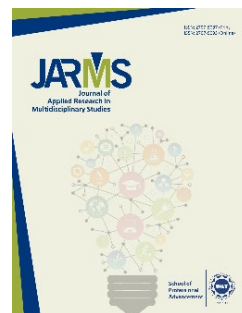
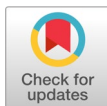


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- Author (s):** Asim Raza^{1,2} and Nasreen Akhtar¹
- Affiliation (s):** ¹International Islamic University, Islamabad, Pakistan
²Bahria University, Islamabad, Pakistan
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Development of an Instrument for Measuring the Voting Behaviour in Pakistan

Asim Raza^{1,2*} and Nasreen Akhtar¹

¹International Islamic University, Islamabad, Pakistan

²Bahria University, Islamabad, Pakistan

Abstract

Understanding voting behaviour is essential for analysing democratic processes, electoral accountability, and political participation. In Pakistan, electoral behaviour varies significantly across provinces due to socio-economic disparities, political culture, identity politics, and institutional trust. Despite a growing body of empirical research, the absence of a standardized and longitudinally applicable measurement tool has constrained comparative and cumulative electoral analysis. This article presents a systematic re-conceptualisation, formulation and validation of an instrument designed in the form of a questionnaire to measure voting behaviour in a selected region of Pakistan across the last four general elections from 2008 to 2024. Drawing upon established theories of voting behaviour, international electoral survey frameworks, and Pakistan-specific empirical studies, the article critically evaluates existing tools and proposes a structured, reliable, and context-sensitive questionnaire. Each stage of instrument development is supported by relevant scholarly literature and methodological standards, ensuring validity, reliability, and applicability in the Pakistani provincial context.

Keywords: issue-based, kinship, measuring instrument, voting behaviour, party affiliation.

Introduction

The study of electoral behaviour seeks to resolve a fundamental question: on what basis do they decide whom to vote. This needs an in-depth and contextual investigation in case of Pakistan, which is a federal parliamentary republic with turbulent political history, vibrant multi-party contention, and deep-rooted socio-political segmentations. Research done in this domain at the national level does not often fully disclose the significant provincial and regional diversity. Here, each province presents a unique landscape of political influences where national parties, regional

*Corresponding Author: asimraza@hotmail.com

powerhouses, religio-political groups, and local kinship networks co-exist in complex manner.

Voting behaviour is a fundamental subject of political science that explains the influence of political preferences, social identities, and issue perceptions into electoral choices of citizens (Dalton, [2018](#)). Voting is not just an impulse action, it is an intricate interplay of socio-demographic attributes, political inclination, media exposure, institutional faith, and situational factors (Rosenstone & Hansen, [2003](#)).

In Pakistan, voting behaviour has transformed from a distinctive combination of time-honoured practices, patron-client relationships, religio-ethnic identities, and evolving party systems (Wilder, [1999](#)). The relationship of these factors varies from province to province, owing to the influence of local political cultures and prevailing development trajectories on corresponding electoral preferences (Shabbir & Haider, [2023](#)). In this backdrop, limited tools have been developed for systematic and longitudinal measurement of voting behaviour in Pakistan's electoral environment. The research undertaken on Pakistani elections is generally based on aggregate data, analyses by experts, or surveys employing Western context instruments without a critical adaptation to address the locally relevant drivers.

This study addresses the shortcomings by developing a questionnaire formulated exclusively for Pakistan's political environment. The study takes into account existing research on the voting behaviour in Pakistan and international best practices in electoral survey design, such as those employed in the American National Election Studies (ANES) and the Comparative Study of Electoral Systems (CSES) (Dalton, & Klingemann, [2007](#)). The intended outcome is to develop an academically validated and empirically reliable instrument to measure the voting behaviour in Pakistan that takes into account the ground realities of regional politics as well as the global political science methodologies.

Contending Approaches and Evaluation of Existing Frameworks

According to Dalton ([2018](#)), voting behaviour pertains to the patterns, motivations, and determinants that influence the participation of individuals in elections and choose among competing political options. It covers observable actions, such as vote choice and turnout, as well as the latent constructs, including political attitudes, party identification, and issue

preferences (Rosenstone & Hansen, [2003](#)).

In Pakistani context, voting behaviour goes beyond ideological positioning to include factors such as personality of the candidate, kinship (*baradari*), local service delivery, and credibility of leadership (Marwat & Khattak, [2020](#); Wilder, [1999](#)). Pakistani political culture has encouraged patrimonialism which has weakened the promotion of democracy or parliamentary form of government. Therefore, any valid measurement instrument to determine the voting behaviour must cover the conventional political variables as well as the context-specific determinants.

Outcome of any direct elections is generally a reflection of the prevailing voting behaviour of the electorate. In Pakistan, patronage and kinship are generally perceived to form the basic elements of the country's politics (Lieven, [2011](#)). Voters frequently prioritise baradari affiliations – extended kinship or caste-based social networks – over political ideology, policy platforms, or even candidate competence. This phenomenon is rooted in traditional rural structures where social cohesion, loyalty, and mutual dependency within the baradari guide political alignments (Afzal, [2018](#)).

Baradari loyalty often trumps party loyalty; voters may choose a candidate simply because they belong to the same baradari, regardless of their party affiliation. To take advantage of this phenomenon, candidates mobilise their baradari networks for votes, especially in rural constituencies, by leveraging social obligations and kinship expectations. Consequently, political parties strategically distribute tickets to influential figures from dominant local baradaris to maximise their vote banks. As such, any study of the voting behaviour in Pakistan needs to take stock of this important aspect.

Literature Review

Extensive research is available on Pakistani political system and forms of governments, but little discourse has been done on the subject topic. This article undertakes an analysis of voters' behaviour according to established theoretical models. Development of a measurement tool must be grounded in theory. The study of voting behaviour is traditionally based on three pillar models: the Sociological model, the Psychosocial model, and the Rational-Choice model.

Sociological Model (Columbia School)

Associated with Lazarsfeld et al. (1944), this approach lays emphasis on the influence of long-term demographic and social determinants such as class, religion, ethnicity, and region on voting decisions. Voter choice is seen as expression of group membership. The voters earlier considered independent are latter persuaded to vote for a particular candidate not as the result of an analysis of the proposals submitted by each candidate or the issues under discussion in the campaign but following pressure from members of their community (Madubuegwu et al., 2022). Research in Pakistan substantiates the relevance of social identity and group affiliation in shaping electoral outcomes (Shabbir & Haider, 2023).

Psychological Model (Michigan School)

This model has its origin in the studies conducted by Campbell et al. (1960). The main concept of this model is partisanship or bias in voting behaviour, which comprises of a psychological resemblance, stable and lasting relationship with a political party that does not necessarily transform into a solid link, such as registration, or consistently voting and systematically militancy with this party (Antunes, 2010). The model identifies six psychological factors that may influence voters' decision-making process: party identification; concerns with issues; personal attachment to candidates; conformity to the group standards; sense of efficacy, and; sense of civic obligation to vote (Mahsud & Amin, 2020). Studies in Pakistan have demonstrated that voter choice is significantly affected by party loyalty and leader appeal, particularly in urban constituencies (Quadri et al., 2025).

Rational Choice Model (Rochester School)

The theoretical background for an economic explanation of voting behaviour was first presented by Anthony Downs in 1957, which is commonly referred to as Rational Choice Theory. It presents voters as utility-maximising actors who evaluate parties and candidates according to their performance, policy benefits, and issue salience. The basic assumption of the rational choice model is that citizens will act rationally in political activities (Nurdin, 2023). Empirical studies in Pakistan show increasing evidence of issue-based voting, especially related to economic performance and governance (Saleem et al., 2024).

In the political landscape of Pakistan, no single theory is sufficiently applicable due to the hybrid political dynamics. Here, social

structures define party loyalties and performance is usually measured through ethnic or sectarian prism.

Standardised instruments are generally available at a global level to measure voting behaviour in different times and countries through large-scale electoral surveys, such as those developed by ANES and CSES (Dalton, & Klingemann, [2007](#)). Such tools comprise of modules on demographics, political leanings, media influence, pertinent issue, and voter confidence. Their robust methodology provides significant guidance in developing the questionnaire, especially in scale design and longitudinal comparability.

However, these surveys cannot be exactly replicated in Pakistan's scenario due to varying divergencies, such as the literacy levels, political socialisation trends, and trust deficits at institutional level (Wilder, [1999](#)). Invaluable data about the voting behaviour in Pakistan's elections has been collected by the larger survey houses like the Pakistan Election Study (PES), Gallup Pakistan, and the South Asian Barometer. Their questionnaires are based on voter's choice, party liking, and key issues. However, gaps remain in the available literature as summarised below:

- Such surveys are national in scope, with diluted province-specific idiosyncrasies.
- Kinship or *Baradari* influence is often insufficiently measured or not catered.
- The role of local influencers, such as *pirs* and landlords, is seldom quantified.
- Questions on religious motivation may not distinguish between personal piety, support for religio-political parties, and the desire for a more Islamic system in general.
- Retrospective questions about previous voting are not always systematically included.

Methodology

The questionnaire for the survey of voting behaviour in Pakistan formulated for this study is based on the following principles.

Defining Measurement Objectives

Design of a questionnaire is developed on the clear research objectives (DeVellis, [2017](#)). In the subject case, the objectives comprise of:

- Measuring the voter's choice across four general elections.
- Identifying stable and changing factors of voting behaviour.
- Evaluating the influence of media, issues, and political trust over time.

Such objectives align with best practices in electoral survey research (Dalton, [2018](#)).

Item Generation and Content Validity

As suggested by DeVellis ([2017](#)), formulation of survey items should be based on a thorough review of related literature and adaptation to local scenario. Studies undertaken in Pakistan provide empirically established indicators for party faithfulness, leadership charisma, and issue significance (Shabbir & Haider, [2023](#); Marwat & Khattak, [2020](#)). Political scientists and survey analysts augment the content validity through related review, as suggested in the literature pertaining to scale development (Boateng et al., [2018](#)).

Scaling and Response Formats

Political attitudes are commonly measured in Likert-type owing to better reliability and interpretability (Likert, [1932](#); Aybar et al., [2024](#)). Studies in Pakistan have successfully used five-point Likert scales to cover variations in political trust, media influence, and issue importance (Quadri et al., [2025](#)).

Formulated Questionnaire Structure

The questionnaire developed for this study (placed in the Appendix) is designed to undertake psychometric evaluation. Internal consistency is verified by testing multi-item sections of the instrument through Cronbach's alpha. Validation of the questionnaire is ascertained through trend and factor analysis of longitudinal electoral data (DeVellis, [2017](#); Nunnally & Bernstein, [1994](#)). Content and construct validity is reinforced by the alignment of instrument items with established theoretical models.

Respondent particulars (name, address, and constituency) are included in the questionnaire to keep a check on the authenticity of the face-to-face

response. In the process, each respondent was assured of the personal data confidentiality through related clause at the beginning of the questionnaire and a verbal assurance to this effect prior the face-to-face conduct.

The questions are formulated as per the self-reported vote choice because the officially available records do not provide all the details being pursued through this instrument.

Section A: Demographic Controls and Contextual Variables

Demographic variables are fundamental control variables in analysis of voting behaviour, as they frequently mitigate the effects of political attitudes and social influences (Rosenstone & Hansen, [2003](#)). Studies in Pakistan often indicate linkage of age, education, occupation, and urban residence with political participation and party choice (Marwat & Khattak, [2020](#)). Based on this analogy, Section A of the questionnaire (Respondent Demographics) comprises of socio-demographic details. Gathering this data from major urban centres of Punjab (Lahore, Faisalabad, Multan, Rawalpindi, Gujranwala) augments comparability across urban political contexts within provincial perspective.

In the Gender category, Other has been added along with Male and Female to register the opinion of the 3rd gender. The purpose is to expand the instrument range to cover all segments of the society.

Section B: Longitudinal Measurement Across Four Elections

A key factor of the instrument is its retrospective panel design, enabling respondents to share voting behaviour and influences in the general elections from 2008 to 2024. Electoral studies widely use longitudinal recall questions to analyse voting consistency and variations when panel data are not available (Dalton, & Klingemann, [2007](#)). Section B of the questionnaire (Voting History) is based on this approach, inquiring the participation in each election (Q6), the political party supported (Q7), and the primary reasons for the voting choices (Q8). Determining the top three reasons among the given variables leads to the identification of dominant and secondary motivations. This method is recommended in voting behaviour study to depict multifactorial decision-making (Dalton, [2018](#)).

Section C: Sociological Model and Its Operationalization

The sociological model of voting behaviour lays emphasis on the role of social location (class, religion, ethnicity, kinship) in shaping electoral

choices (Lazarsfeld et al., [1944](#); Mahsud & Amin, [2020](#)). Sociological determinants are highly noticeable in Pakistan, particularly in Punjab, where voting decisions are significantly affected by kinship ties/ *baradari*, family influence, and community leadership (Wilder, [1999](#)). Section C of the questionnaire (Sociological Factors & Influences) is based on this theoretical perspective, covering the kinship influence (Q9), religious affiliation (Q10), ethnic or linguistic identity (Q11), and community leaders' recommendations (Q12) to record the persistence and variation of sociological voting patterns across four elections. Statistical significance of these factors as predictors of voting choice is ascertained in empirical studies undertaken in Punjab and Khyber Pakhtunkhwa (Shabbir & Haider, [2023](#); Marwat & Khattak, [2020](#)).

Section D: Psychosocial (Michigan) Model and Party Identification

The Psychosocial model describes the voting behaviour to be driven by long-term psychological affinity, such as partisan allegiance and leadership appraisals (Campbell et al., [1960](#)). This model is highly applicable in Pakistan, where party loyalty and strong leader-centric politics often co-exist (Quadri et al., [2025](#)). The instrument addresses this model through Section D (Psychosocial Factors & Party/ Leader Influences). Q13 reviews voting behaviour changes over time to differentiate stable partisan voters from volatile or swing voters. Q14 and Q15 discern party choice in each election and its linkage with leadership appeal, party ideology, party performance, and family tradition. These aspects indicate the impact of leadership charisma and party reputation over the voter realignment in the last four general elections (Saleem et al., [2024](#)).

Section E: Rational Choice and Issue-Based Voting

The Rational Choice theory anchors on the premise that voters judge political parties and electoral candidates as per anticipated benefits, policy performance, and issue priorities (Downs, [1957](#); Panagopoulos & Wang, [2025](#)). This model is conventionally considered less relevant in developing democracies. However, recent studies in Pakistani context indicate an increasing trend towards issue-based voting, especially focusing inflation, corruption, and unemployment (Saleem et al., [2024](#)). This theoretical perspective underpins Section E of the questionnaire (Rational Choice / Issue-Based Voting); Questions 16 to 18 measuring issue salience, retrospective performance evaluation, and expectations of personal or

community benefits. Empirical evidence substantiates these factors whereby voters increasingly compare party performance across electoral cycles, especially in urban constituencies of Punjab (Shabbir & Haider, [2023](#)).

Section F: Media Influence and Campaign Effects

Political communication research exhibits the expanding role of media in formulation of political attitudes and voting behaviour (Norris, [2000](#)). Enhanced availability of television news and social media has transformed electoral campaigning and voter mobilisation in Pakistan (Quadri et al., [2025](#)). Section F of the questionnaire (Media & Campaign Influence) directly addresses this aspect. Q19 and Q20 measure the sources of political information and the perceived influence of election campaigns across the last four elections. This structure enables the analysis of media effect shift over time, especially the rise of social media after 2013 (Saleem et al., [2024](#)).

Section G: Reflective Evaluation and Democratic Attitudes

Contemporary research on voting behaviour lays emphasis on democratic attitudes such as political effectiveness, institutional trust, and reform preferences (Dalton, [2004](#)). In Pakistan, perceived electoral fairness and representative performance significantly affect political engagement (Wilder, [1999](#)). These factors are covered in Section G of the questionnaire (Reflections and Trends). There, Q21-25 assess retrospective influence patterns, support for electoral reforms, perceived impact of voting, system preferences, and satisfaction with representatives. The open-ended question (Q26) allows respondents to share concerns not covered in closed-ended questions, to enhance content validity.

Reliability and Validity Considerations

The voting behaviour measuring instrument developed in this study is analytically strong due to the following characteristics, that enable multi-layered statistical analysis, and not just descriptive results:

- Application of the questionnaire across four elections (2008-2024) allows longitudinal comparison.
- Sociological, psychosocial, and rational-choice factors are adequately measured.

- It includes city-wise variation within Punjab.
- The survey uses categorical, ordinal, and scale-type variables, which are suitable for advanced SPSS analysis.

Content validity and ethical considerations of the instrument have been attained through its designing with an expert supervisor, who is the PhD supervisor and co-author of this paper. Notwithstanding, instrument development in social science research should undergo systematic evaluation through empirical application (DeVellis, [2017](#)). Such a requirement is particularly critical in voting behaviour research because electoral preferences are shaped by local political cultures, socio-economic structures, and institutional contexts (Dalton, [2018](#)).

Face validity of the instrument developed for this research is attained through cognitive pre-testing by a subset of the target population (10 respondents). This exercise has also verified the suitability of the framework for the contents of questions, the wording, the format and layout, the sequence, the instructions, the question difficulty level, and the range of scale (five-point Likert).

A physical survey was conducted across five major cities of Punjab to ascertain the reliability of the questionnaire. Other provinces were not included to contain the financial effects of the validation. However, the nature of questions in the instrument is general which is applicable to any other region of Pakistan.

Sample size was kept as 100 across five major cities (Lahore-30, Faisalabad-25, Multan-20, Rawalpindi-15, Gujranwala-10). Stratified sampling was adopted to ensure representation across age, gender, education, and occupational categories; consistent with best practices in electoral survey research (Dalton, & Klingemann, [2007](#)).

The activity was undertaken face-to-face to tackle varying literacy levels of the respondents and to attain higher response accuracy, especially for retrospective questions covering four major elections from 2008 to 2024. Such methodology has been adopted in other studies of voting behaviour in Pakistan that accentuate interviewer-assisted surveys for data reliability (Marwat & Khattak, [2020](#)).

The survey was conducted during September-October 2025 through local sources in each city. Reply was received from 80 respondents (Lahore-

28, Faisalabad-20, Rawalpindi-14, Gujranwala-10, Multan-8) that were evaluated through SPSS analysis. This apparently low number was acceptable only for the instrument validation. In any field application, the sample size is expected to be much large, such as between 2,000 to 2,500 respondents or more.

Results

In evaluating the instruments reliability, Cronbach's Alpha coefficients were strictly reserved for reflective Likert-type scales where items were intended to measure a singular latent construct. The following results were obtained for Section C, E and F of the instrument:

Table 1

Instrument Reliability

Section	Questions	Cronbach's Alpha	Interpretation
C	9-12	0.878	Highly Reliable
E	16-18	0.823	Highly Reliable
F	19-20	0.696	Acceptable

For Section A, B, D, and G, internal consistency metrics were theoretically and statistically excluded based on the nature of the data. Sections A and B consist of categorical demographic and historical indicators, as independent background variables rather than psychometric scales. Similarly, Sections D and G utilize formative indicators – capturing distinct historical motivations, systemic preferences, and varied reflections – where high inter-item correlation is neither conceptually expected nor mathematically required for validity (Hair et al., [2019](#)).

The use of nominal and ordinal data in Section A, B, D, and G violates the assumption of continuity required for Alpha, making the metric an inappropriate measure of quality (Tabachnick & Fidell, [2019](#)). Consequently, these sections were validated through content relevance and analysed via descriptive and non-parametric methods to preserve the multidimensionality of the respondents political behaviour.

Research shows Section As social cleavages do not need to correlate, yet voting in Pakistan is driven by these distinct factors. In Punjab, this manifests through patronage and regional identity (Wilder, [1999](#)).

Section B utilizes a retrospective panel design to capture longitudinal shifts (2008–2024) between clientelism and performance-based choices

(Mohmand, [2019](#); Wilder, [1999](#)).

On the other hand, Sections D and G rely on formative, categorical indicators instead of reflective scales. Because these items are conceptually independent and violate continuity assumptions, internal consistency metrics like Alpha are inappropriate for analysis of these Sections (Hair et al., [2019](#); Tabachnick & Fidell, [2019](#)).

Validity of the questionnaire confirms whether the developed instrument actually measures what it claims to measure. For a multidimensional study on voting behaviour as in this case, validity is determined through Factor Analysis (for scales) and Construct/ Content Validity (for categorical sections). For demographic and historical sections where statistical factor analysis is not possible (because the data is nominal/ categorical), validity is determined qualitatively.

The construct validity of the research instrument was established through Exploratory Factor Analysis (EFA) to ensure that the survey items accurately represented their intended theoretical constructs. Before factor extraction, the suitability of the data for each section was evaluated using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity, as tabulated below:

Table 2
Instrument Adequacy and Sphericity

Section	Questions	KMO	Interpretation	Bartlett's Test	Interpretation
A	1-5	0.504	Borderline	<0.001	Highly Significant
B	6-8	0.488	Unacceptable	<0.001	Highly Significant
C	9-12	0.657	Acceptable	<0.001	Highly Significant
D	13-15	0.421	Unacceptable	<0.001	Highly Significant
E	16-18	0.621	Acceptable	<0.001	Highly Significant
F	19-20	0.462	Unacceptable	<0.001	Highly Significant
G	21-25	0.500	Borderline	<0.001	Highly Significant

Bartlett's Test was consistently significant across all sections, indicating sufficient inter-item correlation, while the KMO values varied. For sections where the KMO meets or exceeds the 0.50-0.60 threshold, factor extraction proceeded through Principal Component Analysis (Hair et al., [2019](#)). Meanwhile, sections yielding a KMO below 0.50 were excluded from factor reduction and analysed as independent indicators to maintain data integrity

and avoid unstable factor structures (Tabachnick & Fidell, [2019](#)).

For Successful Sections ($KMO > .60$): Sections having a KMO value above 0.60 (e.g., 0.657 and 0.621) were considered to have mediocre to good sampling adequacy, that provide a robust basis for identifying underlying patterns in voting behaviour (Hair et al., [2019](#)).

For Borderline Sections ($KMO = .50$): Sections reaching the 0.500 threshold were retained for analysis as they met the absolute minimum requirements for factorability, though results were interpreted with caution due to the limited common variance (Tabachnick & Fidell, [2019](#)).

For Excluded Sections ($KMO < .50$): Items in sections with KMO values below 0.50 (e.g., 0.421 and 0.462) were treated as formative or independent variables. This approach follows the recommendation that factor analysis should not be performed when sampling adequacy is deemed miserable, as it compromises the validity of the resulting components (Hair et al., [2019](#)).

For the components/ questions having significant KMO threshold ($> .60$), the extraction, loadings, and variance were found to be as follows:

Table 3

Instrument Exploratory Factor Analysis

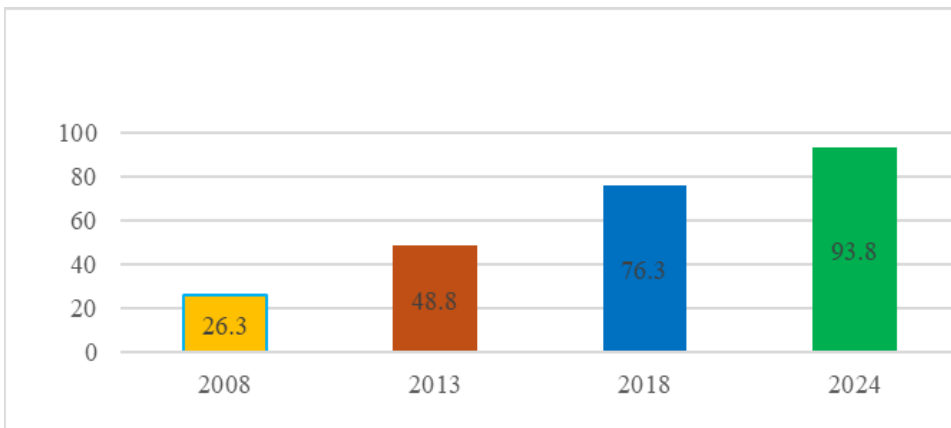
Section	KMO	Question	Year	Extraction	Loadings	%Variance
C	0.657	9	2008	0.708	0.582	12.881
			2013	0.905	0.715	
			2018	0.773	0.525	
			2024	0.746	0.635	
		10	2008	0.894	0.775	4.684
			2013	0.915	0.815	
			2018	0.888	0.601	
			2024	0.744	0.690	
		11	2008	0.893	0.744	3.204
			2013	0.860	0.838	
			2018	0.870	0.541	
			2024	0.844	0.509	
		12	2008	0.847	0.697	2.888
			2013	0.867	0.720	
			2018	0.838	0.578	
			2024	0.735	0.620	

Section	KMO	Question	Year	Extraction	Loadings	%Variance
E	0.621	16	2008	0.764	0.693	2.335
			2013	0.811	0.809	
			2018	0.892	0.496	
			2024	0.787	0.707	
		17	2008	0.902	0.768	1.889
			2013	0.900	0.821	
			2018	0.866	0.630	
			2024	0.614	0.625	
		18	2008	0.858	0.677	1.461
			2013	0.879	0.693	
			2018	0.950	0.530	
			2024	0.930	0.425	

Descriptive & Trend Analysis (Foundation Analysis)

Figure 1

Evaluation Respondents Voting Turnout (%)



The analysis was undertaken to see how voting behaviour, turnout, and issue salience changed over time in Punjab. The questionnaire variables used were:

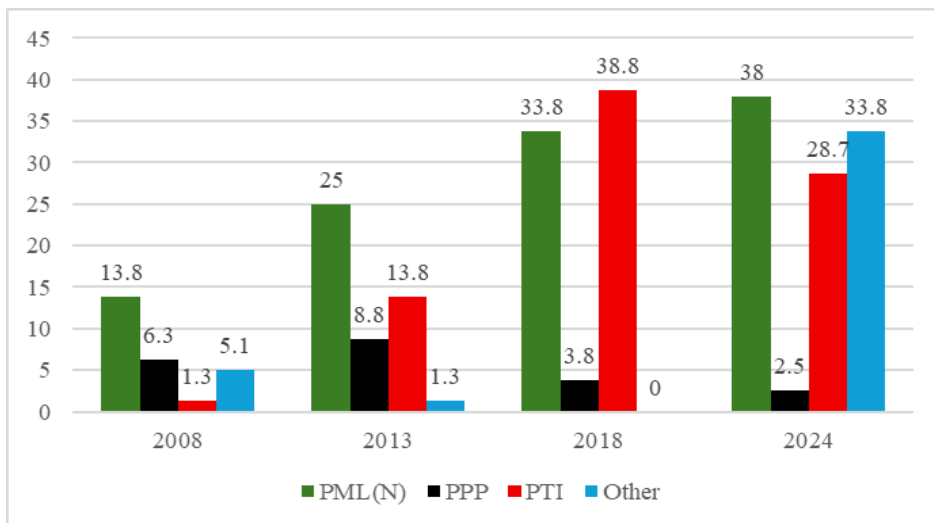
- Voting participation (Q6)
- Party voted (Q7)
- Voting reasons (Q8)

- Issue importance (Q16)
- Media sources (Q19)
- Democratic perceptions (Q22-Q25)

SPSS techniques adopted were Frequencies, Percentages, and Cross-tabulations by election year. This established the following baseline trends, which directly answered the “how did voting behaviour alter” part of RQ1: Whether turnout increased/ decreased, Shifts in party dominance, and Influence of issue-based voting.

Figure 2

Evaluation Shift in Party Dominance (%)



Chi-Square Tests of Association

These tests were conducted to validate whether socio-economic and political factors are significantly associated with voting behaviour. The following variables were adopted for the stated analysis:

Independent Variables (IVs)

- Education (Q4)
- Occupation (Q5)
- City (Q1)

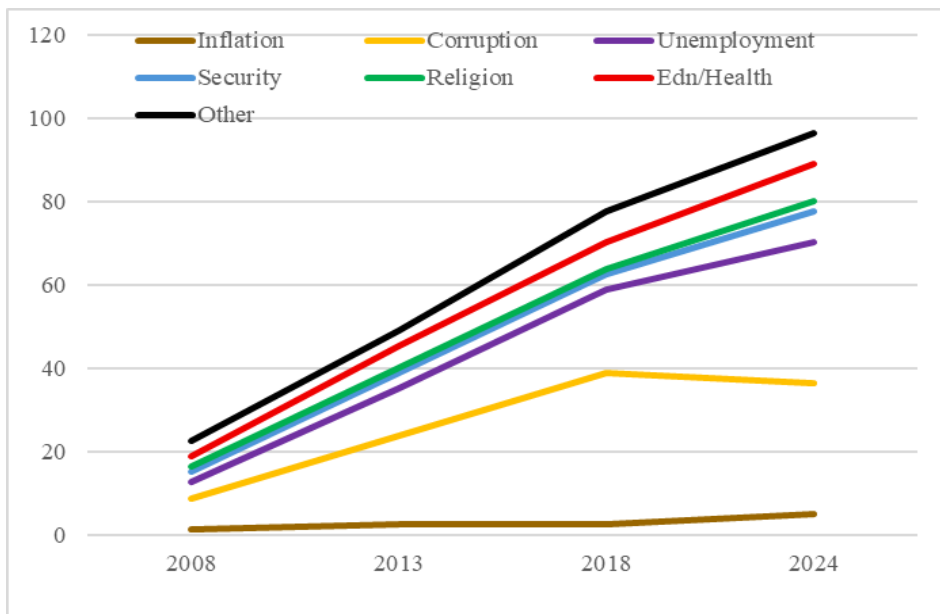
- Baradari influence (Q9)
- Religious influence (Q10)
- Media source (Q19)

Dependent Variables (DVs)

- Party voted (Q7)
- Vote choice consistency/ change (Q13)
- Issue-based voting (Q16)

Figure 3

Evaluation Respondents Issues Most Influenced (%)



SPSS Test was conducted through *Chi-Square Test of Independence* considering the following; to explain how socio-economic factors have altered the voting behaviour:

- Variables are categorical.
- Suitable for testing associations, not prediction.
- Widely accepted in electoral studies.

The results thus determined for the Pearson Chi-Square Value, Degree of Freedom (df), Asymptotic Significance (p) and corresponding Linear-by-Linear Association (L-L) for the selected Independent Variables (IVs) and Dependent variables (DVs) are tabulated below:

Table 4

Chi-Square Results for Selected Variables

IV	DV	Year	Value	df	p	L-L	Cramer's V	Significance
Q1	Q7	2008	26.237	20	0.158	0.004	0.286	No
		2013	41.050	16	0.001	0.526	0.358	Yes
		2018	16.615	12	0.165	0.063	0.263	No
		2024	45.180	16	<0.001	0.289	0.376	Yes
Q4	Q13	2008						
		2013	20.062	20	0.454	0.989	0.250	No
		2018						
Q5	Q16	2024						
		2008	72.167	42	0.003	0.623	0.388	Yes
		2013	56.112	42	0.071	0.936	0.342	No
		2018	39.668	42	0.574	0.733	0.287	No
		2024	39.239	42	0.593	0.382	0.286	No
Q9	Q7	2008	130.826	20	<0.001	<0.001	0.639	Yes
		2013	105.346	16	<0.001	<0.001	0.574	Yes
		2018	95.737	12	<0.001	<0.001	0.632	Yes
		2024	74.206	16	<0.001	0.068	0.482	Yes
		2008	9.431	15	0.854	0.503	0.198	No
Q10	Q13	2013	14.783	15	0.467	0.011	0.248	No
		2018	51.289	15	<0.001	<0.001	0.462	Yes
		2024	36.732	15	0.001	0.998	0.391	Yes
		2008	160.989	35	<0.001	<0.001	0.634	Yes
Q19	Q16	2013	142.121	35	<0.001	<0.001	0.596	Yes
		2018	129.368	35	<0.001	<0.001	0.569	Yes
		2024	62.624	35	0.003	0.541	0.396	Yes

Due to the comprehensive nature of the questionnaire and the exploratory sample size ($N=80$), a high percentage of cells across several contingency tables have expected counts below 5. While Pearson Chi-Square tests are reported in line with standard academic frameworks, the corresponding Likelihood Ratios are emphasized where cell sparsity is severe, following recommendations by McHugh (2013).

Demographic Variance and Voting Shifts

City of Residence (Q1) vs. Political Party Preference (Q7)

To evaluate whether geographical urbanisation or regional variations within Punjab affected electoral trends across time, individual Chi-square tests were cross tabulated for each election cycle.

Geographical fragmentation shows an oscillating pattern of significance. In 2008 and 2018, the relationship between a respondents city of residence and the political party they selected was not statistically significant. However, highly significant associations emerged in 2013 [$\chi^2(16)=41.050, p=0.001$] and 2024 [$\chi^2(16)=45.180, p<0.001$]. These results indicate that during specific electoral waves, political fragmentation along geographical or municipal boundaries significantly increases in Punjab and is aligned with regionalised campaign strategies observed in Pakistani political history (Wilder, [1999](#)).

Education Level (Q4) vs. Changes in Voting Behaviour (Q13)

A cross-tabulation was carried out to determine the effect of voters education level in shifting of his/ her voting choices over time (e.g., shifting due to dissatisfaction or leadership appeal). The relationship was noted to be statistically non-significant, [$\chi^2(20)=20.062, p=0.454$], which means that fluctuations, stability, or behavioural shifts in voting patterns have equal effect across all educational backgrounds.

Socio-Economic Influences on Political Issues

This analysis reflects the relationship of a respondents livelihood with the core governance issues (e.g., inflation, corruption, unemployment) that influenced their choices in each election.

Occupation (Q5) vs. Issue-Based Voting (Q16)

For the 2008 election, a statistically significant relationship was disclosed between a voter's occupation and the primary issue motivating his/ her vote, [$\chi^2(42)=72.167, p=0.003$]. In subsequent elections, this relationship declined below standard significance levels of p , highlighting a structural shift in the electorate: 0.071 in 2013, 0.574 in 2018, and 0.593 in 2024. Voting choices in 2008 were highly stratified by socio-economic class and occupational vulnerabilities, such as farmers vs. private sector employees prioritising different issues. By 2018 and 2024, issues like

inflation and economic distress were widespread, which affected all occupational segments uniformly (Zaidi, [2015](#)).

Sociological Factors: Kinship, Sect, and Voting Decisions

Baradari/ Kinship Influence (Q9) vs. Political Party Preference (Q7)

Kinship (*baradari*) ties have been a core, highly powerful predictor of political party alignment for all generations of elections surveyed i.e. $p < 0.001$ across all years. The Pearson Chi-Square values particularly display a sequential, downward trend over the 16-year period: decreasing from 130.826 in 2008 to 105.346 in 2013, 95.737 in 2018, and 74.206 in 2024. This systematic decline reflects the gradual weakening of *baradari* system grip on party choice even though it has been statistically robust in rural and semi-urban mobilisation. This trend demonstrates a structural evolution toward modern, party-centric, or charisma-driven partisan alignments (Lieven, [2011](#)).

Religious/ Sectarian Affiliation (Q10) vs. Changes in Voting Behaviour (Q13)

The impact of religion or sectarian background on voting behaviour was not very significant during the 2008 or 2013 elections; p being 0.854 and 0.467 respectively. A shift in this domain is visible in 2018 [$\chi^2(15) = 51.289$, $p < 0.001$], which remained significant in 2024 [$\chi^2(15) = 36.732$, $p = 0.001$]. This trend reflects direct influence of structural changes in the political landscape, given credence with the emergence of new, ideologically potent religio-political parties around the 2018, such as the *Tehreek-e-Labbaik Pakistan* (TLP). These parties successfully politicised religious identity that contributed in making sectarian dynamics a major driver of electoral shifts in the last two elections.

The Digital Revolution and Media Influence

Primary Information Source (Q19) vs. Core Influencing Issues (Q16)

Across all the years surveyed for this study (2008-2024), the relationship between a voters source of political information (e.g., print and electronic media vs. social media) and the key national issues influencing their choices is very significant ($p \leq 0.003$). Gradual centralisation of the information during this period is clearly visible with the Chi-square strength, which drops from its highest value of 160.989 in 2008 to 62.624 by 2024. A distinct information divide existed in earlier period, as print,

electronic media, and community gatherings (*jalsas*) framed entirely different sets of priorities for their respective audiences. The widespread adoption of social media by 2024 has democratised information flow. This paradigm shift has created a more shared, cross-cutting political agenda across the entire electorate (Ahmad et al., [2019](#)).

Conclusion

The instrument described in this article comprehensively covers the intended research domains and is designed to determine the voting behaviour in any region of Pakistan. Reliability and validity of all the questions have been duly evaluated. Validity, reliability, and contextual adaptability of the questionnaire is manifested through its empirical application across five major cities of Punjab. However, the generalised structuring of the questionnaire is such that the instrument reflects the common as well as the city-specific determinants of voting behaviour in other regions besides Punjab. This validates its suitability as a comprehensive measurement tool for longitudinal electoral analysis in Pakistan. The questionnaire connects the global theories of voting behaviour with empirical practice in Pakistan, filling the gap noted in the earlier studies.

This article reviews and presents the questionnaire placed in the Annexure as the outcome of a methodical instrument-development process evolving from the established voting behaviour theory and Pakistan-specific empirical research. Integrating the sociological, psychosocial, and rational choice perspectives of voting behaviour within its contours, the questionnaire provides a comprehensive longitudinal instrument to measure voting behaviour in any region of Pakistan. Its structured design enables robust statistical analysis with due consideration of local political realities. As such, this study constitutes a significant methodological contribution to the study of voting behaviour in Pakistan's political landscape.

Limitation

The instrument pilot sample size is limited to 80 due to the financial effects involved in case for a higher number in the adopted face-to-face survey across different cities. Due to the same constraint, the instrument has been validated through the survey in Punjab only. However, the questions formulated therein are of general nature in Pakistan's perspective and not restricted to a particular region. Nonetheless, a preliminary survey for the

appropriate sample size in the intended region may be conducted prior to adopting this instrument in another province. The results are based on the respondent feedback which could vary from the actual (respondent's actual practice versus the survey response). The pilot sample did not include other gender which could have been duly included in the instrument application.

Author Contribution

Asim Raza: conceptualization, data curation, formal analysis, investigation, methodology, project administration, resources, software, validation, visualization, writing – original draft, writing – review & editing. **Nasreen Akhtar:** supervision, validation, writing - review & editing.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study will be provided by the corresponding author upon request.

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