

The Re-exploration of Democracy Index

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Abstract: The third wave of democratisation has been sweeping the world since the beginning of the 21st century, and with the expansion of internet applications and the spread of big data algorithms, the term 'democracy' has gradually moved from a definitional distinction to a new form of scientific measurement. A large number of scholars have become interested in measuring the extent of democracy, not only in what democracy is, but also in what constitutes a good democracy. In this paper, we attempt to construct a new index model for measuring the degree of democracy by statistically analysing the data from the World Values Survey, and explore its impact on the degree of democracy in terms of political confidence, political participation, political rights, civil liberties, the rule of law and the level of society.

Keywords: democracy; index of democracy; statistically analysing; impact

1. Introduction

As one of the most central values of modern society, democracy seems to have become an accepted "good" throughout the world. "The complexity of the concept of democracy conveys the basic fact that different peoples have not developed a uniform model of understanding democracy at a particular stage in history, and that the history of the development of the concept of democracy is itself a history of ideas competing for the "title" of democracy."^[1] Citizens' perceptions of democracy vary significantly not only at the macro level, such as country, system and culture, but also at the micro level, such as age, education level and income level. With the advancement of technology and the integration of various disciplines, more and more scholars and experts are committed to measuring the degree of democracy in a country through quantitative methods, either in order to compare the democratisation processes of different countries, to develop more targeted democratisation programmes according to different countries, or to work towards building a community of human destiny.

2. Review of the literature

2.1. Background of the study

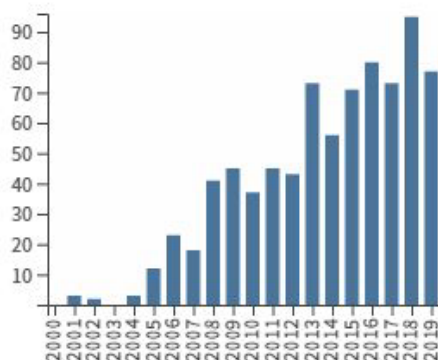


Figure 1: Number of documents issued by democracy index

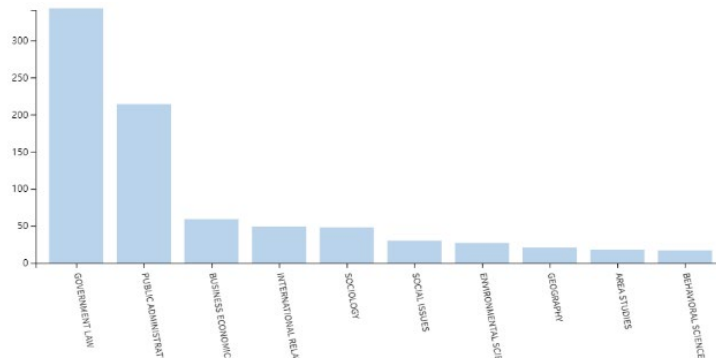


Figure 2: Content of documents issued by democracy index

A search of the democracy index on the Web of Science yielded a total of 806 relevant papers. As can be seen from Figure 1, since the 21st century, people are not only concerned with the legitimacy of democratic institutions, but also increasingly with the degree of democracy, trying to find out how to achieve a better and more appropriate democracy for different countries. Figure 2 shows that when people want to measure the extent of democracy, they most often look at two dimensions: government law and public administration, followed by business economics, the international sphere, social issues and so on.

Tocqueville, the famous 19th century theorist of democracy, predicted in his book *On Democracy in America* that "democracy is about to arrive inevitably and universally throughout the world." [2] Contemporary Western democratic theory understands democracy as institutional arrangements around elections, multi-party competition and representation, because with these criteria, "it is possible to analyse whether political institutions are becoming more or less democratic" [3] There are now two main ways in which democracy can be seen and understood in political science research: narrative methods and statistical methods. In the narrative tradition, as much information as possible is assembled and then analysed through the experience and subjective judgement of a number of experts. In the statistical tradition, specific information is assembled a priori and interpreted through some statistical method or software, relying less on the personal subjective judgement of the observer. An example is now Polity IV, which collates statistics based on a set of indicators to compare the degree of democracy and dictatorship in most countries of the world. [4] However, research on the meaning and measurement of democracy has not evolved smoothly, but has been marked by both progress and regression. Even fundamental questions like whether we should treat liberal democracy as a continuum with gradients, or whether it is an existential or non-existent property, have not been fully resolved. [5] Many European scholars argue that democracy is more or less advanced and cannot be semi-democratic: there is a natural zero point against the idea that there is a middle ground between democracy and dictatorship, but they agree that there are different types of democracy and dictatorship. Huntington points out that the use of a continuous measure of democracy poses many problems, for example the weighting of indicators is unknown. On the other hand, researchers such as Arat, Bolen, Hadenius and Vanhanen see democracy as a continuum. Hadenius, Thorel and Elkins, argue that if a dichotomous measure of democracy is used, much important information will be lost. Bohlen points out that countries approaching a tipping point are difficult to measure using a dichotomous measure. When dealing with the transition from autocracy to democracy and vice versa, it is necessary to know which countries are democracies and which are not. However, when a dichotomous approach is used, it is not possible to measure changes in democracy. Where the degree of democracy is used as the dependent variable, democracy is seen as a continuously relevant phenomenon and therefore the strength of democracy measures such as Freedom House and the Economist Intelligence Unit (EIU) is that they provide both a variety of measures and a graded scale of democracy. [6]

2.2. Several mature democracy indices

Polity IV (Polity IV). The dataset covers all major independent countries in the global system for the period 1800-2017, i.e. countries with a total population of 500,000 and above in the most recent year; there are currently 167 countries. With the support of a dedicated working group, the Polity IV project has been transformed into an ongoing data collection exercise, meaning that it continuously monitors regime change in all major countries and provides an annual assessment of the characteristics, changes and data updates of regime authorities. The conceptual scheme of the project is unique in that it examines the nature of democratic and authoritarian powers accompanying each other in governance institutions, rather than discreet and mutually exclusive forms of governance. This perspective envisages a range of

governance powers, from fully institutionalised dictatorships to mixed or disjointed regimes of power to fully institutionalised democracies. "The Polity Score captures the authority spectrum of regimes on a 21-unit scale ranging from -10 (hereditary monarchies) to +10 (solid democracies). Regime scores can also be converted into regime categories and are proposed in three sections: "Dictatorships" (-10 to -6), "Mixed regimes" (-5 to +5 and three special values: -66, -77 and -88) and "Democracies" (+6 to +10). The polity scenario consists of six components, of which the four main structural variables are: key qualities of executive recruitment, restrictions on executive power, political competition and changes in the quality of institutionalisation of the governing authority.^[7] However, the independence of the six structural variables is not very significant and they overlap and influence each other.

Freedom House. Analysts and consultants within Freedom House set the questions and prepare the questionnaires, which are then handed over to each country to draw up a report and tally the scores by its own experts in the field. Freedom House introduces the minimum standards of democracy in political terms through political circles, but in social and economic terms it attempts to cover the maximum standards of democracy through civil liberties. By so attempting, Freedom House categorises the differences between democracies as full democracy and limited democracy. The project consists of two dependent variables: political rights and civil liberties, which are measured using a scale from 1 to 7, where 1 denotes the highest degree of freedom and 7 the lowest. These two items consist of three and four observed variables respectively: political rights consist of the electoral system, political pluralism and the functioning of government; civil liberties include freedom of expression and belief, freedom of assembly and association, the rule of law, and the right to personal autonomy. For each variable, the values of the minimum to maximum scores for a question are summed and the average is calculated to obtain the final score.^[8] Freedom House is able to show progress in the direction of rigorously measuring the diversity of democratic systems, but there are methodological limitations in that the measurement of the individual variables is achieved by means of questionnaire responses to experts in a given country, and the participation of several experts can be to some extent distinctly subjective, with their own expertise and competence imposing limitations on the objective data.

The Economist Intelligence Unit (EIU) The EIU Index is a measure of the degree of democracy in most independent countries and territories around the world, as measured by the Economist team. The structural variables of this democracy index are divided into five areas: electoral processes and pluralism, civil liberties, government functions, political participation and political culture. Each country is divided into four forms according to the data in each category: full democracy, flawed democracy, mixed polity, and authoritarian polity. Democracy indicators are measured by a total of 60 evaluation questions divided into five categories, with each of the 60 questions being answered with a score of 0, 0.5, 1 or 'yes/no'. The sum of the scores obtained in order to answer the individual questions in each category is multiplied by 10, then divided by the sample size in each question, and the resulting average for each category is added up and divided by the total number of categories⁵ to obtain the final score. A score of 8-10 is a full democracy, a score of 6-7 . The most unique feature of the EIU Democracy Index is that, in addition to expert evaluations, public opinion surveys are also used as an evaluation factor. The indicators based on public opinion surveys are mainly used in the areas of 'political participation' and 'political culture', but also in the areas of 'civil liberties' and 'government functions'. "Public opinion survey data is mainly derived from the World value survey. The EU refers to those who survey and develop democracy indicators as 'experts', and there is no clear information on the number of participants, their affiliation, or who they are, other than the reference to experts, which has led some to question their reliability.^[8]

The Vanhanen Index. The Vanhanen Index of Democracy is made up of two separate categories, 'competition' and 'participation', and is designed to develop important differences that distinguish democracies from other polities. Competition is measured by the percentage of votes obtained by the minority party in parliamentary or presidential elections, i.e. 100 minus the percentage of votes obtained by the party with the most votes, and participation is measured by the turnout in elections. These two categories are reflected as equal proportions in the measurement of the Democracy Index. The most important features of the Vanhanen Democracy Index are its simplicity and objectivity. The only two factors that form the Democracy Index are competition and participation, and the data used to measure each of these also utilise objective election outcome data. The process of measuring and calculating the indicators is therefore transparent and can be measured again directly by any interested researcher. However, the Vanhanen Index is designed to simply determine the degree of democracy and can only be observed based on election outcome data, without taking into account other elements of democracy, such as civil liberties and political rights.

2.3. Other research results

All four of these widely used and authoritative democracy indices focus on civil liberties and political rights, and similarly, many other scholars have similarly used these components as key variables in measuring the degree of democracy. Coppedge and Reinicke include five indicators in their measure: freedom of expression, freedom to organise, media pluralism, the right to vote and the extent to which fair elections are held. Zehra Arat's measure of democracy consists of four dimensions of popular sovereignty: participation, inclusion, competitiveness and civil liberties, covering a period of 35 years, with the number of countries included in the index ranging from 29 to 109. Axel Hadenius (1992) constructed a democracy index in 1988, initially covering 132 less developed countries, which consisted of two dimensions: elections and political freedom. The ACLP index used by Alvarez, Shebub, Limongi and Przeworski has now been expanded to include data from 1800 to 2008, for a total of 141 countries, with the ACLP index focusing on competition. [6]Bollen defines liberal democracy as the extent to which a political system allows for political freedom and democratic rule. Political freedom is expressed in freedom of expression and the freedom to organise groups that can support or oppose the government, and democratic rule is the accountability of elites to the general population, which is almost always expressed in the holding of free and fair elections at reasonable intervals.[5] Ferdi Botha has constructed a Good African Society Index (GASI) for 45 African countries. One of the characteristics of a good society is stable democracy, which he measures by looking at societies that allow citizens to express their views and make free choices, and have an effective government.[9]

At the same time, new indices of democracy are constantly emerging, with many scholars either adding structural variables to the measurement of democracy or applying new methods to make the degree of democracy measured more accurate, reasonable and convincing. In measuring democracy, Zhao Yuanbin includes not only process indicators such as political rights and civil liberties, but also focuses on outcome factors such as economic performance, social welfare, and civil equality, discussing freedom with the economic and social dimensions at its core, and measuring the degree of social stability and harmony in terms of the value of equality. Mark Bultmann, Wolfgang Merkel, Lisa Müller and Bernhard Wessel argue that the now well-established democracy indices are not sensitive enough to measure the nuances between mature democracies. [10]So they propose a democracy barometer that introduces law as an influencing factor, where freedoms and rights are protected by law and where the legal framework must be independent and effectively impartial. Existing measures of democracy are often inconsistent and sometimes contradictory, and scholars' hesitation in deciding which democracy index to use is further complicated. Penstein, Mercer and Melton suggest that by using a Bayesian latent variable approach, using five of the following existing indices to generate a posteriori means for a given country, and identifying a number of assumptions (democracy is one-dimensionally continuous; errors are independently normally distributed, etc.), the various existing indices can be combined into a 'Unified Democracy Score' (UDS) index. Mihaiela Ristei Gugiu and Miguel Centellas have extended their previous research by developing an index that can distinguish between types of regime - the Democracy Cluster Classification (DCC) - using Hierarchical Cluster Analysis (HCA). By clustering the classification rates of each index and grouping countries according to similarities within and between groups, one is able to examine the continuity of democracy building.[11] Alexander and Wilzel used the six most widely used democracy indices to form the Effective Democracy Index (EDI). They find that the Effective Democracy Index shows a stronger association with key theories of democracy, including economic prosperity, distributive equality, civic values, and civil society. Moreover, the Effective Democracy Index reveals a pattern that previous research has largely ignored: the global rarity of electoral democracy before the Third Wave has been replaced by the equally rare effective democracy of today.[12]

3. Study Design

3.1. Data sources

Criteria-based data means that the researcher or rating agency first breaks down the concept of democracy into a measurement framework containing a number of democratic principles, each of which is specified as a series of ordinal, temporal or nominally standardised indicators. The researcher then examines the performance of different countries against this standardised set of indicators, which are then aggregated into an index. Survey-based data is mainly derived from public opinion surveys, which measure people's perceptions of the stage of democratic development, perceptions of democracy or the quality of democracy in their own or other countries through random sampling of the target population,

generally using inferential statistics. Researchers often use the data from such surveys to study public perceptions of democracy at the individual or group level. This type of democracy index, based on various public opinion surveys, is often referred to as a 'subjective democracy index'.

These well-established measures of democracy in the Western mainstream, such as Polity IV, Freedom House, The Economist, etc., in order to praise and promote "liberal democracy", they are mainly based on standard principles that are derived from the political systems of some Western countries, which exist objectively and are therefore objective criteria, and the resulting democracy indices can also be called "objective democracy indices". However, in a sense, these objective criteria are also subjective in nature, and are subjectively used by scholars and experts as a measure of democracy, which might yield very different results if a different set of objective criteria were used. What is the purpose of having a democratic system of government and measuring the degree of democracy? It should not be democracy for democracy's sake, nor is getting a supposedly high democracy score a way of saying that a good democracy is a good democracy. The purpose of democracy is not democracy per se, it is that it should better serve the people; it is to consolidate social stability and achieve social development, so the decision of whether democracy is good or bad should also return to the people, depending on how well it serves them. The World Values Survey (WVS) collects data mainly on the attitudes and values of the general public, for example by asking about attitudes towards the degree of democracy in the country and by asking questions about the different features of democracy, so the data used in this paper are all from the sixth wave (2010-2014) of the WVS Database survey, using the statistical software SPSS 25.0 to measure the democracy index on the values dimension.

3.2. Selection of variables

Table 1: Composition of pre-determined variables

| No. | Structural variables | Observed variables | Scale statements | Alpha factor |
|---------------|-------------------------|---|---|--------------|
| A1 | Political rights | Free elections | Do you think it is essential for democracy that people choose their leaders through free elections? | 0.67 |
| A2 | | | Do you think it is essential for democracy that the military takes over when the government is incompetent? | |
| A3 | | Freedom of the Person | Do you think that the inviolability of people's freedom as a constitutionally protected civil right is an essential element of democracy? | 0.85 |
| A4 | | Livelihood Security | Do you believe that government provision of unemployment benefits is an essential element of democracy? | |
| A5 | | | Do you think it is essential for democracy that the state makes the population's income equal? | |
| A6 | Political participation | Democratic activities | Have you participated in a boycott? | 0.89 |
| A7 | | | Have you ever participated in a peaceful demonstration? | |
| A8 | | | Have you ever participated in a strike? | |
| A9 | | | Have you taken part in other forms of protest? | |
| A10 | Civil Liberties | Freedom of association | Are you an active member of an educational/artistic/musical/cultural organisation? | 0.70 |
| A11 | | | Are you an active member of the professional association ? | |
| A12 | | | Are you an active member of a consumer organisation? | |
| A13 | | | Are you an active member of a self-help organisation / mutual aid organisation? | |
| A14 | | Freedom of Expression | Are you worried about government phone tapping, reading private letters or emails? | 0.85 |
| A15 | | Freedom of the press | How often do you keep up with national and world events via your mobile phone? | |
| A16 | | | How often do you keep up to date with national and world events via email? | |
| A17 | | How often do you access the internet at to learn about national and world events? | | |
| A18 | Political Confidence | Civic Trust | Do you trust central government? | 0.89 |
| A19 | | | Do you trust political parties? | |
| A20 | | | Do you trust the People's Assembly? | |
| A21 | | | Do you trust the administration? | |
| A22 | Rule of law level | Violations | Are robberies a regular occurrence around the area you live in? | 0.82 |
| A23 | | | Do you live in an area where there are frequent incidents of police brutality in your private life? | |
| A24 | | | Are there frequent incidents of ethnic discrimination around the area you live in? | |
| A25 | | | Do you live in an area where drug trafficking is a regular occurrence? | |
| A26 | Social level | Social stability | Have you and your family experienced not having enough food to feed yourself in the past year? | 0.80 |
| A27 | | | Have you and your family experienced feeling unsafe at home due to high crime rates in the past year? | |
| A28 | | | Have you and your family not received the medication and medical treatment you needed in the past year? | |
| A29 | | | Have you and your family experienced no cash income in the past year? | |
| A30 | Citizen Perception | Subjective will | Are you satisfied with your current life? | 0.32 |
| A31 | | | How democratic do you think our country is? | |
| Overall Scale | | | The above 31 question items | 0.84 |

As the World Values Survey involves a multidimensional and comprehensive set of values, not just a

measure of democracy, the questions selected for the scale, after a prior literature review and question assessment, are closely related to the situation of democracy, which helps to better provide a factual basis and data support for the measurement of the subjective democracy index. As shown in Table 1, the variables can be divided into three components, structural variables, observed variables and scale statements. The scale statements are statements used to ask respondents direct questions, and the observed variables can be derived directly from the mean of the corresponding scores in the questionnaire, both of which constitute the explicit variables. The structural variables, on the other hand, can be resolved into a variety of observed variables, which need to be weighted by the corresponding scores on the explicit variables, and are latent variables. In practice, only one or a few observed variables can be measured according to the design of the questionnaire, and the underlying structural variables can be estimated from these directly measurable variables.

Political rights: the political rights referred to here are not just the right to vote and to be elected, but are a broader right that is an important component of democratic life and consists of three main observational variables: free elections, personal freedom and security of life. Free elections consist of two questions: whether it is essential to democracy for people to choose their leaders through free elections and for the military to take over when the government is incompetent. Personal freedom is measured by asking whether the inviolability of people's freedoms is a constitutionally protected civil right and whether security of life is an essential element of democracy, mainly at the economic level, including whether it is essential for democracy for the government to provide unemployment benefits and for the state to equalise the income of the population. A value of 1-10 was assigned, with 1 indicating disagreement as an essential element of democracy and 10 indicating strong agreement as an essential element of democracy.

Political participation: Political participation is an important way of realising citizens' rights, reflecting their status and role in social life and the nature of political relations. One of the main ways in which the general public can participate in politics is through participation in unofficial democratic activities in which people have clear political demands, so the question chosen is "Have you ever participated in boycotts, peaceful demonstrations, strikes or other forms of protest?" A value of 1 means yes, 2 means maybe, 3 means never.

Civil liberties: The idea that every citizen can enjoy different freedoms is a wonderful vision of a perfect democratic society, and the degree of civil liberties is certainly one of the good measures of the degree of democracy in a country. Among these freedoms is the freedom of association, which allows citizens to form spontaneous groups of various kinds that formally replace the middle class between the state and the individual, maintaining checks and balances on power and preventing the power of the state from interfering too much in the lives of individuals. Respondents are mainly asked if they are active members of educational/art/music/cultural organisations, professional associations, consumer organisations, self-help organisations/mutual aid organisations, and are assigned a value of 0 no, 1 for general membership and 2 for Active member. Freedom of expression is a way for citizens to speak out and understand the needs and suggestions of different people, the question is "Are you worried about the government tapping phones, reading private letters or emails?" Assign a value of 1 very worried, 2 worried, 3 not too worried, 4 very unworried, 8 don't know. The media is an important way for the public to learn about important events at home and abroad, and freedom of the press is an important indicator of democracy. Assign a value of 1 daily, 2 weekly, 3 monthly, 4 less than monthly, 5 no.

Political Confidence: The main question here refers to citizens' trust in the state party and government organs. If a country has a higher degree of democracy, the more stable the society will be and the people's living standard will also improve, then the people's trust in the party and government will be higher. "Assignment 1 very much, 2 trust, 3 not much, 4 not at all.

Level of rule of law: A country with a sound and complete legal system is one of the conditions necessary to ensure the good functioning of its democracy. drug trafficking. Assign a value of 1 very frequent, 2 fairly frequent, 3 not too frequent, 4 none.

Level of society: One of the most important purposes of democracy is to maintain social stability, so the level of social stability in a country or region is closely related to the level of democracy. The following questions may affect social stability: "Have you and your family ever not had enough food to eat in the past year? Have you ever felt unsafe at home due to high crime rates? Have you not had access to the medicines and medical treatment you need? Ever had no cash income?" Assign values 1 often, 2 sometimes, 3 rarely, 4 never.

Civic perceptions: The dependent variable, consisting of each respondent's satisfaction with their current life and their perception of the country's level of democracy, is a subjective willingness of the

respondent to be compared with various indicators of democracy that they subjectively judge.

4. Exploratory Factor Analysis

4.1. Prerequisite test

Table 2: KMO and Bartlett's test

| | | |
|--|-------------------------|-----------|
| KMO Number of sample suitability measurements. | | 0.806 |
| Bartlett Sphericity Test | Approximate cardinality | 11920.312 |
| | Freedom | 406 |
| | Significance | 0.000 |

The KMO test statistic is an indicator used to compare the simple correlation coefficient and the partial correlation coefficient between variables. When the sum of the squares of the simple correlation coefficients between all variables is much greater than the sum of the squares of the partial correlation coefficients, the KMO value is close to 1. The closer the KMO value is to 1, the stronger the correlation between the variables and the more suitable the original variables are for factor analysis. Table 2 shows that the KMO value is 0.806 and the Bartlett sphericity test is significant ($p < 0.001$), which means that the data are correlated and the correlation coefficient matrix of the factors is non-unit matrix, which can extract the least number of factors and explain most of the variance at the same time, which meets the requirements of the study and can be used for factor analysis.

4.2. Factor analysis

Table 3: Total variance explained

| Ingredients | Initial Eigenvalue | | | Extraction of sum of squares of loads | | | Sum of squared rotating loads | | |
|-------------|--------------------|---------------------|--------------|---------------------------------------|---------------------|--------------|-------------------------------|---------------------|--------------|
| | Total | Percentage variance | Cumulative % | Total | Percentage variance | Cumulative % | Total | Percentage variance | Cumulative % |
| 1 | 4.930 | 17.000 | 17.000 | 4.930 | 17.000 | 17.000 | 3.074 | 10.601 | 10.601 |
| 2 | 2.999 | 10.340 | 27.340 | 2.999 | 10.340 | 27.340 | 3.056 | 10.539 | 21.139 |
| 3 | 2.676 | 9.229 | 36.569 | 2.676 | 9.229 | 36.569 | 2.785 | 9.602 | 30.742 |
| 4 | 2.421 | 8.348 | 44.917 | 2.421 | 8.348 | 44.917 | 2.675 | 9.223 | 39.964 |
| 5 | 1.920 | 6.622 | 51.539 | 1.920 | 6.622 | 51.539 | 2.517 | 8.679 | 48.644 |
| 6 | 1.779 | 6.135 | 57.674 | 1.779 | 6.135 | 57.674 | 2.299 | 7.928 | 56.572 |
| 7 | 1.675 | 5.776 | 63.450 | 1.675 | 5.776 | 63.450 | 1.927 | 6.647 | 63.218 |
| 8 | 1.068 | 3.682 | 67.131 | 1.068 | 3.682 | 67.131 | 1.135 | 3.913 | 67.131 |

As can be seen from Table 3, the eigenvalues of the first 8 components are greater than 1, and together they can explain 67.131% of the variance, which is not bad, so roughly the coefficient matrix of the 8 principal components can be obtained to do an orthogonal rotation, and the rotation converges after 6 iterations to obtain 8 common factors showed in table 4.

Factor1 is closely related to X18, X19, X20 and X21, including citizens' trust in the central government, political parties, people's congresses and administrative organs, with factor loading coefficients of 0.871, 0.912, 0.912 and 0.774 respectively. These factors examine citizens' trust in party and government organs, which can be named as political confidence.

Factor2 is closely related to X6, X7, X8 and X9, which are citizens' willingness to participate in boycotts, peaceful demonstrations, strikes or other forms of resistance, with factor loading coefficients of 0.835, 0.867, 0.872 and 0.841 respectively, and these are directly involved in organisations or activities with a clear political connotation, which could name this factor political participation.

Factor3 contains four variables, X22, X23, X24 and X25, which are robbery incidents, incidents of police violence interfering with one's private life, incidents of ethnic discrimination and incidents of drug trafficking, which are illegal incidents occurring around residential living areas, and the factor loading coefficients reach 0.725, 0.840, 0.867 and 0.790 respectively, this factor reflects from the side the legal This factor reflects the soundness of the legal system, so it can be named as the level of rule of law.

Factor4 is a common factor that can be extracted from the four variables X26, X27, X28 and X29, and reflects the level of social stability from the individual household living situation of citizens, including whether there has been, in the past year, not enough food to feed the hungry, feeling unsafe at home due to high crime rates, not getting needed medicine and medical treatment, not having cash income, this factor is named Social Level. (The factor loading coefficients were 0.734, 0.737, 0.835 and 0.837 respectively)

The factor loadings of X1, X2, X3, X4 and X5 in Factor7 are more prominent, at 0.556, 0.304, 0.701, 0.760 and 0.639 respectively, corresponding to whether free elections (people choosing their leaders through free elections is a fundamental element of democracy, the military taking over when the government is incompetent is a fundamental element of democracy) personal freedom (people's freedom not being violated is a constitutionally protected civil right is a fundamental element of democracy) livelihood security (the government providing unemployment benefits is a fundamental element of democracy, the state making income equal is a fundamental element of democracy). (is the inviolability of people's freedom a constitutionally protected civil right?) and security of life (is the provision of unemployment benefits by the government a fundamental element of democracy?)

Factor5 has the largest factor loading coefficients for the four variables X10, X11, X12, and X13 with 0.681, 0.775, 0.838, and 0.787, respectively, corresponding to whether or not they are active members of educational/art/music/cultural organizations, professional associations, consumer organizations, and self-help organizations/mutual aid organizations. Factor6 can be extracted as a common factor for the variables X15, X16, and X17, with factor loading coefficients of 0.843, 0.853, and 0.875, respectively. X16, and X17, the public factor of the three variables, the frequency of learning about national and world events via mobile phones, e-mail, and computer access to the Internet, with factor loading coefficients of 0.843, 0.853, and 0.875, respectively. Factor8 is closely related to only one variable, X14 (with a factor loading coefficient of 0.859), and it would represent only this one factor, whether one is worried about the government conducting telephone wiretapping, reading private letters or emails. These three public factors could be named freedom of association, freedom of the press, and freedom of speech, respectively; they are all different aspects of freedom and vary so much that it is difficult to obtain the same public factor, but for the purpose of understanding the impact of freedom on democracy, they could also be named uniformly as civil liberties.

Table 4: Rotated component matrix^a

| No. | Ingredients | | | | | | | |
|-----|-------------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| X1 | -0.033 | -0.178 | -0.046 | 0.022 | 0.003 | 0.026 | 0.556 | -0.041 |
| X2 | -0.079 | -0.034 | -0.040 | -0.196 | 0.014 | 0.102 | 0.304 | -0.435 |
| X3 | -0.004 | 0.012 | 0.057 | 0.105 | -0.032 | -0.052 | 0.701 | -0.167 |
| X4 | -0.015 | 0.065 | 0.069 | 0.009 | -0.083 | 0.024 | 0.760 | -0.107 |
| X5 | 0.001 | 0.128 | 0.017 | -0.084 | 0.000 | 0.026 | 0.639 | 0.306 |
| X6 | -0.016 | 0.835 | 0.041 | 0.082 | -0.155 | 0.103 | -0.012 | -0.011 |
| X7 | 0.003 | 0.867 | 0.058 | 0.071 | -0.060 | 0.083 | -0.008 | -0.021 |
| X8 | -0.008 | 0.872 | 0.132 | 0.075 | 0.000 | 0.049 | 0.011 | 0.040 |
| X9 | -0.058 | 0.841 | 0.067 | 0.089 | -0.042 | 0.023 | -0.018 | 0.019 |
| X10 | -0.050 | -0.057 | -0.022 | -0.064 | 0.681 | -0.135 | -0.057 | 0.108 |
| X11 | 0.028 | -0.073 | -0.081 | -0.080 | 0.775 | -0.110 | 0.003 | -0.015 |
| X12 | 0.057 | -0.081 | -0.142 | -0.094 | 0.838 | 0.004 | -0.069 | -0.064 |
| X13 | -0.007 | -0.024 | -0.092 | 0.025 | 0.787 | -0.073 | 0.006 | -0.074 |
| X14 | -0.021 | -0.015 | 0.081 | 0.026 | -0.025 | 0.094 | -0.008 | 0.859 |
| X15 | -0.012 | 0.079 | 0.019 | 0.061 | -0.097 | 0.843 | 0.016 | -0.010 |
| X16 | -0.054 | 0.080 | 0.094 | -0.003 | -0.124 | 0.853 | 0.054 | 0.008 |
| X17 | -0.075 | 0.079 | 0.044 | -0.092 | -0.104 | 0.875 | -0.029 | 0.040 |
| X18 | 0.871 | 0.006 | -0.054 | -0.013 | -0.015 | -0.039 | -0.096 | -0.055 |
| X19 | 0.912 | -0.025 | -0.060 | -0.008 | -0.029 | -0.040 | -0.045 | -0.030 |
| X20 | 0.912 | 0.004 | -0.043 | -0.048 | 0.016 | -0.025 | -0.033 | 0.027 |
| X21 | 0.774 | -0.059 | -0.068 | -0.056 | 0.046 | -0.041 | 0.085 | 0.087 |
| X22 | -0.034 | 0.047 | 0.725 | 0.112 | -0.046 | 0.037 | 0.068 | 0.108 |
| X23 | -0.064 | 0.091 | 0.840 | 0.146 | -0.104 | 0.042 | 0.010 | -0.053 |
| X24 | -0.046 | 0.097 | 0.867 | 0.110 | -0.123 | 0.053 | 0.042 | 0.006 |
| X25 | -0.089 | 0.064 | 0.790 | 0.172 | -0.081 | 0.036 | -0.043 | 0.060 |
| X26 | 0.025 | 0.046 | 0.168 | 0.734 | -0.130 | -0.002 | 0.081 | -0.012 |
| X27 | -0.062 | 0.095 | 0.150 | 0.737 | -0.040 | -0.004 | -0.002 | 0.102 |
| X28 | -0.060 | 0.079 | 0.122 | 0.835 | -0.010 | -0.040 | -0.020 | 0.077 |
| X29 | -0.032 | 0.082 | 0.084 | 0.837 | -0.035 | 0.022 | -0.005 | -0.022 |

4.3. Reliability and validity analysis

Reliability analysis mainly examines the reliability and consistency of measured items in various dimensions on such subjective values of people, and in empirical studies, academics commonly use the internal consistency Cronbach's alpha coefficient to test the reliability of data. In general, a Cronbach's alpha coefficient greater than 0.7 indicates high data reliability. According to previous measurements, the alpha coefficients of the explanatory variables on the dimensions, except for the alpha coefficient of the free election scale statement in political rights, which is slightly less than 0.7, and the right to personal freedom and freedom of expression, which are two observed variables with only one question selected to measure the alpha coefficient, are The alpha coefficient for the total scale is 0.84. Therefore, the reliability of the scale is relatively reliable.

As previously known, with the exception of X2 which is slightly lower at 0.304, all the remaining observations have a commonality greater than 0.5 and the loading coefficients of the observed variables pointing to the common factor are greater than 0.7, with the exception of X1 0.556 and X5 0.639, all of which have high convergent validity. The cross-factor loadings, on the other hand, are small and therefore have good discriminant validity.

4.4. Summary

Factor1 and Factor2 have the highest percentage of variance at 17.0% and 10.3% respectively, while the sum of the three public factors Factor5 Factor6 Factor8 has 16.4%, and the contribution they can use to explain the total variance is the most, indicating that in the dimension of people's values, political confidence, civil liberties and political participation have a s degree of democracy is highly influential, accounting for nearly half of the proportion.

5. Regression analysis

5.1. Selection of variables

The eight main factors derived from the exploratory factor analysis can be categorised and organised into six structural variables, named political confidence, political participation, level of rule of law, level of society, political rights and civil liberties. Since the factor loading of a variable indicates the loading of that variable on a public factor, reflecting the relative importance of that variable on that public factor, a variable with a large relative factor loading was selected as the independent variable for each of the six structural variables, F1 indicating people's trust in political parties, F2 indicating people's participation in strikes, F3 indicating incidents of ethnic discrimination around residential areas F4 indicates people's income status, F5 indicates people's perception of the government's provision of unemployment benefits, and F6 indicates the frequency with which people access the Internet to learn about national and world events. The extent to which people subjectively want our country to be democratic is taken as the dependent variable F.

5.2. Multiple linear regression

Table 5: Multiple linear regression output results

| Models | | Coefficients | | | | | |
|--------|--|-----------------------|-----------------|--------|--------------|-----------------------|-------|
| | | Unstandardised factor | | t | Significance | Covariance statistics | |
| | | B | Standard errors | | | tolerance | VIF |
| | (Constant) | 4.183 | 0.680 | 6.155 | 0.000 | | |
| F1 | Confidence: Political Parties | -0.639 | 0.072 | -8.934 | 0.000 | 0.972 | 1.028 |
| F2 | Political action: Joining strikes | 0.361 | 0.103 | 3.512 | 0.000 | 0.948 | 1.054 |
| F3 | How frequently do the following things occur in your neighbourhood: Racist behaviour | 0.272 | 0.156 | 1.743 | 0.082 | 0.932 | 1.073 |
| F4 | In the last 12 months, how often have you or your family: Gone without a cash income | 0.443 | 0.070 | 6.292 | 0.000 | 0.954 | 1.048 |
| F5 | Democracy: People receive state aid for unemployment. | -0.017 | 0.024 | -0.689 | 0.491 | 0.983 | 1.017 |
| F6 | Information source: Internet | 0.002 | 0.029 | 0.056 | 0.955 | 0.959 | 1.043 |

As the WVS questionnaire is a comprehensive set of values questionnaires with a wide variety of questions of non-uniform types, there are both continuous and dummy variables among the explanatory

variables, so regression analysis is applied here. The post-regression DW value of 1.502 shows that the autocorrelation between the explanatory variables is not significant and the residuals are relatively independent. In seeing the F-test, $P=0.000 < 0.05$, so the linear regression equation is significant at the significance level of 0.05 and there is no multicollinearity. A linear regression equation can be derived from Table 5

$$F = -0.639F_1 + 0.361F_2 + 0.272F_3 + 0.443F_4 - 0.017F_5 + 0.002F_6 + 4.183$$

5.3. Summary

The Communist Party of China (CPC) is the vanguard of the Chinese working class, as well as the vanguard of the Chinese people and the Chinese nation, and is the leading core of the socialist cause with Chinese characteristics. The leadership of the Party is the fundamental guarantee for the realization of people's ownership. Each unit increase in F_1 is followed by a 0.639 unit decrease in the dependent variable. A higher score indicates a lower level of trust in political parties, so that the more people believe in the Party's leadership, the more the democracy index will increase and the more democratic the country will be. The idea of democracy is an important core value of the Communist Party.

The dependent variable will subsequently increase by 0.443 units with each unit increase in F_4 , with higher scores indicating that fewer cases of no cash income occur. As our country moves into a new era of prosperity and wealth, people's pursuit of material life has turned into a need for a better life. The general public's standard of living has improved and their income has increased, and with it the progress of a country, an important step in the democratisation process of a modernised country. Achieving total poverty eradication and the full realisation of a well-off society are important dividends that a democratic country yields.

The frequency with which the government provides unemployment benefits in F_5 and the frequency with which people access the Internet to learn about national and world events in F_6 have little effect on people's perceptions of the level of democracy in a country. The government's provision of unemployment benefits is not a major influence on the level of democracy in a country, and the frequency with which people access the Internet as a channel to learn about news does not play a decisive role in the change in a country's democracy index.

6. Conclusion and Discussion

In the 70 years since the founding of New China, the idea of democracy is still prevalent in the country, and existing research has mainly focused on the West, with little quantitative research on democracy in China, which has always been a major obstacle to how people perceive the idea of democracy and even how China can better realise democracy under the socialist system with Chinese characteristics. Therefore, by combining qualitative and quantitative research, this study hopes to obtain different factors that can influence the degree of democracy at the level of values from the subjective will of people, with the following main findings.

Firstly, the questions of the overall questionnaire were first screened and classified, and then the initial questionnaire was purified through exploratory factor analysis and multiple linear regression to obtain six main structural variables that affect the degree of democracy, forming a scale to measure the index of democracy. Each dimension has its own distinct observation: ① political rights - free elections, personal freedom, livelihood security ② political participation - forms of democratic activities ③ civil liberties - freedom of association, freedom of expression, freedom of the press ④ political confidence - the degree of citizens' trust ⑤ level of rule of law - the frequency of violations ⑥ social level - the degree of social stability.

Secondly, on the dimension of political confidence, the fluctuation of the degree of democracy in subjective consciousness is somewhat greater. The higher people's trust in the Party, in the government, in the state administration and in the people's congresses, the greater the subjective democracy index will be, and the more democratic the country will be perceived by the general public. It is clear from this that the Communist Party of China and the party and government organs in China are truly from the people and back to the people. As long as the people are kept at the centre, the level of trust of the people is increased and the political confidence of the citizens is enhanced, the level of democracy in the country will increase significantly. Political participation and civil liberties are also important influencing factors in the democracy index. The higher the level of political participation, the more democratic activities of non-governmental organisations, and the more enthusiastic everyone will be in participating in the

governance of the country and society, the more democratic the country will become. At the same time, people's freedom of expression, freedom of association and freedom of the press are also directly proportional to the degree of democracy in the country; the better civil liberties are guaranteed, the more they will believe that the country is more democratic.

Thirdly, the scale measures the general public's subjective index of democracy, but also, in a sense, reflects differences in values through the different influences on democracy. Democracy is no longer defined and measured only through objective criteria, but is also closely related to the diversity of values.

It should be noted that there are still some imperfections in the development and testing of this scale. On the one hand, the scale relies only on the questionnaire of the World Values Survey, which is too homogeneous a source, and the types of questions are not uniformly set, which may cause some trouble in the establishment and testing of the model, and the degree of fit is not up to the optimal standard. On the other hand, the subjective democracy index of the general public should be combined with the objective democracy index in order to better reflect the degree of democracy in a country.

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