IPS Working Papers

WHO BELIEVES, WHO DOUBTS, WHO PARTICIPATES? CITIZEN ENGAGEMENT AND COLLECTIVE ACTION IN SINGAPORE

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CONTENTS

Tables and Figures

WHO BELIEVES, WHO DOUBTS, WHO PARTICIPATES? CITIZEN ENGAGEMENT AND COLLECTIVE ACTION IN SINGAPORE

EXECUTIVE SUMMARY

This paper examines how Singaporeans perceive pluralism, collective agency and the capacity for coordinated civic action in a complex, multi-stakeholder society. The study addresses these questions through a nationally representative survey of 1,981 residents conducted in late 2024. Factor analysis of responses across 14 trend areas identified two latent constructs: pluralistic coexistence — measuring attitudes towards multi-stakeholder coordination and cultural diversity; and collective agency — capturing beliefs about citizens' capacity to influence national outcomes. Together, these orthogonal constructs constitute the civic outlook framework used in this study.

Cluster analysis revealed five distinct citizen clusters: Grounded Traditionalists (25.5%), who scored highest on both constructs and sectoral (government, business, society, individual) confidence; Cautious Optimists (23.4%), occupying the attitudinal centre; Steady Strivers (23.0%), endorsing pluralistic values while doubting collective efficacy; Heartland Caretakers (10.3%), preferring community-based over nationally-coordinated approaches; and Sceptical Realists (17.9%), expressing lowest confidence in both sectors and collective action. Notably, these profiles cut across traditional demographic categories, with effect sizes for demographic predictors remaining small (Cramér’s V = .04–.09).

Across four of the five clusters, roughly 80 per cent of respondents expressed high confidence in government, businesses and societal institutions. Substantially lower confidence was concentrated among the educated in the Sceptical Realists cluster. These findings carry implications for participatory governance, suggesting that engagement strategies must address both a trusting majority and an influential sceptical minority. The paper concludes by proposing an engagement framework that aligns distinct citizen clusters with appropriate participation modalities.

1. INTRODUCTION

Effective public engagement requires policymakers to understand how citizens orient towards anticipated developments. Governments have invested heavily in foresight capabilities for strategic planning, but far less is known about how ordinary residents perceive future challenges and opportunities. Understanding these perceptions is a precondition for engagement that moves beyond consultation towards co-creation.

Singapore offers a relevant case. The government has developed substantial foresight infrastructure, and successive national exercises have invited public participation in envisioning the nation's future. These efforts have shifted over time from feedback collection towards participatory modalities positioning citizens as contributors to policy formulation. As Singapore moves into a more mature phase of nationhood, understanding how residents perceive anticipated challenges becomes increasingly consequential for the legitimacy of participatory governance.

This study reports findings from a nationally representative conducted in the fourth quarter of 2024. The survey assessed perceptions across 14 trend areas spanning regional stability, inequality, climate cooperation, misinformation and Singapore's role as a business hub. This breadth permits examination of whether coherent orientations exist across domains and whether distinct citizen profiles emerge.

The analysis proceeds inductively. Factor analysis of trend perceptions yielded two constructs. The first, Pluralistic Coexistence, captures attitudes towards multi-stakeholder coordination and the maintenance of diverse perspectives. The second, Collective Agency, captures beliefs about citizens' capacity for collective influence on Singapore's trajectory. Together, these constructs define what this paper terms civic outlook. Cluster analysis subsequently identified five clusters based on configurations across these constructs.[1]

Findings indicate that while most respondents express confidence in key sectors, civic outlook varies substantially in how citizens understand coordination and collective influence. Four clusters, representing over 80 per cent of respondents, exhibit moderate-to-high sectoral confidence, with government consistently rated above business and civil society. The fifth cluster shows markedly lower confidence across all domains. Overall, demographic associations with cluster membership are modest in magnitude, suggesting that civic outlook cuts across conventional demographic boundaries.

The next section reviews relevant literature on foresight, citizen segmentation and sectoral confidence. The methodology section then outlines survey design, sample characteristics and analytical approach. Findings are presented in four parts: perceptions across the 14 trend areas, confidence in four sectors (government; business; society; and individual), the five clusters defined by

[1] A note on terminology: *constructs* refer to the two dimensions identified through factor analysis; *clusters* are the statistical groupings of respondents based on their scores across these constructs.

configurations of civic outlook and demographic profiles, an engagement framework mapping clusters onto participation modalities. The discussion situates these findings within broader questions about participatory governance, and the conclusion considers implications for strengthening citizen engagement around future-oriented issues.

2. LITERATURE REVIEW

2.1 Anticipating the Future

The value of considering alternative futures has long been recognised in governance scholarship. Scenario planning, as articulated by Schwartz (1991) and elaborated by van der Heijden (2010), enables organisations and societies to structure their thinking about divergent trajectories. Habegger (2010), in a comparative study of the United Kingdom, Singapore and the Netherlands, argued that institutionalised foresight contributes to more robust policy by surfacing assumptions and expanding the range of contingencies under consideration.

Singapore exemplifies this institutionalised approach. Foresight efforts began in the Ministry of Defence in the late 1980s. The Scenario Planning Office was established in the Prime Minister's Office in 1995 and renamed the Strategic Policy Office in 2003. From that, the Centre for Strategic Futures was created in 2009 to pursue research and build foresight capacity across the public service (Centre for Strategic Futures, 2025).

Foresight exercises have typically engaged experts, public officers and selected stakeholder representatives. Despite this extensive foresight infrastructure, systematic evidence on how ordinary residents perceive future trends remains limited.

2.2 Public Perception of Future Trends

Surveys examining how citizens orient towards the future remain uncommon. Research has tended towards domain-specific inquiries: attitudes towards technological change, climate futures or demographic shifts. Comprehensive assessments spanning multiple trend areas are rare.

Several studies provide relevant precedent. Van Der Duin et al.(2020) surveyed Dutch adults on attitudes towards science and technology, finding variation by education and age. The Copenhagen Institute for Futures Studies (2024) conducted a “future barometer” of Danish citizens, identifying healthcare and youth well-being as priority concerns. Chambers et al. (2019) developed methods for embedding future scenarios within survey instruments, enabling assessment of citizen responses to alternative trajectories.

These international studies suggest that citizen orientations towards the future can be surveyed and often appear to vary along demographic lines. Whether such perceptions cohere across multiple domains and whether they form attitudinal configurations that cut across demographic categories remain unexamined for Singapore.

2.3 Public Engagement in Singapore

Singapore's approach to public engagement has shifted from feedback collection towards co-creation. The Feedback Unit, established in 1985, was restructured in 2006 as REACH (Reaching Everyone for Active Citizenry @ Home), signalling a move from passive feedback-gathering towards proactive engagement (Wong, 2025). Our Singapore Conversation (2012) marked a further evolution, engaging more than 47,000 participants through dialogue sessions designed to be more inclusive and trust-building than previous consultative exercises (Khoo & Yee, 2014).

More recently, deliberative formats have been adopted. The Ministry of Health convened Singapore's first citizens' jury in 2017 with support from the Institute of Policy Studies (Soon & Yeo, 2018). Subsequent panels addressed work-life harmony, recycling (Soon & Sim, 2021) and employment resilience (Institute of Policy Studies, 2023). Forward Singapore (2022–2023), the most ambitious exercise to date, engaged over 200,000 participants (Government of Singapore, 2023). This evolution raises practical questions: how are different segments of the population differently oriented towards participation, and whether engagement strategies should be differentiated accordingly.

2.4 Citizen Segmentation Approaches

The segmentation of citizens by civic orientation has a well-established methodological lineage. Verba and Nie's *Participation in America* (1972) pioneered a two-step approach: factor analysis to identify latent participation dimensions, followed by cluster analysis to classify respondents into distinct types.

Subsequent research has employed varied clustering techniques depending on measurement characteristics. When indicators are categorical (e.g., binary participation items), latent class analysis (LCA) has gained prominence. Studies using LCA across diverse contexts consistently find that citizens do not divide simply into “engaged” and “disengaged”, but exhibit varied configurations: voters who participate electorally but not otherwise, activists who are engaged across multiple modes, and sizeable disengaged segments that are invisible in single-behaviour studies (Johann et al., 2020; Alvarez et al., 2017; Oser, 2022). Cross-national research identifies three to five citizen types across LCA applications, suggesting these patterns reflect genuine population heterogeneity rather than methodological artefacts.

When factor analysis has first transformed multiple items into continuous composite scores, k-means or hierarchical clustering on these scores remains appropriate and widely practised (Amnå & Ekman, 2014). This approach reduces dimensionality, addresses multicollinearity among original items and yields cluster profiles that are interpretable along substantively meaningful constructs. Amnå and Ekman (2014) applied Ward’s hierarchical clustering to factor-derived scores measuring participation, political interest, efficacy and institutional trust among Swedish adolescents. Their four-cluster solution introduced the influential “standby citizen” concept: individuals that are politically attentive but not currently mobilised. The Pew Research Center’s political typology series similarly demonstrates applied utility, using clustering on attitudinal dimensions to segment the American electorate into interpretable

segments that inform political communication strategy (Pew Research Center, 2021).

Research on political efficacy has distinguished collective efficacy (beliefs about the public's capacity as a collective actor) from individual-level internal and external efficacy. Klandermans (1984) established that participation in collective action depends on participating citizens' confidence, and if they believe they can succeed. This position was reinforced through a meta-analytic synthesis of 182 effect sizes showing collective efficacy was an independent predictor of collective action (Van Zomeren et al., 2008). In Hong Kong, collective efficacy positively predicted both participation and support for democratisation, operating independently of beliefs about government responsiveness (Lee, 2006). These findings suggest that citizens vary in terms of personal sense of political competence and in their assessment of what collective action can achieve.

However, existing segmentation research focuses on current participation behaviours or retrospective governance evaluations. There remains ample scope to explore how citizens perceive emerging societal trends, and whether they believe collective action can shape those trends.

2.5 Singapore Studies on Citizen Attitudes

Several Singapore studies have examined citizen attitudes using segmentation approaches, though none has focused specifically on perceptions of future trends.

An early study was Kwon et al.'s "Seven Faces of Singaporeans" (1999), which applied factor and cluster analysis to lifestyle and values items. The study identified seven segments defined by orientations towards family, materialism, independence and social status. Segment membership showed modest association with demographic variables, establishing that psychographic profiles capture variation beyond what age, income and education explain. The focus, however, was consumer behaviour rather than civic orientation.

More recent work has applied similar methods to political attitudes. The IPS Post-Election Survey (Koh, 2025) identified three clusters among Singapore voters: conservative, pluralist and swing. The Asian Barometer Survey for Singapore (Koh et al., 2024) produced clusters based on satisfaction with democratic governance and orientations towards political participation. These studies address political orientation towards current conditions rather than perceptions of anticipated developments.

On intergroup relations, the IPS Survey on Race, Religion and Language (Mathews et al., 2025) canvassed 4,000 residents on prejudice, identity and lived experiences. Key findings include stable perceptions of racial prejudice over time, though with minorities and younger respondents more likely to perceive increased prejudice. The study documents attitudes on a specific set of social issues but does not examine perceptions of future trends more broadly.

The study most proximate to the present inquiry is Suhaila et al., (2025) which surveyed residents on temporal horizon and postures towards the future. Their

analysis identified four groups distinguished by combinations of optimism and time orientation: long-term optimists, short-term optimists, long-term pessimists and short-term pessimists. The authors argued that engagement approaches should be tailored to these profiles. This study addresses how citizens orient towards the future in general terms.

Sectoral confidence has been examined primarily through cross-national surveys. The World Values Survey Singapore (Mathews et al., 2021) found that confidence in government substantially exceeded OECD averages, with an age gradient: 28.5 per cent of respondents aged 65 and above expressed “a great deal” of confidence compared to 15 per cent of those aged 21–35 years. The Edelman Trust Barometer (2024) placed Singapore among the highest-trust societies globally, with government confidence exceeding 70 per cent. These studies document confidence levels by demographic group but do not examine how confidence might vary across attitudinal segments.

Three gaps emerge from this review. First, existing segmentation studies address consumer behaviour, political orientation or assessments of current conditions; applications to forward-looking perceptions are absent. Second, while Suhaila et al. established that future orientations are heterogeneous, their focus on general temporal posture leaves unexamined how residents perceive specific anticipated developments. Third, sectoral confidence has been studied demographically but not in relation to citizen clusters defined by attitudinal configurations.

3. METHODOLOGY

This study examines how Singapore residents perceive future societal trends and whether coherent citizen profiles emerge from these perceptions. Using survey data, the analysis identifies underlying perceptual dimensions and clusters respondents based on their configurations across these dimensions. Differences across clusters in demographic composition and sectoral confidence are then examined, and implications for differentiated engagement strategies are derived from the findings.

3.1 Sampling and Fieldwork

The survey was conducted with 1,981 Singapore citizens and permanent residents (PRs) aged 21 and above. A sampling frame was generated from the Department of Statistics to approximate population distributions across gender, ethnicity and age.

Fieldwork was conducted in September 2024. Invitation letters were sent to households in the sampling frame two weeks prior to survey administration. When prospective respondents were not available, surveyors returned at different times and on different days to maximise response opportunities. A standardised replacement protocol within the same demographic strata was applied where households remained unreachable. Upon contact, surveyors briefed respondents using a participant information sheet, obtained informed consent, and administered the survey.

To minimise social desirability bias (Nederhof, 1985), the survey was self-administered. Respondents self-completed the survey on tablets, ensuring

privacy while allowing surveyors to provide clarification when required, supported by a standardised glossary. The survey was available in English, Mandarin, Malay and Tamil. Participants received $20 cash compensation upon completion.

The final sample showed slight underrepresentation of females, residents aged 65 years and above, and Chinese residents (See Appendix A-1). Post-stratification weights were applied to align the sample with 2024 resident population parameters (Department of Statistics, 2025). Most respondents completed the survey within 40 minutes, with a majority completed it within 10–20 minutes.

3.2 Survey Design and Analysis Strategy

The survey operationalised elements of scenario analysis (Smith & Ashby, 2020; van der Heijden, 2010). Survey questions were developed based on trends identified through Reimagining Singapore 2030 workshops, which characterised trends as uncertain yet impactful, with potential outcomes described as opposing "polarities". For example, one trend examined whether Asia is more likely to be characterised by "war and conflict" or by "peace and cooperation".

Given that abstract or unfamiliar topics may encourage satisficing through midpoint selection (Chyung et al., 2017; Krosnick, 1991; Kulas & Stachowski, 2009), questions used a six-point scale anchored by opposing outcomes. A

score below the midpoint (3.5) indicated proximity to one outcome, while scores above 3.5 indicated proximity to the alternative.

Respondents first rated all 14 trends on likelihood of outcomes and then selected and ranked the three that they considered most important. For these selected trends, respondents rated their confidence in four sectors' ability to address these them (government, business, society and the individual) using a six-point scale (1 = very doubtful to 6 = very confident).

4. CONSTRUCTS, POLARITIES AND CONFIDENCE

4.1 Construct Identification

Exploratory factor analysis was conducted on the 14 trend variables using the principal factor method. Factor loadings were examined to identify coherent latent dimensions underlying respondents' perceptions. Internal consistency was assessed using Cronbach's alpha for factor-derived item groupings.

Two orthogonal latent constructs emerged from the analysis. The first construct, comprising four items, showed good internal consistency (Cronbach's $\alpha = .74$). The second construct, comprising 5 items, showed acceptable reliability ($\alpha = .64$). Although the latter falls slightly below the conventional .70 threshold, it meets accepted standards for exploratory research (Hair et al., 2010) and was retained due to the conceptual coherence of its items.

Construct 1: Pluralistic Coexistence

This construct captures attitudes towards multi-stakeholder coordination across diverse actors and interests, encompassing domains of collaborative engagement: international, intersectoral and between groups in society.

Construct 2: Collective Agency

This construct reflects attitudes towards citizens' collective capacity to influence national trajectories, capturing perceptions of civic efficacy and the possibility of meaningful participation in shaping shared outcomes.

Five items did not load sufficiently on either construct and exhibited weak inter-item correlations (highest r = .25). No stable sub-dimensions emerged among these items were weak ($\alpha < .60$ for all possible combinations) and they were therefore excluded from subsequent analyses.

These constructs should be interpreted as context-specific attitudinal configurations, shaped by the future-oriented framing of the survey and Singapore's governance context, rather than as universal dimensions of civic orientation.

Table 1 presents means and standard deviations for all 14 trend items, organised by construct. These descriptive statistics provide an overview of respondents' perceptions across the full set of trends.

Table 1: Means and Standard Deviation for all 14 Trends

Construct	*Trend*[2]	*M*	*SD*	*Outcome A (1)*	*Outcome B (6)*
Pluralistic Coexistence (α = .74)	*A05 Working with Southeast Asia* How will Singapore work with the rest of Southeast Asia in responding to climate change?	4.49	1.49	Singapore will address it without cooperating with countries within the region.	Singapore will address climate change by cooperating with the countries within the region
	A08 Tech, Govt, Business, People Working Together Will technologies, government, people and business work together to make Singapore more liveable as the climate changes?	4.45	1.49	Technologies, people, government and businesses are not able to work together and Singapore is less liveable.	Technologies, government, people and businesses work to make Singapore more liveable.
	A11 Hub Can Singapore continue to be a hub for business activities?	4.61	1.37	Singapore loses its appeal as a hub for business activities	Singapore strengthens as a hub for business activities.
	A12 The Good Life Will Singaporeans agree or disagree on the meaning of "the good life" in Singapore?	4.20	1.41	Singaporeans cannot agree and fight over the key ideals of “the good life”.	Singaporeans agree and work towards the key ideals of “the good life”.

[2] The numbers and short titles in italics will be used in Table 2 to refer to the trends.

	A03 Stand Up Will Singaporeans speak up and take action to help under-privileged and marginalised people in society?	4.08	1.38	No, because it will be troublesome.	Yes, even if it might be troublesome.
	A04 Social Issues Awareness How aware will the public be about important social issues?	4.21	1.27	Not aware.	Very aware.
Collective Agency (α = .64)	*A06 Balanced Outcomes* How will government and businesses choose between growth, sustainability and fair outcomes for as many people as possible?	3.64	1.54	Government and businesses prioritise growth first and address sustainability and fair outcomes for as many people as possible later.	Government and businesses balance sustainability and fair outcomes for as many people as possible at the same time.
	A07 Openness Will Singaporeans be more or less open to the world?	4.61	1.33	Singaporeans are less open to inflows of people, capital and ideas from the world.	Singaporeans are very open to inflows of people, capital and ideas from around the world.
	A14 Shaping Future Will Singaporeans feel that they can shape their collective future?	4.14	1.42	No, Singaporeans become more passive and prefer to rely on the authorities to shape their collective future.	Yes, Singaporeans become more active and involved in shaping their collective future

Individual Items	*A01 Asia Peaceful or Violent* Will Asia be peaceful or violent?	4.37	1.36	There will be war and conflict.	There will be peace and cooperation.
	A02 Inequality Will inequality improve or worsen in Singapore?	3.17	1.48	Inequality will rise.	Inequality will fall.
	A09 Fake Information What will happen if fake and wrong information become widely shared?	3.77	1.65	People prefer to decide on their own what they believe is right and true.	People prefer to rely on experts and/or government authorities to indicate what is right and true.
	A10 Extreme Views Online Will Singaporeans become more extreme in their views online in order to be noticed and popular?	3.31	1.5	Yes, discussion becomes more extreme because netizens want to become noticed and popular.	No, self-control prevails and views are expressed without being extreme.
	A13 Outcome or Process In shaping Singapore's future, which might Singaporeans choose as more important: the outcome, or the process?	3.52	1.66	The process matters more in shaping Singapore’s future.	The outcome matters more in shaping Singapore’s future.

Table 1 presents the constituent items for each construct, together with their mean scores, standard deviations and polarity labels. These items capture the attitudinal dimensions underlying civic engagement orientations. Mean scores across the Pluralistic Coexistence items (α = .74) range from 4.20 to 4.61, indicating broad endorsement of cooperative and inclusive approaches to addressing Singapore's challenges. Scores for the Collective Agency items (α = .64) show greater dispersion, with means ranging 3.64 to 4.61, suggesting more heterogeneous beliefs about citizens' capacity to shape collective outcomes. The item “Will government and businesses balance growth and sustainability outcomes for as many people as possible?” recorded the lowest mean score (M = 3.64, SD = 1.54), indicating some scepticism about sectoral capacity to reconcile the competing objectives of growth and sustainability. This pattern is examined further in subsequent analyses of sectoral confidence.

4.2 Sectoral Confidence

The survey assessed both the salience of future trends and confidence in sectoral capacity to address them. Respondents first selected the three trends they considered most important from the list of 14, then ranked these from 1 (most important) to 3 (least important among their selections). This approach captures the variation in perceived importance across the population while retaining information on relative salience.

For each selected trend, respondents rated their confidence in four key actors — government, business, civil society and individuals — to effectively address the issue. Confidence was measured on a 6-point scale ranging from 1 (very doubtful*)* to 6 *(*very confident*),* with no neutral midpoint.

Table 2 reports mean confidence scores for each actor across the 14 trends, calculated only among respondents who selected each trend as important. Overall confidence levels are moderate, with most mean scores ranging from 4.2 to 4.8 on the 6-point scale. Across nearly all trends (except A02 and A10), government receives the highest confidence ratings (M = 4.40 to 4.89). This pattern indicates that respondents consistently view government as the actor most capable of addressing future challenges.

Table 2: Confidence in Addressing the Trend by Actor (listed in order of overall confidence)

Trends	*N*	*Overall*	*Government*	*Business*	*Society*	*Individual*
A11 Hub	548	4.74 (0.66)	4.89 (0.73)	4.79 (0.75)	4.60 (0.82)	4.66 (0.82)
A07 Openness	333	4.67 (0.71)	4.78 (0.84)	4.71 (0.85)	4.49 (0.92)	4.70 (0.83)
A08 Tech, Govt, Business, People working together	563	4.58 (0.77)	4.80 (0.80)	4.49 (0.95)	4.44 (0.95)	4.60 (0.89)
A05 Working with Southeast Asia	304	4.51 (0.79)	4.71 (0.87)	4.42 (0.97)	4.37 (0.95)	4.56 (0.86)
A09 Fake Information	363	4.39 (0.83)	4.66 (1.00)	4.30 (1.01)	4.23 (1.01)	4.47 (0.94)
A13 Outcome or Process	291	4.38 (0.83)	4.55 (0.95)	4.29 (1.04)	4.23 (1.01)	4.47 (0.94)
A01 Asia Peaceful or Violent	552	4.38 (0.87)	4.63 (0.94)	4.27 (1.06)	4.24 (1.06)	4.24 (1.06)

A14 Shaping Future	326	4.31 (0.92)	4.40 (1.01)	4.17 (1.11)	4.28 (1.03)	4.39 (1.01)
A04 Social Issues Awareness	298	4.29 (0.82)	4.44 (0.93)	4.12 (1.00)	4.21 (0.96)	4.38 (0.96)
A03 Stand Up	451	4.28 (0.97)	4.44 (1.12)	4.03 (1.21)	4.23 (1.17)	4.43 (1.04)
A06 Balanced Outcomes	585	4.21 (0.92)	4.39 (1.00)	4.07 (1.12)	4.12 (1.01)	4.26 (1.04)
A10 Extreme Views Online	194	4.18 (0.85)	4.25 (1.04)	4.03 (1.03)	4.07 (1.12)	4.37 (0.98)
A12 The Good Life	387	4.15 (0.96)	4.25 (1.07)	4.02 (1.10)	4.11 (1.09)	4.21 (1.06)
A02 Inequality	748	3.68 (1.04)	3.78 (1.23)	3.48 (1.26)	3.64 (1.14)	3.80 (1.16)

Note: Scores measured on a six-point scale, 1 = very doubtful, 6 = very confident. Standard deviation in parentheses.

We next establish the overall pattern of confidence across the four sectoral domains. Table 3 presents pairwise comparisons from a mixed effects model with random intercepts for respondents, demonstrating that, government consistently commands the highest trust, followed by individuals, while confidence in business and society do not appear to be statistically distinguishable.

Table 3: Overall Pairwise Comparison of Sectoral Confidence

Comparison	*b*	*SE*	*z*	*p*
Business vs. Government	−0.27	0.01	−19.72	<.001
Society vs. Government	−0.27	0.01	−19.45	<.001
Individual vs. Government	−0.10	0.01	−7.26	<.001
Society vs. Business	0.00	0.01	0.27	1.00
Individual vs. Business	0.17	0.01	12.46	<.001
Individual vs. Society	0.17	0.01	12.19	<.001

Marginal Means				
Sector	*M*	*SE*	*95% CI LL*	*95% CI UL*
Government	4.47	0.02	4.43	4.51
Business	4.20	0.02	4.16	4.24
Society	4.20	0.02	4.16	4.24
Individual	4.37	0.02	4.33	4.41

Notes: Coefficients from mixed effects model with random intercepts for respondents. Bonferroni correction applied for multiple comparisons.

The factor analysis identified two orthogonal dimensions of civic outlook. These dimensions may manifest in individuals in distinct ways. For example, high Pluralistic Coexistence paired with low Collective Agency reflects a different civic profile than the reverse configuration. To identify such naturally occurring configurations, cluster analysis was conducted using respondents' scores on both constructs simultaneously.

5. CONSTRUCTS AND CLUSTERS

5.1 Demographic Analyses of the Constructs

Each construct was operationalised as the mean of its constituent items. The Pluralistic Coexistence comprises four items (M = 4.44, SD = 1.08) while Collective Agency comprises five items (M = 4.14, SD = .89). Scores range from 1 to 6, with higher values indicating stronger endorsement of the construct. Tables 4 and 5 present the effect sizes for the demographic variables associated with each constructs.

For Pluralistic Coexistence, income emerged as the strongest demographic predictor, followed by age groups. Both effects were statistically significant but small in magnitude (ηp^2 = .010 and .004, respectively). Other demographic variables did not show meaningful associations with this construct.

Table 4: Key Statistics for Plural Coexistence Across Demographics

Variables	*F*	*p*	*df1*	*df2*	*ηp²*	*N*
Ethnicity	.902	.406	2	1978	.001	1981
Gender	.215	.643	1	1979	.000	1981
Age Group	2.898	.034*	3	1977	.004	1981
Education	.466	.627	2	1978	.000	1981
Income	9.483	<.001***	2	1976	.010	1979
Employment Status	1.476	.183	6	1960	.005	1967[3]
Housing	.618	.539	2	1978	.000	1981

****p<.001, **p<.01, *p<.05*

For Collective Agency, statistically significant results were observed for ethnicity, age groups, education, income and employment status (see Table 5). Among these, employment status showed the largest effect at ηp^2 = .011, followed by

[3] National Servicemen (n = 14) are economically inactive are excluded from this analysis.

ethnicity (ηp^2 = .010); both effects were small according to conventional benchmarks (Cohen, 1988; Richardson, 2011).

Table 5: Key Statistics for Collective Agency Across Demographics

Variables	*F*	*p*	*df1*	*df2*	ηp^2	*N*
Ethnicity	10.071	<.001***	2	1978	.010	1981
Gender	3.783	.052	1	1979	.002	1981
Age Group	5.535	<.001***	3	1977	.008	1981
Education	7.964	<.001***	2	1978	.008	1981
Income	3.134	.044*	2	1976	.003	1979
Employment Status	3.596	.002**	6	1960	.011	1967
Housing	2.520	.081	2	1978	.003	1981

****p<.001, **p<.01, *p<.05*

Overall, Pluralistic Coexistence — capturing attitudes towards multi-stakeholder coordination — showed limited demographic variation compared to Collective Agency. Only income and age are associated with statistically significant differences and both effects are small. In contrast, Collective Agency — reflecting beliefs about empowered civic participation — exhibited more systematic demographic variation, with multiple demographic predictors reaching statistical significance, those effect sizes remain modest. Taken together, these findings indicate that demographic characteristics explain only limited variance in the two constructs. The limited variance do not imply that demographic factors are irrelevant but that demographics alone are insufficient proxies for civic outlook.

Individuals with similar demographic backgrounds may nonetheless differ substantially in their configurations of Pluralistic Coexistence and Collective Agency. Such combinations carry distinct implications for civic engagement strategies. To capture these holistic patterns, the analysis proceeds to cluster

respondents based on their joint positioning across both constructs, allowing us to identify coherent civic outlook profiles that are not reducible to demographic categories alone.

5.2 Cluster Analysis

Using Stata's k-means clustering procedure, solutions ranging from one to 10 clusters were evaluated. Inspection of elbow plots (See Figures 1 and 2) based on within-cluster sum of squares and eta-squared values based on the proportion of variance explained by cluster membership, indicated that a five-cluster solution provided the best balance between differentiation and interpretability.

Alternative solutions with four and six clusters were examined but yielded either conceptually collapsed groupings or marginal differentiation without additional interpretive value.

Figure 1: Within-Cluster Sum of Squares vs. Number of Clusters

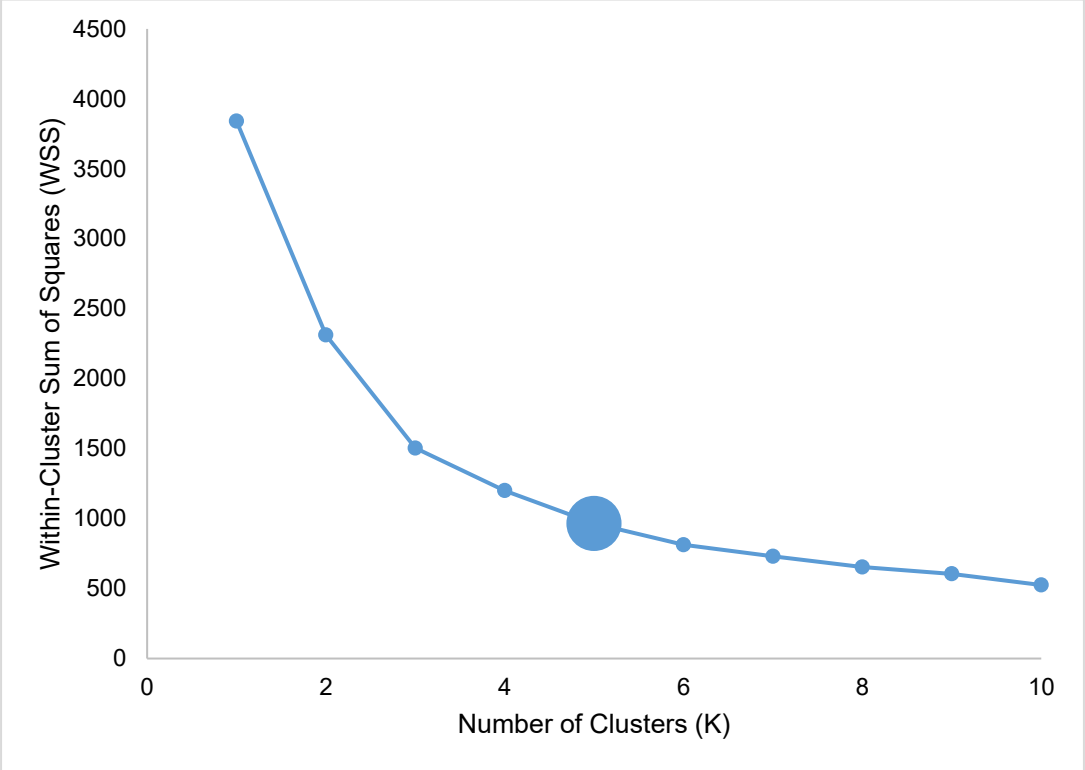
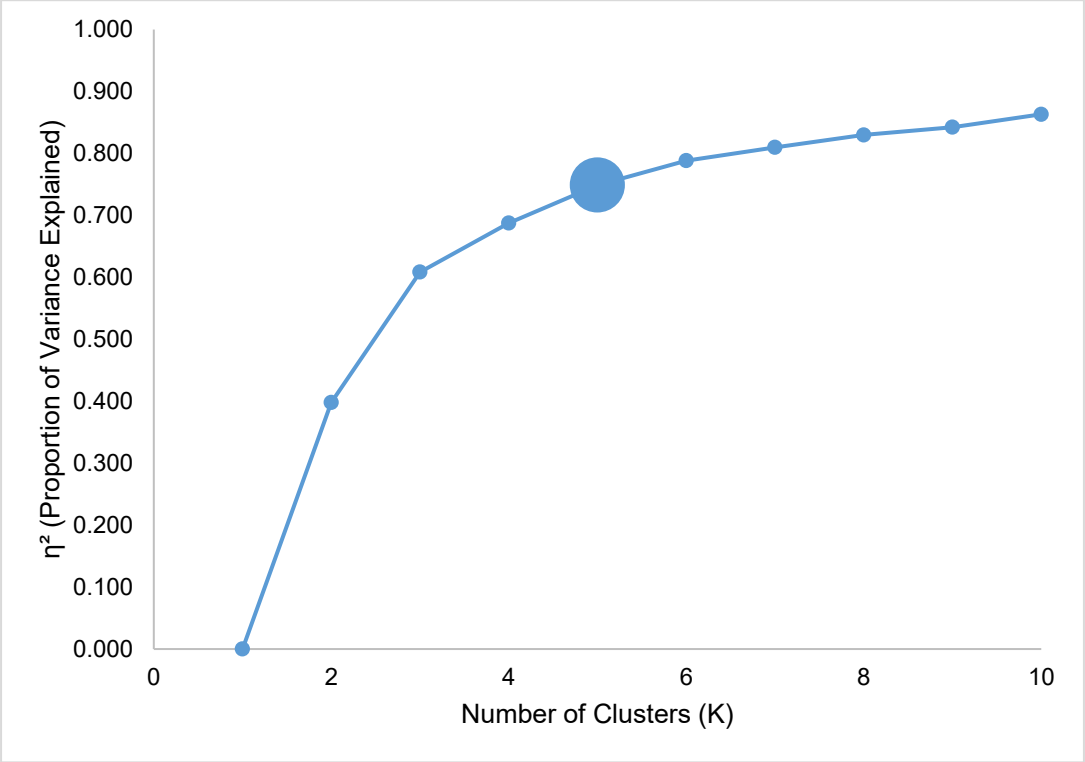


Figure 2: Proportion of Variance Explained by Number of Clusters



Five clusters emerged from the analysis, each reflecting a distinct configuration of Pluralistic Coexistence and Collective Agency. Table 6 presents cluster sizes and mean scores on both constructs.

Table 6: Cluster Sizes and Construct Scores

Cluster	n (%)	Pluralistic Coexistence M (SD)	Collective Agency M (SD)
1	505 (25.5)	5.41 (.442)	5.00 (.458)
2	463 (23.4)	4.13 (.417)	4.35 (.399)
3	456 (23.0)	5.17 (.420)	3.48 (.609)
4	203 (10.3)	2.36 (.630)	4.14 (.887)
5	354 (17.9)	3.71 (.588)	3.10 (.511)

Note: N = 1,981.

Cluster 1 scores highest on both constructs. Cluster 2 occupies the attitudinal centre with moderate scores on both dimensions. Cluster 3 combines high Pluralistic Coexistence with low Collective Agency. Cluster 4, the smallest cluster, exhibits the inverse pattern, with low Pluralistic Coexistence and moderate Collective Agency. Cluster 5 scores below average on both constructs, with the lowest Collective Agency among all clusters.

5.3 Cluster Demographic Characteristics

We next examine the demographic composition of these clusters. Table 7 presents demographic characteristics by cluster; Table 8 presents chi-square tests of association.

Table 7: Demographic Characteristics by Cluster

Variable	*Sample (%)*	*Cluster 1 (%)*	*Cluster 2 (%)*	*Cluster 3 (%)*	*Cluster 4 (%)*	*Cluster 5 (%)*
Ethnicity						
Chinese	75.5	73.5	77.5	77.6	65.0	78.8
Malay	12.4	12.7	13.2	9.6	19.7	10.2
Indian and Others	12.2	13.9	9.3	12.7	15.3	11.0
Age						
21–34	23.9	18.8	28.1	23.2	19.2	29.4
35–49	28.0	28.3	26.3	27.6	27.1	30.5
50–64	27.5	26.7	26.1	29.2	33.5	24.6
65 and above	20.7	26.1	19.4	20.0	20.2	15.5
Gender						
Male	48.5	47.1	46.0	52.6	45.8	50.0
Female	51.5	52.9	54.0	47.4	54.2	50.0
Education						
Secondary and below	36.3	40.4	34.1	33.6	47.3	30.5
Post-secondary	30.6	29.9	28.5	33.8	30.0	30.8
Tertiary	33.1	29.7	37.4	32.7	22.7	38.7
Income						
$0–$2,499	30.1	35.0	29.7	28.6	26.6	27.7
$2,500–$5,999	30.5	29.1	26.4	29.0	44.8	31.4
$6,000 and above	39.4	35.8	43.9	42.4	28.6	41.0
Employment status						
Service	35.1	35.9	37.7	33.2	25.3	38.6
Non-service	21.6	21.4	22.1	21.7	26.7	18.3
Homemaker	9.0	10.2	7.4	8.4	15.8	6.0
Retiree	15.6	19.0	14.5	15.7	13.4	13.1
Self-employed	8.54	4.8	7.6	12.0	8.4	12.0
Unemployed	6.6	5.8	6.1	6.4	6.9	8.6
Students	3.7	3.2	4.8	3.5	3.5	3.4
Housing						
HDB 1–3 room	33.7	34.9	33.0	33.8	38.4	30.2

Variable	*Sample (%)*	*Cluster 1 (%)*	*Cluster 2 (%)*	*Cluster 3 (%)*	*Cluster 4 (%)*	*Cluster 5 (%)*
HDB 4 room	36.1	34.9	34.6	37.1	36.5	38.4
HDB 5 room, Executive and Private	30.2	30.3	32.4	29.2	25.1	31.4

Notes: *N* = 1,981. Column percentages sum to 100 within each variable.

Table 8: Chi-Square Tests of Association Between Demographic Variables and Cluster Membership

Variable	χ^2	*df*	*p*	Cramér's *V*
Ethnicity	24.0	8	.002	.08
Age	33.5	12	< .001	.08
Gender	5.6	4	.235	.05
Education	30.6	8	< .001	.09
Income	34.3	8	< .001	.09
Employment status	57.0	24	< .001	.09
Housing	6.8	8	.554	.04

Note: N = 1,981

Five demographic variables show statistically significant associations with cluster membership: ethnicity, age, education, income and employment status. Gender and housing type do not exhibit significant associations. Effect sizes are small (Cramér's V = .04 – .09), indicating that, while statistically significant differences exist, they are weak predictors of cluster membership (per Rea & Parker [2014]).

5.4 Clusters

The conjunction of attitudinal scores and demographic characteristics informs descriptive labels for each cluster. Table 9 summarises pairwise comparisons between clusters for the significant demographic variables (full results in Tables A-2 to A-8).

Table 9: Summary Table of Pairwise Comparisons of Demographic Variables Between Clusters

Comparison	*Ethnicity*	*Age Group*	*Education*	*Income*	*Employment Status*
CO vs. SS	–	–	–	–	–
CO vs. SR	–	–	–	–	–
CO vs. GT	–	•	–	–	–
CO vs. HC	•	–	•	•	•
SS vs. SR	–	–	–	–	–
SS vs. GT	–	–	–	–	–
SS vs. HC	•	–	•	•	–
SR vs. GT	–	•	•	–	•
SR vs. HC	•	–	•	•	•
GT vs. HC	–	–	–	•	–

Notes: • indicates significant at Bonferroni-adjusted threshold (p<.005); – indicates not significant. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists. Gender and housing type showed no significant pairwise differences and are omitted from this summary;

The findings suggest that while demographic tendencies exist within clusters, civic outlook profiles are not reducible to demographic categories. The descriptions below highlight demographic features that, though modest in magnitude, contribute to a composite characterisation of each cluster.

Cluster 1: Grounded Traditionalists. This group skews older, with 26.1 per cent aged 65 and above and a relatively high proportion of retirees (19.6 per cent). High scores on both Pluralistic Coexistence and Collective Agency, combined

with this age profile, suggest endorsement of existing institutional and societal frameworks shaped by lived experiences.

Cluster 2: Cautious Optimists. Members of this cluster have the highest income level (43.9 per cent earning $6,000 and above) and higher proportion with tertiary education (37.4 per cent). Moderate scores on both constructs, together with this socio-economic profile, are consistent with a more evaluable orientation towards collective arrangement rather than uncritical endorsement.

Cluster 3: Steady Strivers. This cluster has the highest proportion of men (52.6 per cent) and self-employed workers (11.5 per cent). High Pluralistic Coexistence paired with low Collective Agency suggests support for diversity alongside more individualised conceptions of goal pursuit.

Cluster 4: Heartland Caretakers. This cluster shows the highest Malay representation (19.7 per cent), with the lowest proportion with tertiary education (22.7 per cent), the highest share of homemakers (16.4 per cent), and concentrated in middle-income brackets (44.8 per cent earning $2,500–$5,999). Low Pluralistic Coexistence with moderate Collective Agency suggests civic orientations rooted more in local and community contexts than in broader multi-stakeholder civic investment.

Cluster 5: Sceptical Realists. This is the youngest cluster (29.4 per cent aged 21–34) and the most highly educated (38.7 per cent with tertiary education) while having elevated unemployment (8.9 per cent). Lower scores on both constructs

among younger educated respondents suggest scepticism towards collective arrangement, rather than civic disengagement.

Beyond demographic composition, sectoral confidence provides an additional lens for characterising these clusters. The next section examines whether clusters formed on Pluralistic Coexistence and Collective Agency differ systematically in their confidence in government, society, business and individual action.

5.5 Sectoral Confidence and Engagement

Cluster membership explains a substantial share of variance in sectoral confidence across all four domains. As shown in Table 9, between 14 and 18 per cent of variance in sectoral confidence is attributable to cluster membership (ηp^2 = .133 – .177*).* Government confidence showed the greatest between-cluster differentiation (ηp^2= .177).

Table 10: ANOVA Results for Sectoral Confidence by Cluster

Sector	*F*	*df1, df2*	*p*	ηp^2	ω^2
Government	106.29	4, 1976	<.001	.177	.175
Society	92.10	4, 1976	<.001	.157	.155
Business	94.77	4, 1976	<.001	.161	.159
Individual	82.81	4, 1976	<.001	.144	.142

Both ηp^2 and ω^2 indicate proportion of variance explained: .01 = small, .06 = medium, .14 = large, per Cohen (1988) and Lakens (2013).

Building on the overall pattern of sectoral confidence Table 3 and the between-cluster differences reported in Table 9, Table 10 presents the pairwise comparisons of sectoral confidence within each cluster.

Across all five clusters, confidence in government exceeds confidence in business and civil society ($p < .001$). However, the gap between individual and government sectors varied by cluster. Grounded Traditionalists, Cautious Optimists and Steady Strivers showed significant differences between individual and government confidence. In contrast, among Sceptical Realists, the difference was not statistically significant (b = -.00). Heartland Caretakers showed the smallest gaps between the sectors, with non-significant differences for individual versus both government and business.

Table 11: Pairwise Comparisons of Sectoral Confidence Across Clusters

Comparison	Grounded Tradn'ts	Cautious Optimists	Steady Strivers	Heartland Caretakers	Sceptical Realists
Business vs. Government	−0.26*** (0.02)	−0.30*** (0.03)	−0.30*** (0.03)	−0.19*** (0.04)	−0.28*** (0.04)
Society vs. Government	−0.27*** (0.02)	−0.31*** (0.03)	−0.31*** (0.03)	−0.17*** (0.04)	−0.22*** (0.04)
Individual vs. Government	−0.12*** (0.02)	−0.11*** (0.03)	−0.15*** (0.03)	−0.09 (0.04)	−0.00 (0.04)
Society vs. Business	−0.01 (0.02)	−0.02 (0.03)	−0.01 (0.03)	0.02 (0.04)	0.06 (0.04)
Individual vs. Business	0.14*** (0.02)	0.19*** (0.03)	0.15*** (0.03)	0.09 (0.04)	0.28*** (0.04)
Individual vs. Society	0.15*** (0.02)	0.21*** (0.03)	0.16*** (0.03)	0.08 (0.04)	0.22*** (0.04)

Note*:* Standard errors in parentheses.

Marginal Means (SE)

Government	4.88 (0.03)	4.47 (0.03)	4.54 (0.04)	4.55 (0.06)	3.76 (0.05)
Business	4.62 (0.03)	4.17 (0.03)	4.24 (0.04)	4.36 (0.06)	3.48 (0.05)
Society	4.61 (0.03)	4.16 (0.03)	4.23 (0.04)	4.38 (0.06)	3.54 (0.05)
Individual	4.76 (0.03)	4.36 (0.03)	4.39 (0.04)	4.45 (0.06)	3.76 (0.05)
Observations	2,020	1,852	1,824	812	1,416

Notes: Coefficients represent differences between sectoral domains estimated from mixed effects models with random intercepts for respondents. Standard errors in parentheses. Bonferroni correction was applied for multiple comparisons. *** $p < .001$

5.6 Full cluster profiles

Each profile in this section integrates demographic composition, civic outlook and engagement implications. Civic outlook comparisons are based on post-hoc pairwise comparisons using Tukey's HSD; full results are reported in Appendix Tables A1 to A2. Each profile concludes with a short composite portrait to provide descriptive face validity.

5.6.1 Grounded Traditionalists (Cluster 1: n = 505, 25.5 per cent)

Grounded Traditionalists scored highest on both Pluralistic Coexistence (M = 5.41, SD = .44) and Collective Agency (M = 5.00, SD = .46).

Demographics. This cluster skewed older. Respondents aged 65 and above were overrepresented (26.1 per cent vs. 20.6 per cent sample-wide), while those aged 21–34 were underrepresented (18.8 per cent vs. 27.5 per cent). Retirees were correspondingly overrepresented (19.0 per cent vs. 15.6 per cent) and self-employed individuals were underrepresented. No distinct patterns were observed for ethnicity, education, income or housing type.

Civic outlook. High scores on both constructs indicate endorsement of multi-stakeholder cooperation alongside confidence in collective efficacy. Sectoral confidence was consistently higher for this cluster than for all others across all four domains. Relative to Cautious Optimists, Grounded Traditionalists report significantly high confidence in government (the mean difference for government confidence was MD = 0.42, 95% CI [0.28, 0.56], $p < .001$; for business, MD = 0.45, 95% CI [0.30, 0.60], $p < .001$; for society, MD = 0.45, 95% CI [0.31, 0.60], $p < .001$; and for individual agency, MD = 0.40, 95% CI [0.26, 0.54], $p < .001$. The

largest gaps were observed with Sceptical Realists, with differences exceeding one point on the six-point scale across all four sectors (all p <.001).

Engagement implications. Grounded Traditionalists are likely to engage across a wide range of participation modalities, from community initiatives to national-level consultations. Their combination of pluralistic orientations, strong efficacy beliefs and high sectoral confidence suggests responsiveness to engagement opportunities that require sustained commitment and deliberation.

Composite portrait: Grounded Gwen is in her 60s, having spent three decades in the public service before retiring. She now volunteers regularly at her nearby community centre and serves on the residents' committee. When invited to a dialogue on ageing policies, she attends readily, believing that participation matters and that institutions are receptive when citizens engage constructively. Staying informed, in her view, is both habit and responsibility.

5.6.2 Cautious Optimists (Cluster 2: n = 463, 23.4 per cent)

Cautious Optimists scored moderately on both Pluralistic Coexistence (M = 4.13, SD = .42) and Collective Agency (M = 4.35, SD = .40).

Demographics. No demographic variable showed statistically significant distinctiveness after Bonferroni correction. The cluster approximated a representative cross-section of Singapore's adult resident population by age, ethnicity, education, income and employment status.

Civic outlook. The alignment between moderate pluralistic values and moderate collective efficacy suggests measured reservation. Respondents neither fully endorse nor reject pluralistic orientations, nor hold strong views about citizens' capacity to influence outcomes. Sectoral confidence occupied a middle position, significantly lower than that of Grounded Traditionalists (all $p < .001$) yet higher than Sceptical Realists (MD = 0.71 for government, MD = 0.69 for business, MD = 0.61 for society, MD = 0.60 for individual agency, all $p < .001$). Confidence levels do not differ significantly from those of Steady Strivers or Heartland Caretakers (all $p > .05$).

Engagement implications. The combination of moderate pluralistic values and efficacy beliefs suggests openness to engagement without strong intrinsic motivation. Cautious Optimists are likely to participate when engagement opportunities are clearer frames, time-bounded and linked to tangible outcomes, but are unlikely to seek participation proactively. Clear communication of benefits and tangible outcomes will matter for this group.

Composite portrait: Cautious Cheryl is in her early 40s, balancing full-time work with raising two primary school-aged children. She keeps up with the news on social media but does not consider herself political. When the school circulates a survey on enrichment programmes, she responds carefully; when invited to join a workshop on healthcare policies, she is interested but weighs whether participation will meaningfully influence outcomes before committing. Her orientation is optimistic tempered with realism, and she is pragmatic about where her time is best spent.

5.6.3 Steady Strivers (Cluster 3: n = 456, 23.0 per cent)

Steady Strivers scored high on Pluralistic Coexistence (M = 5.17, SD = .42), second only to Grounded Traditionalists, but low on Collective Agency (M = 3.48, SD = .61).

Demographics. This cluster showed no statistically significant demographic distinctiveness from the overall sample. Men comprised a larger share of this cluster (52.6 per cent vs. 48.3 per cent overall), and self-employment is somewhat more common (11.1 per cent vs. 8.5 per cent) though neither difference reached statistical significance.

Civic outlook. The pronounced gap between high Pluralistic Coexistence and low Collective Agency distinguishes this cluster. Steady Strivers strongly endorse multi-stakeholder coordination and cultural diversity at levels, yet express limited confidence in their own capacity to influence national outcomes. This pattern suggests support for pluralistic arrangements at the structural level alongside scepticism about the efficacy of individual participation. Despite their divergent construct scores relative to Cautious Optimists, sectoral confidence did not differ significantly between the clusters across all four domains (government: MD = 0.07, p = .641; business: MD = 0.07, p = .748; society: MD = 0.07, p = .636; individual: MD = 0.02, p = .992). Confidence was significantly lower than Grounded Traditionalists (all $p < .001$) and higher than Sceptical Realists (all $p < .001$).

Engagement implications. Steady Strivers endorse the principle of participation but question its effectiveness. They are more likely to engage when participation

formats make individual contributions visible, consequential and clearly linked to outcomes.

Composite portrait: Steady Sam is a small business owner in his late 30s. He reads widely about inequality and climate change and believes Singapore benefits from diverse voices. Yet, when invited to a government dialogue session, he hesitates, asking whether participants like him genuinely influence decisions. He is more inclined to support causes through donations or targeted action than to participate in forums especially if outcomes appear predetermined.

5.6.4 Heartland Caretakers (Cluster 4: n = 203, 10.3 per cent)

Heartland Caretakers, the smallest cluster, scored lowest on Pluralistic Coexistence (M = 2.36, SD = .63) and moderately on Collective Agency (M = 4.14, SD = .89).

Demographics. This cluster displayed the most distinctive demographic profile. Chinese respondents were underrepresented (65.0 per cent vs. 75.4 per cent), while Malay respondents were overrepresented (19.7 per cent vs. 12.6 per cent). Respondents with secondary education or below were overrepresented (47.3 per cent vs. 34.8 per cent); degree holders were underrepresented (22.7 per cent vs. 33.4 per cent). Service workers were underrepresented (25.3 per cent vs. 35.1 per cent); homemakers were overrepresented (15.8 per cent vs. 9.0 per cent). Income was concentrated in the $2,500–$5,999 bracket (44.8 per cent vs. 29.1 per cent), with fewest respondents in the highest income group.

Civic outlook. Low Pluralistic Coexistence combined with moderate Collective Agency suggests a preference for locally grounded forms of engagement over nationally-coordinated multi-stakeholder approaches. Sectoral confidence was significantly lower than that of Grounded Traditionalists across all domains (government: MD = −.34, $p < .001$; business: MD = −.26, $p = .002$; society: MD = −.23, $p < .001$; individual: MD = −.31, $p < .001$). However, confidence levels do not differ significantly from those of Cautious Optimists or Steady Strivers for government or business ($p > .05$) and exceed those of Sceptical Realists across all domains (all $p < .001$).

Engagement implications. Heartland Caretakers are more likely to engage through initiatives that are local, practical and closely connected to everyday needs. Engagement strategies anchored in neighbourhood-level issues and service delivery are likely to resonate more strongly than abstract, national-level policy discussions.

Composite portrait: Heartland Hana is a former clinic assistant in her mid-50s. Hana left work to care for her elderly mother. Her daily concerns centre on her immediate surroundings: neighbours who share food, the provision shop owner who watches out for her mother, and the reliability of lifts and public services. National policy debates hold limited appear. When her Member of Parliament visits, she raises practical issues such as covered walkways or bus waiting times — matters that directly affect daily life.

5.6.5 Sceptical Realists (Cluster 5: n = 354, 17.9 per cent)

Sceptical Realists scored below average on Pluralistic Coexistence (M = 3.71, SD = .59) and lowest among all clusters on Collective Agency (M = 3.10, SD = .51).

Demographics. This cluster is younger and more highly educated than the sample average, with a larger share aged 21–29 (29.4 per cent aged 21–34 vs. 27.5 per cent) and a higher proportion holding tertiary qualifications (38.7 per cent vs. 33.4 per cent). Unemployment was also more likely (8.6 per cent vs. 6.6 per cent). However, after Bonferroni correction, none of these differences reach statistical significance.

Civic outlook. Lower scores on both constructs reflect scepticism towards multi-stakeholder coordination and limited belief in citizens' collective efficacy. Among younger educated respondents, this configuration may reflect heightened awareness of structural constraints on participation or perceived gaps between participatory rhetoric and governance practice. Sectoral confidence was lowest across all four domains. Compared to Cautious Optimists, the gaps were substantial: government (*MD* = −.71, 95% CI [−.86, −.55], $p < .001$), business (MD = −.69, 95% CI [−.86, −.53], $p < .001$), society (MD = −.61, 95% CI [−.77, −.45], $p < .001$) and individual agency (MD = −.60, 95% CI [−.76, −.45], $p < .001$). Notably, confidence in government and in individual agency are statistically indistinguishable within this cluster. This symmetry is not observed elsewhere, where government typically commands higher confidence.

Engagement implications. Sceptical Realists are least likely to respond to conventional engagement channels. Deliberative forums and citizen juries may

feel remote or ineffective. Engagement is more likely to occur when issues are personally salient and when participation is perceived to have direct and consequential impact.

Composite portrait: Sceptical Steven is a communications executive in his late 20s. He is a few years into her career and still weighing his longer-term direction. He skims the news selectively and occasionally debates issues in group chats but rarely feels compelled to engage formally. When his Resident Committee advertises a community dialogue, he walks past. If an issue directly affected his day-to-day life, he might attend but so far, nothing has crossed that threshold.

5.7 Segmentation Discussion

The five clusters demonstrate that Pluralistic Coexistence and Collective Agency operate as independently dimensions rather than as a single continuum. Citizens combine these orientations in distinct ways, producing configurations that cannot be inferred from demographic characteristics alone. This supports the value of treating civic outlook as a multi-dimensional construct rather than collapsing orientations into a single index.

Age-related patterning is present but limited. Older respondents are more likely to occupy configurations characterised by both pluralistic orientations and confidence in collective efficacy, while younger respondents are more likely to combine higher educational attainment with scepticism towards both multi-stakeholder coordination and participatory influence. These patterns are indicative rather than determinative, reinforcing the broader finding that civic outlook cuts across conventional demographic categories.

Sectoral confidence followed a consistent hierarchy across all four domains, accounting for 14–18 per cent of variance. Confidence is highest among respondents who score strongly on both Pluralistic Coexistence and Collective Agency, lowest among those who score low on both, and intermediate among mixed configurations. This pattern suggests that sectoral confidence is shaped by the joint configuration of pluralistic orientations and efficacy beliefs, rather than by either dimension in isolation.

6. FRAMEWORK FOR ENGAGEMENT

The section proposes an engagement framework that extrapolates from the identified civic outlook profiles. The survey measured perceptions of future trends and beliefs about collective efficacy rather than observed participation behaviours. Accordingly, the framework is intended as an analytically grounded heuristic for thinking about differentiated engagement, and does not serve as an empirically validated model of participation.

The mapping of clusters to engagement modalities draws on established findings linking efficacy beliefs and participation (Finkel, 1985; Verba et al., 1995). However, the propositions advanced here, that Grounded Traditionalists will participate across the full engagement spectrum, or that Sceptical Realists will limit involvement to transactional interactions, should be interpreted as hypotheses for further investigation.

6.1 Engagement-Scale Matrix

The cluster profiles indicate systematic variation not only in citizens' willingness to engage, but also in the *kind* of engagement that are likely to resonate.

Grounded Traditionalists and Cautious Optimists appear open to sustained, policy-level participation. Heartland Caretakers orient towards community- and household-level concerns. Sceptical Realists are least inclined towards engagement beyond immediate or instrumental interactions. These differences raise a practical question: how might engagement opportunities be calibrated to reflect varied civic orientations?

Existing approaches typically conceptualise engagement along a single dimension. Yip (2024), for example, distinguishes levels of *engagement depth*: from service delivery and transactions, consultation and involvement, and co-creation of policies and programmes. This vertical dimension captures the extent to which citizens are involved in shaping outcomes.

Findings from the present study suggest that a second dimension is analytically useful: *topic scale*, ranging from issues affecting the individual, through community and interest-based concerns, to national and cross-sectoral challenges. The orientations of Heartland Caretakers towards local networks and of Sceptical Realists towards transactional engagement, indicate that engagement depth alone does not capture where participation is likely to occur. Crossing engagement depth with topic scale yield a two-dimensional matrix within which engagement activities-and citizen clusters-can be situated (see Figure 3).

Figure 3. Engagement-Scale Matrix

Engagement Depth	Individual	Community / Interest	National / Cross-sectoral
Co-creation	• Personal action plans • SkillsFuture training roadmaps	• Community gardens • Interest-based networks	• Citizen juries • Alliances for Action • Our SG Conversation
Consultation & Involvement	• Personal feedback • Service suggestions	• Town halls • Community dialogues	• Public consultations • REACH sessions
Service Delivery & Transactions	• Digital services usage • Information access	• Community facilities • Grassroots programmes	• National infrastructure • Cross-agency services

Notes: Adapted from Yip (2024). Topic scale increases left to right; engagement depth increases bottom to top.

6.2 Mapping Clusters to Engagement Modalities

The clusters distribute unevenly across this engagement-scale matrix. Four engagement patterns emerge, reflecting each cluster's configuration of Pluralistic Coexistence, Collective Agency and sectoral confidence.

Full-spectrum engagement. Grounded Traditionalists span the entire matrix. Their high scores on both constructs, combined with elevated sectoral confidence, predispose them to engage across scales and depths. Open-ended engagements such as Our Singapore Conversation, as well as intensive deliberative formats including citizen juries on diabetes, work-life harmony, recycling and employment resilience, align with their orientation. Cautious Optimists can also participate across the matrix, though participation is more likely when engagement objectives and expected outcomes are clearly articulated.

Community-focused engagement. Heartland Caretakers concentrate in the lower-left quadrant. Their preference for community-based over nationally-coordinated approaches suggests greater receptivity to engagement on issues affecting immediate relationships and local environments. Practical, locally grounded initiatives are more likely to resonate than abstract national policy consultations.

Conditional engagement. Steady Strivers value pluralistic frameworks but express limited confidence in their own influence within them. Engagement is more likely when formats make individual contributions visible and consequential. Targeted deliberation formats with clearly defined outcomes, such as topical citizen juries linked to concrete policy decisions, may be particularly effective.

Transactional engagement. Sceptical Realists are least inclined towards engagement beyond immediate transactions. Their equivalent confidence in government and individual agency suggests that government-led engagement is not viewed as inherently more legitimate or effective than though sustained engagement is likely to require clear evidence of impact.

These patterns can be summarised as follows:

- Grounded Traditionalists & Cautious Optimists: full-spectrum engagement across all cells.
- Steady Strivers: consultation and co-creation where contributions are visible.
- Heartland Caretakers: community-focused engagement at individual and community scales.

- Sceptical Realists: primarily transactional engagement at the service delivery level.

Government need not lead all engagement effort. As policy challenges grow more complex, other sectors can play leading roles in service delivery and issue-based engagement, with government acting in supportive and facilitative roles: providing funding, convening platforms, regulatory clearance, capacity-building and institutional coordination. The Alliances for Action platform illustrates this model of cross-sectoral collaboration across public, private and people sectors (Singapore Government Partnerships Office, 2025).

Extending engagement beyond government-led channels broadens access to clusters that may be less responsive to formal consultation. Sceptical Realists, Steady Strivers and Heartland Caretakers may engage through neighbourhood networks, interest-based groups or informal community spaces where government presence is indirect. Cautious Optimists and Grounded Traditionalists might pursue engagement through civil society organisations or private-sector initiatives that complement state-led processes.

Taken together, a diversified engagement ecosystem creates multiple entry points for participation. This flexibility allows citizen to engage at scales and depths aligned with their civic outlooks, strengthening participation without requiring uniform engagement formats.

7. CONCLUSION

This study examined how Singapore residents perceive future trends and how these perceptions shape readiness for civic engagement. Using factor and cluster analysis of survey responses from 1,981 residents, it identified two latent constructs: Pluralistic Coexistence and Collective Agency, that together form what this paper terms as civic outlook.

The two constructs are conceptually coherent and resonate with existing theoretical work. Pluralistic Coexistence captures orientations towards multi-stakeholder coordination while Collective Agency reflects beliefs about citizens' capacity for collective influence. Importantly, these constructs emerged inductively from empirical patterns rather than being imposed a priori. While this calls for interpretive caution, it also suggests that civic outlook captures attitudinal configurations grounded in Singapore's specific governance context.

Five distinct citizen clusters were identified: Grounded Traditionalists, Cautious Optimists, Steady Strivers, Heartland Caretakers and Sceptical Realists. The analysis addresses gaps identified in prior segmentation research by shifting attention from consumer behaviour or retrospective political attitudes to forward-looking civic orientations. The consistently small effect sizes for demographic variables (Cramér's V = .04–.09) indicate that civic outlook operates cuts across age, income and education, underscoring the limits of demographic targeting and the value of psychographic approaches.

A central finding concerns sectoral confidence. Confidence followed a consistent hierarchy across clusters: respondents scoring high on both Pluralistic

Coexistence and Collective Agency express elevated confidence across government, business, civil society and individual action, while those scoring low on both express diminished confidence. Grounded Traditionalists and Sceptical Realists anchor these two poles, with the remaining clusters occupying intermediate positions.

The practical implications highlight a core tension for participatory governance. While a large majority of respondents across four clusters exhibit high sectoral confidence and openness to engagement, a sizeable sceptical minority expresses doubts about both collective efficacy and institutional responsiveness. Effective engagement strategies must therefore accommodate both a trusting majority receptive to sustained participation and a more sceptical segment unlikely to respond to conventional consultation formats.

Several limitations should be noted. The cross-sectional design precludes causal inference and reliance on self-reported attitudes does not capture observed participation behaviour. Sectoral confidence ratings are conditional on respondents' selection of salient trends, which may underrepresent views on less salient but politically consequential issues. Future research should assess whether the attitudinal configurations identified here predict engagement across different modalities and scales.

Despite these limitations, the findings offer a vocabulary for understanding citizen diversity that moves beyond demographic categories. Overall, the results are cautiously optimistic: most clusters express openness to participation and confidence in collective problem-solving, while sceptical orientations suggest

potential for engagement when formats align with citizens' civic outlooks. Singapore's evolving ecosystem of participatory mechanisms provides multiple entry points for such alignment, and the diversity of civic outlooks identified here may itself constitute a resource for navigating future challenges.

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APPENDIX

Table A-1: Sample (n), Study Proportion and Weighted Proportions

	Sample (n)	*Study Proportion*	*Study Proportion (weighted)*
Age Categories			
Age 21–34	474	24%	24%
Age 35-49	554	28%	28%
Age 50–64	544	27%	27%
Age 65 and above	409	21%	22%
Age Groups			
Male	961	49%	48%
Female	1,020	51%	52%
Ethnicity			
Chinese	1,495	75%	76%
Malay	245	12%	12%
Indian and Others	241	12%	12%

Table A-2: Pairwise Chi-Square Tests for Ethnicity by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(2) = 4.96$	.084	.07	
CO vs. SR	$\chi^2(2) = 2.17$	.339	.05	
CO vs. GT	$\chi^2(2) = 4.91$	.086	.07	
CO vs. HC	$\chi^2(2) = 11.51$	.003	.13	**
SS vs. SR	$\chi^2(2) = 0.57$	.751	.03	
SS vs. GT	$\chi^2(2) = 2.74$	.255	.05	
SS vs. HC	$\chi^2(2) = 14.85$	< .001	.15	***
SR vs. GT	$\chi^2(2) = 3.23$	.198	.06	
SR vs. HC	$\chi^2(2) = 13.78$	.001	.16	**
GT vs. HC	$\chi^2(2) = 6.53$	.038	.10	*

Notes*:* N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-3: Pairwise Chi-Square Tests for Age Group by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(3) = 3.02$	.388	.06	
CO vs. SR	$\chi^2(3) = 3.26$	.353	.06	
CO vs. GT	$\chi^2(3) = 14.02$	.003	.12	**
CO vs. HC	$\chi^2(3) = 7.14$	.068	.10	
SS vs. SR	$\chi^2(3) = 7.17$	.067	.09	
SS vs. GT	$\chi^2(3) = 6.75$	.080	.08	
SS vs. HC	$\chi^2(3) = 1.92$	.589	.05	
SR vs. GT	$\chi^2(3) = 21.49$	< .001	.16	***
SR vs. HC	$\chi^2(3) = 11.02$	.012	.14	*
GT vs. HC	$\chi^2(3) = 4.49$	.213	.08	

Notes*:* N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-4: Pairwise Chi-Square Tests for Gender by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(1) = 4.04$	.045	.07	*
CO vs. SR	$\chi^2(1) = 1.28$	.257	.04	
CO vs. GT	$\chi^2(1) = 0.12$	.726	.01	
CO vs. HC	$\chi^2(1) = 0.00$	.964	.00	
SS vs. SR	$\chi^2(1) = 0.55$	.457	.03	
SS vs. GT	$\chi^2(1) = 2.90$	.088	.05	
SS vs. HC	$\chi^2(1) = 2.61$	.106	.06	
SR vs. GT	$\chi^2(1) = 0.69$	.407	.03	
SR vs. HC	$\chi^2(1) = 0.91$	.341	.04	
GT vs. HC	$\chi^2(1) = 0.10$	.751	.01	

Notes: N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-5: Pairwise Chi-Square Tests for Education by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(2) = 3.51$	.173	.06	
CO vs. SR	$\chi^2(2) = 1.25$	.534	.04	
CO vs. GT	$\chi^2(2) = 6.95$	.031	.08	*
CO vs. HC	$\chi^2(2) = 15.81$	< .001	.15	***
SS vs. SR	$\chi^2(2) = 3.17$	.205	.06	
SS vs. GT	$\chi^2(2) = 4.83$	.089	.07	
SS vs. HC	$\chi^2(2) = 12.37$	.002	.14	**
SR vs. GT	$\chi^2(2) = 10.70$	.005	.11	**
SR vs. HC	$\chi^2(2) = 20.05$	< .001	.19	***
GT vs. HC	$\chi^2(2) = 4.22$	.121	.08	

Notes: N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-6: Pairwise Chi-Square Tests for Income by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(2) = 0.78$	.678	.03	
CO vs. SR	$\chi^2(2) = 2.41$	.300	.05	
CO vs. GT	$\chi^2(2) = 6.78$	.034	.08	*
CO vs. HC	$\chi^2(2) = 23.88$	< .001	.19	***
SS vs. SR	$\chi^2(2) = 0.52$	.771	.03	
SS vs. GT	$\chi^2(2) = 5.80$	.055	.08	
SS vs. HC	$\chi^2(2) = 17.61$	< .001	.16	***
SR vs. GT	$\chi^2(2) = 5.31$	.070	.08	
SR vs. HC	$\chi^2(2) = 11.95$	.003	.15	**
GT vs. HC	$\chi^2(2) = 16.08$	< .001	.15	***

Notes: N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-7: Pairwise Chi-Square Tests for Employment Status by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(6) = 5.70$	.458	.08	
CO vs. SR	$\chi^2(6) = 8.97$	.176	.11	
CO vs. GT	$\chi^2(6) = 9.90$	.129	.10	
CO vs. HC	$\chi^2(6) = 18.83$	.004	.17	**
SS vs. SR	$\chi^2(6) = 6.58$	.361	.09	
SS vs. GT	$\chi^2(6) = 15.16$	.019	.13	*
SS vs. HC	$\chi^2(6) = 13.13$	.041	.14	*
SR vs. GT	$\chi^2(6) = 26.36$	< .001	.18	***
SR vs. HC	$\chi^2(6) = 25.92$	< .001	.22	***
GT vs. HC	$\chi^2(6) = 17.03$	.009	.16	*

Notes: N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-8: Pairwise Chi-Square Tests for Housing Type by Cluster

Comparison	*χ²(df)*	*p*	*V*	*Significance*
CO vs. SS	$\chi^2(2) = 1.22$	.544	.04	
CO vs. SR	$\chi^2(2) = 1.39$	.498	.04	
CO vs. GT	$\chi^2(2) = 0.58$	.749	.02	
CO vs. HC	$\chi^2(2) = 3.80$	.150	.08	
SS vs. SR	$\chi^2(2) = 1.19$	.551	.04	
SS vs. GT	$\chi^2(2) = 0.51$	.775	.02	
SS vs. HC	$\chi^2(2) = 1.70$	.427	.05	
SR vs. GT	$\chi^2(2) = 2.16$	.340	.05	
SR vs. HC	$\chi^2(2) = 4.47$	.107	.09	
GT vs. HC	$\chi^2(2) = 1.97$	.374	.05	

Notes: N = 1,981. V = Cramér's V. GT: Grounded Traditionalists; CO: Cautious Optimists; SS: Steady Strivers; HC: Heartland Caretakers; SR: Sceptical Realists.
*p < .05. **p < .005 (Bonferroni-adjusted threshold). ***p < .001.

Table A-9: Tukey HSD Post-Hoc Pairwise Comparisons for Confidence in Government by Cluster

Comparison	*MD*	*SE*	*95% CI*	*t*	*p*
Steady Strivers vs. Cautious Optimists	0.07	0.05	[-0.07, 0.22]	1.38	0.641
Sceptical Realists vs. Cautious Optimists	-0.71	0.06	[-0.86, -0.55]	-12.62	<.001***
Grounded Traditionalists vs. Cautious Optimists	0.42	0.05	[0.28, 0.56]	8.14	<.001***
Heartland Caretakers vs. Cautious Optimists	0.08	0.07	[-0.10, 0.26]	1.17	0.770
Sceptical Realists vs. Steady Strivers	-0.78	0.06	[-0.93, -0.63]	-13.86	<.001***
Grounded Traditionalists vs. Steady Strivers	0.34	0.05	[0.20, 0.48]	6.69	<.001***
Heartland Caretakers vs. Steady Strivers	0.01	0.07	[-0.18, 0.19]	0.09	1.000
Grounded Traditionalists vs. Sceptical Realists	1.12	0.06	[0.97, 1.27]	20.41	<.001***
Heartland Caretakers vs. Sceptical Realists	0.79	0.07	[0.60, 0.98]	11.24	<.001***
Heartland Caretakers vs. Grounded Traditionalists	-0.34	0.07	[-0.52, -0.16]	-5.12	<.001***

Notes: MD: mean difference; SE: standard error. Positive values indicate the first group scored higher than the second group. Tukey HSD adjustments applied for multiple comparisons. * p < .05. ** p < .01. *** p < .001.

Table A-10: Tukey HSD Post-Hoc Pairwise Comparisons for Confidence in Business by Cluster

Comparison	*MD*	*SE*	*95% CI*	*t*	*p*
Steady Strivers vs. Cautious Optimists	0.07	0.06	[-0.09, 0.22]	1.21	0.748
Sceptical Realists vs. Cautious Optimists	-0.69	0.06	[-0.86, -0.53]	-11.41	<.001***
Grounded Traditionalists vs. Cautious Optimists	0.45	0.06	[0.30, 0.60]	8.15	<.001***
Heartland Caretakers vs. Cautious Optimists	0.19	0.07	[-0.01, 0.39]	2.59	0.073
Sceptical Realists vs. Steady Strivers	-0.76	0.06	[-0.93, -0.59]	-12.49	<.001***
Grounded Traditionalists vs. Steady Strivers	0.38	0.06	[0.23, 0.53]	6.88	<.001***
Heartland Caretakers vs. Steady Strivers	0.12	0.07	[-0.08, 0.32]	1.64	0.471
Grounded Traditionalists vs. Sceptical Realists	1.14	0.06	[0.98, 1.31]	19.18	<.001***
Heartland Caretakers vs. Sceptical Realists	0.88	0.08	[0.67, 1.09]	11.62	<.001***
Heartland Caretakers vs. Grounded Traditionalists	-0.26	0.07	[-0.46, -0.07]	-3.69	0.002**

Notes: MD: mean difference; SE: standard error. Positive values indicate the first group scored higher than the second group. Tukey

HSD adjustments applied for multiple comparisons. * p < .05. ** p < .01. *** p < .001.

Table A-11: Tukey HSD Post-Hoc Pairwise Comparisons for Confidence in Society by Cluster

Comparison	*MD*	*SE*	*95% CI*	*t*	*p*
Steady Strivers vs. Cautious Optimists	0.07	0.05	[-0.07, 0.22]	1.39	0.636
Sceptical Realists vs. Cautious Optimists	0.61	0.06	[-0.77, 0.45]	-10.65	<.001***
Grounded Traditionalists vs. Cautious Optimists	0.45	0.05	[0.31, 0.60]	8.63	<.001***
Heartland Caretakers vs. Cautious Optimists	0.22	0.07	[0.03, 0.41]	3.22	0.011*
Sceptical Realists vs. Steady Strivers	-0.69	0.06	[-0.85, -0.53]	-11.91	<.001***
Grounded Traditionalists vs. Steady Strivers	0.38	0.05	[0.23, 0.52]	7.18	0.209
Heartland Caretakers vs. Steady Strivers	0.15	0.07	[-0.04, 0.33]	2.13	<.001***
Grounded Traditionalists vs. Sceptical Realists	1.07	0.06	[0.91, 1.22]	18.86	<.001***
Heartland Caretakers vs. Sceptical Realists	0.84	0.07	[0.64, 1.03]	11.62	0.006**
Heartland Caretakers vs. Grounded Traditionalists	-0.23	0.07	[-0.42, -0.05]	-3.42	<.001***

Notes: MD: mean difference; SE: standard error. Positive values indicate the first group scored higher than the second group. Tukey HSD adjustments applied for multiple comparisons. * p < .05. ** p < .01. *** p < .001.

Table A-12: Tukey HSD Post-Hoc Pairwise Comparisons for Individual by Cluster

Comparison	*MD*	*SE*	*95% CI*	*t*	*p*
Steady Strivers vs. Cautious Optimists	0.02	0.05	[-0.12, 0.17]	0.44	0.992
Sceptical Realists vs. Cautious Optimists	-0.60	0.06	[-0.76, -0.45]	-10.72	<.001***
Grounded Traditionalists vs. Cautious Optimists	0.40	0.05	[0.26, 0.54]	7.76	<.001***
Heartland Caretakers vs. Cautious Optimists	0.09	0.07	[-0.09, 0.27]	1.33	0.670
Sceptical Realists vs. Steady Strivers	-0.63	0.06	[-0.78, -0.47]	-11.09	<.001***
Grounded Traditionalists vs. Steady Strivers	0.38	0.05	[0.23, 0.52]	7.28	<.001***
Heartland Caretakers vs. Steady Strivers	0.07	0.07	[-0.12, 0.25]	0.99	0.861
Grounded Traditionalists vs. Sceptical Realists	1.00	0.06	[0.85, 1.15]	18.12	<.001***
Heartland Caretakers vs. Sceptical Realists	0.69	0.07	[0.50, 0.89]	9.87	<.001***
Heartland Caretakers vs. Grounded Traditionalists	-0.31	0.07	[-0.49, -0.13]	-4.65	<.001***

Notes: MD: mean difference; SE: standard error. Positive values indicate the first group scored higher than the second group. Tukey HSD adjustments applied for multiple comparisons. * $p < .05$. ** $p < .01$. *** $p < .001$.

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