	0.652	-0.124	0.078
is_quote***	1.306***	0.083	15.682	0.000	1.143	1.469
swear_words_count	0.091	0.115	0.798	0.425	-0.133	0.316
tweet_mention_count	0.047	0.179	0.264	0.792	-0.304	0.399
Intercept***	1.306***	0.083	15.682	0.000	1.143	1.469

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table B6: Logistic Regression Results for Boomerang Effect (Hypothesis G)

Dependent Variable: Negative Sentiment in Replies (Binary: 0=Not Negative, 1=Negative)
 N=117,695

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity*	0.697*	0.029	24.049	0.000	0.640	0.753
like_count	0.000	0.000	1.052	0.293	-0.000	0.000
tweets_count by username**	-0.001**	0.000	-1.967	0.049	-0.002	-0.000
follower_count	-0.000	0.000	-0.933	0.351	-0.000	0.000
following_count***	-0.000***	0.000	-4.386	0.000	-0.000	-0.000
account_age	0.000	0.000	0.547	0.584	-0.000	0.000
tweet_age*	-0.002*	0.001	-1.822	0.068	-0.005	0.000
tweet_length_characters***	0.013***	0.001	13.627	0.000	0.011	0.015
retweet_count	0.000	0.002	0.088	0.930	-0.003	0.004
tweet_length_word***	-0.107***	0.005	-22.666	0.000	-0.116	-0.097
tweet_hashtags_count***	0.139***	0.015	9.081	0.000	0.109	0.169
swear_words_count***	0.377***	0.019	19.553	0.000	0.340	0.415
person_names_count**	0.044**	0.020	2.182	0.029	0.004	0.083
tweet_created_in_weekend*	0.052*	0.027	1.899	0.058	-0.002	0.105
tweet_created_at_night	0.018	0.029	0.623	0.533	-0.038	0.074
tweet_created_in_officetime	-0.001	0.030	-0.038	0.970	-0.060	0.058
organize_names_count***	0.195***	0.035	5.498	0.000	0.125	0.264
tweet_urls_count	0.044	0.039	1.136	0.256	-0.032	0.120
tweet_mention_count***	-0.232***	0.060	-3.875	0.000	-0.349	-0.115
Intercept***	-1.854***	0.093	-19.940	0.000	-2.037	-1.672

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table B7: Logistic Regression Results for Gender Differences (Hypothesis L)

Dependent Variable: Negative Sentiment in Replies (Binary: 0=Not Negative, 1=Negative)
 N=117,695

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
user_gender	0.001	0.026	0.024	0.981	-0.051	0.052
like_count	0.000	0.000	1.162	0.245	-0.000	0.000
tweets_count by username**	-0.001**	0.000	-1.980	0.048	-0.002	-0.000
follower_count	-0.000	0.000	-1.111	0.266	-0.000	0.000
following_count***	-0.000***	0.000	-4.421	0.000	-0.000	-0.000
account_age	0.000	0.000	0.868	0.385	-0.000	0.000
tweet_age**	-0.003**	0.001	-2.514	0.012	-0.006	-0.001
tweet_length_characters***	0.015***	0.001	15.417	0.000	0.013	0.017
retweet_count	-0.000	0.002	-0.145	0.885	-0.004	0.004
tweet_length_word***	-0.100***	0.005	-21.691	0.000	-0.109	-0.091
tweet_hashtags_count***	0.127***	0.015	8.310	0.000	0.097	0.157
swear_words_count***	0.392***	0.019	20.508	0.000	0.355	0.430
person_names_count***	0.052***	0.020	2.623	0.009	0.013	0.091
negativity***	0.078***	0.023	3.382	0.001	0.033	0.122
tweet_created_in_weekend*	0.047*	0.027	1.740	0.082	-0.006	0.101
tweet_created_at_night	0.017	0.029	0.584	0.559	-0.039	0.073
tweet_created_in_officetime	0.004	0.030	0.127	0.899	-0.055	0.063
organize_names_count***	0.275***	0.035	7.910	0.000	0.207	0.343
tweet_urls_count	-0.049	0.038	-1.264	0.206	-0.124	0.027
tweet_mention_count***	-0.282***	0.060	-4.727	0.000	-0.398	-0.165
Intercept***	-1.811***	0.096	-18.868	0.000	-1.999	-1.623

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table B8: Logistic Regression Results for Gender Differences (Hypothesis L) - Negative Tweets Only

Dependent Variable: Negative Sentiment in Replies to Negative Tweets (Binary: 0=Not Negative, 1=Negative)
N=975 Negative Tweets

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
user_gender	-0.083	0.082	-1.014	0.311	-0.244	0.078
like_count	-0.000	0.000	-0.294	0.769	-0.001	0.001
follower_count	0.000	0.000	0.150	0.880	-0.000	0.000
following_count	0.000	0.000	1.244	0.214	-0.000	0.000
account_age	0.000	0.000	1.058	0.290	-0.000	0.000
tweet_length_characters***	0.014***	0.003	4.401	0.000	0.008	0.021
tweet_age	-0.003	0.004	-0.698	0.485	-0.012	0.006
tweets_count_by_username	-0.004	0.004	-1.139	0.255	-0.011	0.003
retweet_count*	0.008*	0.005	1.716	0.086	-0.001	0.018
tweet_length_word***	-0.102***	0.016	-6.578	0.000	-0.133	-0.072
tweet_hashtags_count***	0.163***	0.049	3.341	0.001	0.067	0.258
person_names_count**	0.130**	0.055	2.371	0.018	0.023	0.237
swear_words_count***	0.337***	0.065	5.215	0.000	0.210	0.463
tweet_created_at_night	0.076	0.090	0.845	0.398	-0.100	0.251
tweet_created_in_weekend	-0.061	0.095	-0.637	0.524	-0.247	0.126
tweet_created_in_officetime	0.125	0.100	1.251	0.211	-0.071	0.320
organize_names_count*	0.194*	0.101	1.916	0.055	-0.004	0.393
tweet_urls_count	0.089	0.109	0.821	0.412	-0.124	0.302
tweet_mention_count	-0.103	0.164	-0.630	0.529	-0.424	0.218
Intercept***	-1.976***	0.284	-6.961	0.000	-2.533	-1.420

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Appendix C: Regression Parameters for the Second Round of 2024 Election

Table C1: Logistic Regression Results for Government-Affiliated Targeting (Hypothesis A)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)
N=2,713

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
has_incumbent_target*	0.222*	0.088	2.534	0.012	0.049	0.395
retweet_count***	0.001***	0.000	3.836	0.000	0.001	0.002
tweets_count_by_username	0.000	0.000	1.047	0.297	-0.000	0.000
following_count*	0.000*	0.000	1.717	0.088	-0.000	0.000
account_age*	0.000*	0.000	1.717	0.088	-0.000	0.000
follower_count*	0.000*	0.000	1.717	0.088	-0.000	0.000
like_count***	-0.000***	0.000	-3.892	0.000	-0.000	-0.000
tweet_length_characters	-0.001	0.003	-0.263	0.793	-0.007	0.005
tweet_age	-0.003	0.007	-0.390	0.697	-0.016	0.011
tweet_length_word	0.007	0.014	0.483	0.630	-0.021	0.035
person_names_count***	0.164***	0.055	2.981	0.003	0.055	0.273
tweet_hashtags_count	-0.016	0.071	-0.220	0.826	-0.156	0.125
tweet_created_at_night	0.097	0.085	1.137	0.257	-0.071	0.265
organize_names_count	-0.019	0.086	-0.216	0.829	-0.188	0.151
tweet_created_in_officetime***	-0.251***	0.087	-2.897	0.004	-0.422	-0.080
tweet_urls_count***	-0.288***	0.093	-3.097	0.002	-0.472	-0.104
tweet_created_in_weekend	-0.117	0.115	-1.019	0.310	-0.344	0.110
swear_words_count	0.132	0.171	0.772	0.441	-0.206	0.469
tweet_mention_count	-0.461	0.429	-1.077	0.283	-1.308	0.386
Intercept*	0.000*	0.000	1.717	0.088	-0.000	0.000

*Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$*

Table C2: Logistic Regression Results for Overall Negativity (Hypothesis E)

Dependent Variable: Tweet Negativity (Binary: 0=Not Negative, 1=Negative)
 N=2,713

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
is_candidate*	0.408*	0.189	2.161	0.031	0.038	0.778
retweet_count***	0.001***	0.000	3.863	0.000	0.000	0.001
tweets_count by username	-0.000	0.000	-1.548	0.122	-0.001	0.000
following_count***	0.001***	0.000	3.687	0.000	0.000	0.001
follower_count***	-0.000***	0.000	-3.175	0.001	-0.000	-0.000
like_count	-0.000	0.000	-0.957	0.339	-0.000	0.000
account_age	0.000	0.000	0.614	0.539	-0.000	0.000
tweet_length_characters	0.001	0.003	0.374	0.708	-0.005	0.007
tweet_age	0.004	0.005	0.851	0.395	-0.005	0.013
tweet_length_word**	0.032**	0.014	2.343	0.019	0.005	0.059
tweet_hashtags_count*	-0.100*	0.052	-1.946	0.052	-0.201	0.001
person_names_count***	0.323***	0.055	5.851	0.000	0.215	0.431
organize_names_count	-0.041	0.085	-0.481	0.630	-0.208	0.126
tweet_urls_count***	-1.187***	0.099	-11.934	0.000	-1.382	-0.992
tweet_created_in_officetime***	-0.450***	0.118	-3.815	0.000	-0.681	-0.219
tweet_created_at_night	-0.059	0.118	-0.497	0.619	-0.290	0.173
tweet_created_in_weekend***	-0.639***	0.119	-5.357	0.000	-0.872	-0.405
swear_words_count*	0.390*	0.208	1.870	0.061	-0.019	0.798
tweet_mention_count	-0.390	0.316	-1.233	0.218	-1.010	0.230
Intercept***	-1.679***	0.314	-5.341	0.000	-2.295	-1.063

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table C3: Negative Binomial Regression Results for Negativity Bias (Hypothesis F) - Like Count

Dependent Variable: Number of Likes
N=2,713

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity	-0.110	0.079	-1.390	0.164	-0.265	0.045
retweet_count***	0.002***	0.000	18.977	0.000	0.002	0.002
is_retweet*	0.000*	0.000	1.779	0.075	-0.000	0.000
following_count***	0.000***	0.000	35.081	0.000	0.000	0.000
follower_count***	-0.000***	0.000	-27.341	0.000	-0.000	-0.000
tweets_count_by_username***	0.000***	0.000	35.078	0.000	0.000	0.000
account_age***	0.003***	0.000	35.081	0.000	0.003	0.003
tweet_length_characters	0.001	0.003	0.285	0.775	-0.005	0.006
tweet_age	0.006	0.005	1.373	0.170	-0.003	0.015
tweet_length_word	-0.007	0.013	-0.532	0.595	-0.032	0.018
tweet_hashtags_count	-0.032	0.042	-0.758	0.449	-0.114	0.050
person_names_count	0.037	0.049	0.743	0.458	-0.060	0.134
organize_names_count	-0.069	0.065	-1.061	0.289	-0.195	0.058
tweet_urls_count*	-0.138*	0.073	-1.889	0.059	-0.282	0.005
tweet_created_at_night	0.105	0.085	1.234	0.217	-0.062	0.271
tweet_created_in_officetime	0.058	0.087	0.661	0.508	-0.113	0.229
tweet_created_in_weekend	0.115	0.094	1.218	0.223	-0.070	0.299
is_quote***	0.000***	0.000	35.081	0.000	0.000	0.000
swear_words_count	-0.088	0.183	-0.480	0.631	-0.445	0.270
tweet_mention_count	-0.360	0.307	-1.175	0.240	-0.961	0.241
Intercept***	0.000***	0.000	35.081	0.000	0.000	0.000

*Note: * p<0.1; ** p<0.05; *** p<0.01*

Table C4: Negative Binomial Regression Results for Negativity Bias (Hypothesis F) - Retweet Count

Dependent Variable: Number of Retweets
N=2,713

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity*	0.099*	0.052	1.892	0.058	-0.004	0.201
is_retweet	-0.000	0.000	-0.801	0.423	-0.000	0.000
following_count***	0.000***	0.000	19.878	0.000	0.000	0.000
follower_count***	0.000***	0.000	3.362	0.001	0.000	0.000
tweets_count_by_username***	0.000***	0.000	19.895	0.000	0.000	0.000
like_count***	0.000***	0.000	30.606	0.000	0.000	0.000
account_age***	0.001***	0.000	19.879	0.000	0.001	0.001
tweet_length_characters	0.000	0.002	0.137	0.891	-0.003	0.004
tweet_age**	0.008**	0.003	2.460	0.014	0.002	0.013
tweet_length_word	0.002	0.009	0.171	0.865	-0.015	0.018
tweet_hashtags_count	0.027	0.028	0.980	0.327	-0.027	0.081
person_names_count	0.006	0.033	0.193	0.847	-0.058	0.071
organize_names_count	-0.005	0.043	-0.120	0.904	-0.089	0.079
tweet_urls_count***	0.171***	0.049	3.512	0.000	0.076	0.266
tweet_created_at night	-0.022	0.056	-0.400	0.689	-0.133	0.088
tweet_created_in officetime	-0.037	0.058	-0.646	0.518	-0.151	0.076
tweet_created_in weekend	-0.001	0.063	-0.019	0.985	-0.124	0.122
is_quote***	0.000***	0.000	19.879	0.000	0.000	0.000
swear_words_count	0.124	0.120	1.031	0.303	-0.112	0.360
tweet_mention_count	-0.313	0.203	-1.541	0.123	-0.712	0.085
Intercept***	0.000***	0.000	19.879	0.000	0.000	0.000

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table C5: Logistic Regression Results for Boomerang Effect (Hypothesis G)

Dependent Variable: Negative Sentiment in Replies (Binary: 0=Not Negative, 1=Negative)
 N=84,828

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
negativity*	0.633*	0.034	18.418	0.000	0.565	0.700
like_count	0.000	0.000	0.651	0.515	-0.000	0.000
follower_count	-0.000	0.000	-1.158	0.247	-0.000	0.000
following_count**	-0.000**	0.000	-2.435	0.015	-0.000	-0.000
account_age	-0.000	0.000	-0.177	0.859	-0.000	0.000
tweet_length_characters***	0.014***	0.001	12.147	0.000	0.012	0.016
tweets_count_by_username	-0.001	0.001	-1.041	0.298	-0.002	0.001
tweet_age**	-0.003**	0.002	-1.997	0.046	-0.006	-0.000
retweet_count	-0.000	0.002	-0.100	0.920	-0.005	0.005
tweet_length_word***	-0.107***	0.005	-19.639	0.000	-0.118	-0.097
tweet_hashtags_count***	0.128***	0.017	7.379	0.000	0.094	0.161
swear_words_count***	0.349***	0.023	15.255	0.000	0.304	0.394
person_names_count***	0.079***	0.023	3.440	0.001	0.034	0.123
tweet_created_in_weekend	0.007	0.032	0.206	0.837	-0.056	0.069
tweet_created_at_night	-0.014	0.033	-0.416	0.677	-0.078	0.051
tweet_created_in_officetime	0.010	0.035	0.288	0.773	-0.058	0.079
organize_names_count***	0.200***	0.041	4.909	0.000	0.120	0.279
tweet_urls_count	0.002	0.043	0.045	0.964	-0.082	0.086
tweet_mention_count***	-0.284***	0.073	-3.877	0.000	-0.427	-0.140
Intercept***	-1.726***	0.107	-16.187	0.000	-1.935	-1.517

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table C6: Logistic Regression Results for Gender Differences (Hypothesis L)

Dependent Variable: Negative Sentiment in Replies (Binary: 0=Not Negative, 1=Negative)
 N=84,828

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
user_gender	0.008	0.030	0.278	0.781	-0.051	0.068
like_count	0.000	0.000	1.070	0.284	-0.000	0.001
follower_count	-0.000	0.000	-1.449	0.147	-0.000	0.000
following_count**	-0.000**	0.000	-2.472	0.013	-0.000	-0.000
account_age	0.000	0.000	0.134	0.893	-0.000	0.000
tweet_length_characters***	0.016***	0.001	13.866	0.000	0.013	0.018
tweets_count_by_username	-0.001	0.001	-1.018	0.309	-0.002	0.001
tweet_age***	-0.004***	0.002	-2.579	0.010	-0.007	-0.001
retweet_count	-0.001	0.002	-0.299	0.765	-0.006	0.004
tweet_length_word***	-0.104***	0.005	-19.154	0.000	-0.115	-0.094
tweet_hashtags_count***	0.108***	0.017	6.222	0.000	0.074	0.143
swear_words_count***	0.361***	0.023	15.761	0.000	0.316	0.406
person_names_count***	0.084***	0.023	3.689	0.000	0.039	0.129
negativity***	0.094***	0.027	3.523	0.000	0.042	0.147
tweet_created_in_weekend	-0.001	0.032	-0.023	0.982	-0.064	0.063
tweet_created_at_night	-0.017	0.033	-0.519	0.604	-0.082	0.048
tweet_created_in_officetime	0.020	0.035	0.584	0.559	-0.048	0.089
organize_names_count***	0.276***	0.040	6.892	0.000	0.197	0.354
tweet_urls_count*	-0.074*	0.043	-1.717	0.086	-0.158	0.010
tweet_mention_count***	-0.378***	0.077	-4.942	0.000	-0.528	-0.228
Intercept***	-1.653***	0.114	-14.501	0.000	-1.877	-1.430

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table C7: Logistic Regression Results for Gender Differences (Hypothesis L) - Negative Tweets Only

Dependent Variable: Negative Sentiment in Replies to Negative Tweets (Binary: 0=Not Negative, 1=Negative)
N=949 Negative Tweets

Variable	Coefficient	Std. Error	z-value	p-value	95% CI Lower	95% CI Upper
user_gender	-0.055	0.049	-1.107	0.268	-0.151	0.042
like_count	0.000	0.000	0.318	0.751	-0.000	0.001
follower_count	-0.000	0.000	-0.498	0.618	-0.000	0.000
following_count	-0.000	0.000	-0.673	0.501	-0.000	0.000
account_age	-0.000	0.000	-0.909	0.363	-0.000	0.000
tweet_length_characters***	0.018***	0.002	8.840	0.000	0.014	0.021
tweet_age	-0.004	0.003	-1.397	0.162	-0.009	0.002
retweet_count	0.004	0.004	0.847	0.397	-0.005	0.012
tweets_count by username	-0.003	0.004	-0.713	0.476	-0.011	0.005
tweet_length_word***	-0.115***	0.009	-12.143	0.000	-0.134	-0.097
tweet_hashtags_count***	0.087***	0.031	2.801	0.005	0.026	0.148
person_names_count***	0.102***	0.035	2.932	0.003	0.034	0.170
swear_words_count***	0.371***	0.038	9.656	0.000	0.296	0.447
tweet_created_at night	0.051	0.055	0.915	0.360	-0.058	0.159
organize_names_count***	0.206***	0.061	3.350	0.001	0.085	0.326
tweet_created_in officetime	0.087	0.063	1.381	0.167	-0.036	0.211
tweet_created_in weekend	-0.012	0.063	-0.186	0.852	-0.135	0.112
tweet_urls_count**	-0.145**	0.072	-2.031	0.042	-0.286	-0.005
tweet_mention_count*	-0.230*	0.118	-1.942	0.052	-0.461	0.002
Intercept***	-1.722***	0.186	-9.264	0.000	-2.086	-1.358

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

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