Economic Development and Population Crisis: An fsQCA Analysis Based on the Pressure of Chinese Youth

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Abstract. In 2022, China experienced its first population decline since the 1960s, marking the emergence of a population crisis. This crisis is often attributed to the younger generation's decreasing desire to have children, a trend influenced by economic development. Using fuzzy-set qualitative comparative analysis (fsQCA), this study examines the configurational relationship between the pressures experienced by Chinese youth and the state of population development. Analyzing data from 2003 to 2021identifies a shift in China's population state from being 'led by economic development' to being 'driven by the accumulation of pressures'. The study reveals that although family and marital pressures are not the core conditions in the path configuration, they significantly influence the evolution of population development. Furthermore, the paper establishes a correspondence between fertility policies and the path configuration, indicating that China's fertility policies significantly impact population development. The research suggests focusing on family and marital pressures, as well as fertility policies, to develop practical solutions for the population crisis.

Keywords: Population Crisis; Youth Pressure; Economic Development; Fuzzy-set Qualitative Comparative Analysis (fsQCA).

1 Introduction

According to the "China Population Situation Report 2023,"[1] China's total fertility rate has declined significantly, from 6 before the 1970s to 2 in 1990, then to 1.5 in 2010, 1.15 in 2021, and 1.1 in 2022. This rate is only half of the generational replacement level of 2.1, placing China near the bottom in global rankings. Concurrently, the aging issue has intensified. The degree of population aging in China continues to deepen, leading to a reduced labor supply and increased pension pressures. The ageing population in China continues to deepen, leading to a reduced labour supply and increased pension pressures. By the end of 2022, the national population was 1,411.75 million, a decrease of 850,000 from the end of 2021, marking China's first negative population growth since 1962. By 2050, the elderly population in China will reach 400 million, accounting for 39% of the total population. This demographic imbalance will significantly impact economic development and social stability. China is facing a severe population development situation, and a population crisis is emerging.

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On the issue of population, on one hand, United Nations research has found that the world population reached 8 billion on November 15, 2022[2]. In contrast, the population was only 2.5 billion in 1952. It is projected that in another 70 years, by 2092, the population will increase by another 2.5 billion. For decades, global population growth has been a primary demographic trend and is expected to continue in the future. On the other hand, from a global perspective, population decline is driven by low birth rates and continually decreasing fertility levels. In 2019, over 40% of the world's population lived in countries where the fertility rate had reached or fallen below the replacement level of 2.1 children per woman; by 2021, this proportion had risen to 60%. The coexistence of global population growth and population crises in certain countries is a primary characteristic of current world population development.[3]

There are three distinct viewpoints regarding the relationship between population growth and economic development: pessimistic, optimistic, and neutral. The pessimistic view, represented by Malthus[4], emphasizes the negative impacts of population growth on economic development and the environment. This perspective often warns of "population explosions," "resource depletion," "environmental crises," and "limits to growth." Conversely, the optimistic view, represented by Simon [5] and Gail Johnson, argues that population growth positively affects economic development. They suggest that population growth promotes knowledge accumulation and technological progress over a more extended period, thereby driving economic growth. The neutral stance holds that the impact of population growth on the economy is neutral. This viewpoint is supported by the research of the U.S. National Academy of Sciences and the Public Policy Committee, which shows that population growth has both positive and negative effects on economic development[6].

The relationship between economic growth and the formation of a population crisis is complex. Generally, as the economy grows, improved living standards and education levels, along with increased female employment rates, may lead to a decline in fertility desires, thereby inducing a population crisis[7]. A possible explanation is that economic independence and increased opportunities for professional development make individuals and families more inclined towards late marriage, late childbirth, or reduced number of births. However, on the other hand, economic growth might also result in better child-rearing conditions and social support systems, potentially increasing the desire to have children. For example[8], if the government provides more childcare subsidies, daycare services, or family-friendly policies, it could encourage families to have more children.

This paper empirically studies the relationship between economic growth and the population crisis, establishing a trajectory of China's recent population dynamics. Instead of directly discussing the connection between economic growth and fertility intentions, it starts by establishing the relationship between the perceived pressures of Chinese youth and population dynamics, and then categorizes and analyzes the trajectory of population dynamic changes. Firstly, the main types of pressures perceived by Chinese youth were investigated. Then, using the fuzzy-set qualitative comparative analysis (fsQCA) method, a configurational relationship between youth pressure and the state of population development was established. The core finding of this paper is that China's population is transitioning from being "dominated by economic development" to being "dominated by the accumulation of pressures." In other words, the path of China's population crisis has fundamentally changed, shifting from being led by economic development to being driven by the accumulation of youth pressures. The paper also provides an in-depth understanding of the dynamics of population change, indicating that alt-

hough family/marital pressures are not the core condition in the path configuration of population dynamics, they substantially guide the evolutionary logic of the population development state.

2 Survey on the Pressures Faced by Chinese Youth

2.1 Survey Process and Participant Structure

On October 1, 2023, a youth pressure questionnaire was designed using the WeChat mini-program "Questionnaire Star" and distributed in WeChat groups of MBA, EMBA, and some undergraduate students at Chongqing University. By October 5, 2023, a total of 107 responses were received. The questionnaire covered seven aspects of youth pressure, including family/marital pressure, employment/workplace pressure, economic downturn pressure, educational pressure, housing and living cost pressure, social pressure, and medical/healthcare pressure. The options for the survey ranged from "very little pressure" to "very high pressure." Each participant was allowed to complete the questionnaire only once. Among the 107 participants, 45.79% were male and 54.21% were female. The age distribution was as follows: 7.48% were 18-24 years old, 18.97% were 25-30 years old, 35.51% were 31-35 years old, 19.63% were 36-40 years old, and 8.41% were 41-45 years old. In terms of marital and parental status, 42.99% were unmarried without children, 0.93% were unmarried with children, 10.28% were married without children, 42.06% were married with children, 1.87% were divorced without children, and 1.87% were divorced with children.

2.2 Youth Pressure

Based on the survey questionnaire, a 5-point scoring system was used, where 1 point represents "very little pressure," 2 points for "relatively little pressure," 3 points for "moderate pressure," 4 points for "relatively high pressure," and 5 points for "very high pressure." For related information, please refer to Table 1.

Table 1. Youth Pressure Analysis Table

Youth Pressure	Mean	Standard Deviation
Economic Downturn Pressure	3.47	1.11
Employment/Workplace Pressure	3.44	0.89
Educational Pressure	3.16	1.20
Housing and Living Cost Pressure	2.98	1.05
Medical and Healthcare Pressure	2.82	1.12
Family/Marital Pressure	2.73	1.15
Social Pressure	2.70	1.07

A reliability analysis was conducted on the data, resulting in a Cronbach's alpha value of 0.836. This is a relatively high value, indicating that the measures of youth pressure have good internal consistency. Generally, a Cronbach's alpha value greater than 0.7 is considered acceptable.

3 Research Model and Data Preparation

3.1 Research Model

Based on the structure of youth pressures identified in the empirical research, the factor with the slightest pressure, "social pressure," was omitted. The study then used fuzzy-set qualitative comparative analysis (fsQCA)[9] to investigate the relationship between China's population crisis and youth pressures. The population crisis was selected as the outcome variable, and six factors were chosen to represent the antecedent variables of youth pressure: employment/workplace pressure, economic downturn pressure, educational pressure, housing and living cost pressure, medical and healthcare pressure, and family/marital pressure.

3.2 Variable Measurement

The selection and description of the independent variable and the outcome variable are presented in Table 2.

Table 2. Description of variables

Category	Indicator Name and Abbreviation	Description
Employment/Workplace Pressure	A1: Number of Registered Unemployed in Urban Areas	Reflects the level of unemployment and job market health.
	A2: Number of Employees in State-Owned Units	Indicates employment stability and government sector job trends.
Economic Downturn Pressure	B1: GDP Growth Rate	Measures economic performance and growth momentum.
	B2: Engel's Coefficient	Assesses the proportion of income spent on basic needs.
Educational Pressure	C1: Per Capita National Fiscal Expenditure on Education	Evaluates investment in education relative to population size.
	C2: Number of Ordinary Undergraduate Graduates	Indicates the scale of educated workforce entering the job market.
Housing and Living Cost Pressure	D1: Per Capita Commodity Sales	Reflects consumer spending power and economic activity.
	D2: Average Sales Price of Commodity Housing	Indicates housing affordability and real estate market trends.
Medical and Healthcare Pressure	E1: Number of Hospital Visits	Measures the demand for medical services and potential health issues.
	E2: Per Capita Health Expenditure	Indicates the level of healthcare investment and access to medical services.
Family/Marital Pressure	F1: Child Dependency Ratio	Assesses the proportion of dependent children in the population.
	F2: Total Dependency Ratio	Measures the overall burden of dependents on the working-age population.
Outcome Variables	Object1: Natural Population Growth Rate	Reflects the rate of population increase or decrease.
	Object2: Year-End Total Population	Provides the absolute number of people in a given region or country.

The natural population growth rate is the difference between the birth rate and the death rate in a country or region. A long-term negative natural population growth rate may indicate that a country faces population ageing problems and/or population decreases. The year-end total population represents the total number of people at a specific time point (usually the end of the year), providing a benchmark for the population size when assessing a population crisis.

3.3 Data Selection

All the data used in this paper are sourced from publicly available data on the National Bureau of Statistics of China website, covering 19 years from 2003 to 2021 (each year being a case in the fsQCA method). This includes 12 data sets for antecedent conditions and two sets for outcome variables.

Table 3. Data Correlation Analysis

	Object 1	Object 2	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	F1	F2
Object 1	1	-0.512	-0.621	0.79	0.358	0.408	-0.576	-0.485	-0.635	0.4	-0.491	-0.676	-0.1	-0.766
Object 2	-0.512	1	0.875	-0.831	-0.802	-0.973	0.989	0.99	0.984	-0.878	0.991	0.966	-0.633	0.309
A1	-0.621	0.875	1	-0.753	-0.844	-0.785	0.886	0.886	0.894	-0.576	0.817	0.884	-0.465	0.413
A2	0.79	-0.831	-0.753	1	0.627	0.783	-0.835	-0.785	-0.876	0.795	-0.819	-0.893	0.233	-0.618
B1	0.358	-0.802	-0.844	0.627	1	0.73	-0.814	-0.776	-0.79	0.546	-0.773	-0.797	0.392	-0.361
B2	0.408	-0.973	-0.785	0.783	0.73	1	-0.942	-0.966	-0.937	0.904	-0.97	-0.902	0.719	-0.162
C1	-0.576	0.989	0.886	-0.835	-0.814	-0.942	1	0.973	0.993	-0.849	0.985	0.987	-0.557	0.405
C2	-0.485	0.99	0.886	-0.785	-0.776	-0.966	0.973	1	0.966	-0.842	0.974	0.936	-0.705	0.221
D1	-0.635	0.984	0.894	-0.876	-0.79	-0.937	0.993	0.966	1	-0.857	0.974	0.992	-0.534	0.433
D2	0.4	-0.878	-0.576	0.795	0.546	0.904	-0.849	-0.842	-0.857	1	-0.899	-0.836	0.582	-0.219
E1	-0.491	0.991	0.817	-0.819	-0.773	-0.97	0.985	0.974	0.974	-0.899	1	0.961	-0.618	0.315
E2	-0.676	0.966	0.884	-0.893	-0.797	-0.902	0.987	0.936	0.992	-0.836	0.961	1	-0.435	0.533
F1	-0.1	-0.633	-0.465	0.233	0.392	0.719	-0.557	-0.705	-0.534	0.582	-0.618	-0.435	1	0.526
F2	-0.766	0.309	0.413	-0.618	-0.361	-0.162	0.405	0.221	0.433	-0.219	0.315	0.533	0.526	1

For the analysis of data correlation, please refer to Table 3. In terms of data correlation, the outcome variable "Population Natural Growth Rate (Object1)" shows weak correlations with all antecedent condition variables. However, the outcome variable "Year-End Total Population (Object2)" exhibits very high positive correlations with "Urban Registered Unemployment (A1)," "Per Capita National Fiscal Education Expenditure (C1)," "Number of Undergraduate Graduates (C2)," "Average Selling Price of Commercial Housing (D1)," "Hospital Outpatient Visits (E1)," and "Per Capita Health Expenditure (E2)." It also has very high negative correlations with "State-Owned Enterprise Employees (A2)," "GDP Growth Rate (B1)," "Residents' Engel Coefficient (B2)," and "Per Capita Commodity Sales (D2)."

The purpose of conducting fsQCA configuration analysis with both the relative outcome variable "Population Natural Growth Rate" and the absolute outcome variable "Year-End Total Population" serves two main objectives: firstly, to validate the stability of the configurations, and secondly, to verify the effectiveness of characterizing the concept of population crisis.

3.4 Data Calibration

The fsQCA method requires data calibration, which means transforming the data to a fuzzy set between 0 and 1 [10,11]. Commonly used thresholds for three-value fuzzy set scaling are 0.95, 0.50, and 0.05, representing fully belonging, half-belonging, and not belonging, respectively. The critical values for variable calibration for both the original outcome variable and antecedent condition variables are as follows (Table 4).

Table 4. Calibration Reference Points

Crisis and Pressure	Dimension	Fully Belonging (0.95)	Half Belonging (0.50)	Not Belonging at All (0.05)
Population Crisis	Object1	6.782	5.28	1.339
	Object2	141216.8	135922.0	129911.9
Employment/Workplace Pressure	A1	1052.0	922.0	824.3
	A2	6842.7	6420.0	5554.0
Economic Downturn Pressure	B1	12.85	8.4	5.62
	B2	38.17	33.0	28.38
Educational Pressure	C1	3059.1815	1703.004	339.0005
	C2	421.26843	303.8473	116.96208
Housing and Living Cost Pressure	D1	9887.9	5790.99	2736.1
	D2	0.324071	0.301644	0.268876
Medical and Healthcare Pressure	E1	38.462	25.42	12.958
	E2	5145.103	2068.76	576.478
Family/Marital Pressure	F1	30.41	23.8	22.19
	F2	45.94	37.9	34.38

4 fsQCA Configuration Analysis

4.1 Necessity Test

Firstly, "Population Natural Growth Rate (Object1)" is chosen to characterize the population crisis. Before conducting the configuration analysis of the relationship between youth stress and population crisis, it is necessary to test the relationship between antecedent condition variables and the outcome variable[10,11]. As shown in Table 5, the consistency of the antecedent conditions in this study did not exceed 0.9, indicating that they do not constitute necessary conditions for the population crisis.

Table 5. Necessity Analysis

Antecedent Conditions	Dimension	Consistency	Coverage
Employment/Workplace Pressure	A1(Present)	0.561	0.661
	A1(Absent))	0.747	0.778
	A2(Present)	0.78	0.909
	A2(Absent)	0.608	0.639
Economic Downturn Pressure	B1(Present)	0.679	0.758
	B1(Absent))	0.615	0.673

Educational Pressure	B2(Present)	0.635	0.749
	B2(Absent)	0.608	0.633
	C1(Present)	0.491	0.592
	C1(Absent))	0.725	0.739
Housing and Living Cost Pressure	C2(Present)	0.577	0.622
	C2(Absent)	0.686	0.779
	D1(Present)	0.535	0.613
	D1(Absent))	0.721	0.768
Medical and Healthcare Pressure	D2(Present)	0.698	0.731
	D2(Absent)	0.556	0.651
	E1(Present)	0.526	0.604
	E1(Absent))	0.68	0.725
Family/Marital Pressure	E2(Present)	0.503	0.597
	E2(Absent)	0.72	0.744
	F1(Present)	0.522	0.628
	F1(Absent))	0.728	0.745
	F2(Present)	0.596	0.687
	F2(Absent)	0.8	0.850

4.2 The Configuration Analysis of Population Crisis

The fsQCA algorithm generates a truth table for all configurations. The truth table consists of 0s and 1s. Combinations of antecedent conditions with a consistency score equal to or above the critical value are designated as fuzzy subsets of the outcome and encoded as 1, in contrast combinations below the critical value do not form fuzzy subsets and are encoded as 0.

Afterwards, configurations sufficient to explain the population crisis are selected based on the consistency critical value and sample frequency critical value. The final results include three groups: complex solutions, simple solutions, and intermediate solutions. Complex and simple solutions are usually considered extreme and are mainly used as reference points, while intermediate solutions serve as the configuration to explain the results.

Considering the recommended consistency critical value not lower than 0.75 given by Ragin, as well as factors such as natural breaks in consistency in the data, in this study, the consistency critical value is set at 0.80, and the sample frequency critical value is set at 1. Following the representation used by Ragin and Fiss, the intermediate results are obtained as shown in Table 6. As shown in Table 6, fsQCA analysis has produced three configurations of youth pressure related to the population crisis. The overall consistency is 0.951, significantly higher than the consistency critical value of 0.8, indicating that the generated configurations have perfect consistency. The overall coverage is 0.782, indicating that the three configurations cover approximately 80% of the annual samples, thus capturing the population status development characteristics in China for the 19 years from 2003 to 2021.

Among these configurations, the core conditions of the configuration include urban registered unemployment, state-owned enterprise employees, GDP growth rate, residents' Engel coefficient, per capita national fiscal education expenditure, undergraduate graduates, average selling price of commercial housing, per capita commodity sales, hospital outpatient visits, and per capita health expenditure. These conditions appear in both the intermediate and parsimo-

nious solutions, classifying them as core conditions. Other conditions are considered auxiliary as they only appear once in intermediate or parsimonious solutions.

Table 6. Configurational Structure of Population Crisis and Youth Pressure

Antecedent Conditions	Dimension	Configuration 1	Configuration 2	Configuration 3
Employment/Workplace Pressure	A1	⊗	⊗	•
	A2	●	●	⊗
Economic Downturn Pressure	B1	●	●	⊗
	B2	●	●	⊗
Educational Pressure	C1	⊗	⊗	•
	C2	⊗	⊗	•
Housing and Living Cost Pressure	D1	⊗	⊗	•
	D2	●	●	⊗
Medical and Healthcare Pressure	E1	⊗	⊗	•
	E2	⊗	⊗	•
Family/Marital Pressure	F1	•		⊗
	F2		⊗	⊗
	Configurational Annual Cases	2003, 2004, 2005, 2006, 2007, 2008	2008, 2010	2013, 2014, 2015
Consistency		0.960	0.969	0.952
Raw Coverage Rate		0.509	0.420	0.349
Net Coverage Rate		0.088	0.093	0.179
Overall Consistency			0.951	
Overall Coverage Rate			0.782	

Notes: ● represents the presence of core conditions in the configuration, ⊗ represents the absence of core conditions in the configuration (the absence implies that the fuzzy complement serves as a core condition in the configuration), • represents the presence of auxiliary conditions in the configuration, ⊗ represents the absence of auxiliary conditions in the configuration, -(missing) represents that the condition in the configuration is optional or can be present or absent.

Configurations 1 and 2 can be considered as the "economic-development-led" configurations, while Configuration 3 can be seen as the "pressures-accumulation-driven" configuration. Starting from 2001, China joined the WTO and experienced rapid economic development. During the same period, the birth control policies began to gradually loosen, leading to the implementation of the "Universal Two-Child Birth Policy" in 2013. This period corresponds to the population dynamics path characterized by "led by economic development," which includes Configurations 1 and 2. Although configuration 2 exhibits the main characteristics of " economic-development-led," it can be seen as a transitional state from Configuration 1 to Configuration 3.Secondly, the population birth policy began to loosen, and around 2012, the "Universal Two-Child Birth Policy" was introduced.

Furthermore, it is clear that Configurations 1 and 3 exhibit distinct "mirror effect" characteristics. The antecedent variables involved in both configurations are nearly the same, but the variables are either present or absent (complementary) in a mirror-symmetric manner. Notably, the global financial crisis around 2008 influenced the population dynamics through the pathway of "family/marital stress" in Configurations 1 and 2.

4.3 Robustness Test

The outcome variables "Population Natural Growth Rate (Object1)" and "Year-End Total Population (Object2)" can both depict crisis signals in the context of China's population status. While the "Population Natural Growth Rate" can establish a configuration link with youth pressure, "Year-End Total Population (Object2)" should also potentially form a configuration link with youth pressure. With this, we obtain a test of configuration stability.

Similarly, we conducted a necessity test on the relationship between "Year-End Total Population (Object2)" and the antecedent condition variables related to youth pressure. It is found that five antecedent conditions, including residents' Engel coefficient (non-existent), the number of undergraduate graduates (existent), average selling price of commercial housing (existent), the number of hospital outpatient visits (existent), and per capita health expenditure (existent), have a consistency exceeding 0.9 with "Year-End Total Population (Object2)." These necessary antecedent conditions will become the core conditions for configuring the population.

Table 7. Configurations of Population Crisis and Youth Pressure (Year-End Total Population)

Antecedent Conditions	Dimension	Configuration 4	Configuration 5	Configuration 6
Employment/Workplace Pressure	A1	⊗	●	●
	A2	•	⊗	⊗
Economic Downturn Pressure	B1	•	⊗	⊗
	B2		⊗	⊗
Educational Pressure	C1	⊗	●	●
	C2		●	●
Housing and Living Cost Pressure	D1		●	●
	D2	•	⊗	⊗
Medical and Healthcare Pressure	E1		●	●
	E2		●	●
Family/Marital Pressure	F1	⊗	⊗	
	F2	⊗		•
	Configurational Annual Cases	2010	2013，2014，2015，2016，	2017，2018，2019，2020

	2017，2018		
Consistency	0.812	1	1
Raw Coverage Rate	0.352	0.542	0.451
Net Coverage Rate	0.146	0.077	0.061
Overall Consistency	0.902		
Overall Coverage Rate	0.75		

As shown in Table 7, three configurations have been established between the outcome variable "Year-End Total Population" and the antecedent condition variables related to youth pressure, resulting in Configuration 4, which is essentially "led by economic development," and Configurations 5 and 6, which represent "driven by the accumulation of pressures" configurations. It can be observed that Configuration 4, similar to Configuration 2, explains the transition from "led by economic development" to "driven by the accumulation of pressures," with the core condition (Configuration 2) becoming an auxiliary condition in the configuration.

Subsequently, Configurations 5 and 6 provide a detailed depiction of the evolution process of the "driven by the accumulation of pressures" configuration. Configuration 3 is also a "driven by the accumulation of pressures" configuration but explains only the cases from 2013 to 2015. However, Configurations 5 and 6 transform relevant auxiliary conditions into core conditions, dividing the period into two phases marked by the 2016 "Universal Two-Child Birth Policy." After repeating coverage and explanation in Configurations 6 and 7 for 2017 and 2018, Configuration 5 evolves into Configuration 6.

It is noteworthy that during this process, the combination of "relative outcome variables" and "absolute outcome variables" in characterizing the population crisis have research value. Specifically, the "relative outcome variables" are suitable for explaining the evolution of the population crisis from 2003 to 2015, while the "absolute outcome variables" are suitable for the period from 2010 to 2020. Therefore, the combined configuration analysis of the two outcome variables can verify the stability of the "mirror effect" in the configurations and also reveal the regulatory role of the 2016 "Universal Two-Child Birth Policy" in population development policies.

4.4 Mediating Effect

In the earlier research, it was found that while "family/marital pressure" is not a core condition in the configuration of population dynamics development paths, its participation can induce population dynamics to shift from "led by economic development " to "driven by the accumulation of pressures," and it can also reveal the impact of economic development on fertility policies forming the population crisis. Furthermore, by combining "family/marital pressure" with its five categories of youth pressure, it forms combinations such as "A+F" representing the combination with employment/workplace pressure, "B+F" representing the combination with economic downturn pressure, "C+F" representing the combination with education pressure, "D+F" representing the combination with housing/living cost pressure, and "E+F" representing the combination with healthcare pressure. Through fsQCA analysis, it is found that "family/marital pressure " plays a mediating role in the configuration of the pathways, activat-

ing various youth stresses to achieve similar explanations for the configuration of population dynamics pathways(see Table 8).

Table 8. Configuration Analysis under Antecedent Condition Combinations

		A+F			B+F			C+F			D+F			E+F		
	Var.	Conf. A1	Conf. A2	Conf. A3	Conf. B1	Conf. B2	Conf. B3	Conf. C1	Conf. C2	Conf. C3	Conf. D1	Conf. D2	Conf. D3	Conf. E1	Conf. E2	Conf. E3
A	A1	⊗	⊗	•												
	A2	•	•	⊗												
B	B1				•	•	⊗									
	B2				•	•	⊗									
C	C1							⊗	⊗	•						
	C2							⊗	⊗	•						
D	D1										⊗	⊗	•			
	D2										•	•	⊗			
E	E1													⊗	⊗	•
	E2													⊗	⊗	•
F	F1	•		⊗	•		⊗	•		⊗	•		⊗	•		⊗
	F2		⊗	⊗		⊗	⊗		⊗	⊗		⊗	⊗		⊗	⊗
	Cases	2003, 2004, 2005, 2006, 2007, 2008	2008, 2010, 2012	2013, 2014, 2015	2003, 2004, 2005, 2006, 2007, 2008, 2009	2008, 2010, 2009, 2011	2013, 2014, 2015	2003, 2004, 2005, 2006, 2007, 2008, 2009	2008, 2010, 2009, 2011	2013, 2014, 2015	2003, 2004, 2005, 2006, 2007, 2008, 2009	2008, 2010, 2009, 2011	2013, 2014, 2015	2003, 2004, 2005, 2006, 2007, 2008, 2009	2008, 2010, 2009, 2011	2013, 2014, 2015
Consistency		0.89	0.96	0.952	0.806	0.935	0.956	0.761	0.925	0.954	0.786	0.93	0.964	0.757	0.914	0.954
Raw Coverage Rate		0.459	0.59	0.428	0.432	0.515	0.476	0.467	0.572	0.453	0.448	0.579	0.466	0.457	0.566	0.462
Net Coverage		0.1	0.087	0.11	0.105	0.036	0.209	0.112	0.033	0.135	0.112	0.017	0.124	0.112	0.033	0.145

age Rate															
Overall Con-sistency	0.898			0.859			0.813			0.838			0.807		
Overall Cover-age Rate	0.8			0.828			0.819			0.815			0.822		

5 Conclusions

The implementation of the "Two-Child Policy with Dual-Only Before and After 2022," the "One-Child Policy" in 2013, the "Universal Two-Child Policy" in 2015, and the "Three-Child Policy" in 2021 reveal China's continuous concern about population issues and its efforts to adjust the country's population development status to mitigate potential population crises. Young people's attitudes are critical in resolving the crisis and are influenced by various pressures they face. This study examines the relationship between youth pressure and population development, explaining the developmental path of economic growth and population crises. The main conclusions include:

(1) The path of China's population crisis has undergone a change. Economic growth is no longer the core configurational condition; rather, the combination of youth pressures has become the main reason for the current population crisis. The youth pressure configuration model can effectively fit China's population development status. From 2003 to around 2008, it was in the " led by economic development" mode, while from 2013 onwards, it has been in the " driven by the accumulation of pressures " mode. Approximately from 2003 to around 2008, it was in the " led by economic development " mode, while approximately from 2013 onwards, it has been in the " driven by the accumulation of pressures " mode. The period from 2009 to 2012 represents a transition phase.

(2) Although family/marital pressure is not a core participating condition in the configuration, it substantially guides the evolution logic of population development status. Employment/workplace pressure, economic downturn pressure, education pressure, housing/living cost pressure, and healthcare pressure, either individually or in any combination, cannot effectively explain the configuration of population development status. However, any configuration of these pressures, along with family/marital pressure, can explain China's population development status (especially the target of the natural population growth rate). One possible explanation is that "family/marital pressure plays an intermediary or activating role in the transmission process of fertility and population issues among contemporary young people." We suggest referring to this factor as a substantive configuration activation factor.

(3) The "Universal Two-Child Birth Policy" implemented in 2016 hurts population development policies and can significantly distinguish the " driven by the accumulation of pressures " mode. In the configuration analysis of the "year-end total population" indicator for youth pressure and population development status, it is shown that after 2016, the substantive configuration activation factor 'family/marital pressure' transitioned from not participating as a core condition in the "child dependency ratio" indicator to participating as an auxiliary condition in the "total dependency ratio." One possible explanation is that "the 'Universal Two-Child Birth Policy' in 2016 and the ongoing issue of aging have altered the population's characteristics."

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