

# Investigation into Residents' Fertility Intention of Heilongjiang Province under the “Universal Two-child” Policy

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**Abstract**—Since the implementation of the universal two-child” policy, the fertility rate in Heilongjiang Province has increased slightly but has not reached the expected level. This paper conducts a sample survey on fertility intention of the residents in Harbin, Qiqihar, Jiamusi, Jixi and Qitaihe cities in Heilongjiang Province. The results of the study show that Heilongjiang residents have lower second-child fertility intention, and the residents who have the second-child fertility intention are more likely to set their fertility plan after 2022. The cost of fertility is the most important factor affecting the fertility intention. Therefore, how to effectively encourage residents to have the second-child fertility intention and raise the fertility rate is an urgent problem to be solved in the population development of Heilongjiang Province.

**Keywords**—Fertility intention; Influencing factors; Universal two-child policy; Fertility behavior

## I. INTRODUCTION

Heilongjiang Province, as a region deeply affected by the "one-child" policy, has consistently maintained its fertility rate at the lower level in China. Its fertility rate was 6.00‰ in 2015. After the “Universal Two-child” policy was promulgated, the fertility rate increased to 6.12‰ in 2016, though it has increased slightly, but it is only half of the national average. Therefore, it is imperative to study the Heilongjiang residents' fertility intention and influencing factors to encourage childbirth.

Fertility intention refers to the attitudes and views of people on childbearing behavior, to some extent, it determines the level of fertility and the status of population development in a country and region. There are three famous theories about fertility intention in foreign countries. First, American scholar Harvey Leibenstein launched the famous theory of Marginal Child Rational Choice in 1969. It is proposed that the cost and utility analysis of fertility should be used, that is, by comparing and balancing the cost and utility of the N children, a rational couple should decide whether to give birth to the marginal child according to the economic, social, cultural and other factors[1]. Second, the Population Transformation Theory demonstrate the transition from the traditional

population reproduction type (i.e. high birth rate, high mortality rate and low natural growth rate) to the modern population reproduction type (i.e. low birth rate, low mortality rate and low natural growth rate). Third, Bongaarts put forward the "Low Fertility Rate Theory Model" in 2001. It is proposed that there are four main intermediate variables affecting the fertility rate, namely, marriage ratio, contraception, abortion and postpartum infertility [2].

Since the implementation of the “Universal Two-child” policy, the domestic research contents on fertility intention are becoming more and more extensive, and the research methods are gradually transferred from qualitative analysis to quantitative analysis. Feng Xiao Tian (2012) found that the number of ideal children in urban and rural areas in China decreased from 1979 to 1999[3]. The preference for boys in rural areas decreases, but it still exists. Urban residents have no obvious gender preference for the first child, but they tend to have a boy and a girl for the second children. Zhang Xiaoqing (2016) uses the two element logistic regression model to demonstrate that age, regional factors, the first child's sextant subjective factors have significant influence on the second-child fertility intention[4]. Fang Xing Ming (2016) put forward that the first child's sex can affect the parents' second child fertility intention. The increase of residents' income can significantly promote the second-child fertility intention. Education expenditure and house price will inhibit the second-child childbearing intention [5].

The research on fertility intention and influencing factors in foreign countries was more systematically, which provides useful theoretical and technological reference for domestic research[6]. However, while drawing lessons from foreign experience, we should also consider the realistic problems of China. At present, the relevant research of Heilongjiang Province are relatively scarce. This paper attempts to investigate and analyze Heilongjiang residents' fertility intention under the “Universal Two-child” policy through sampling surveys, and proposes countermeasures for the development of Heilongjiang population.

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**II. SURVEY DESIGN AND SURVEY RESULTS OF HEILONGJIANG RESIDENTS' FERTILITY INTENTION**

**A. Survey Design of Heilongjiang Residents' Fertility Intention**

The investigation sites were selected in five cities: Harbin, Qiqihar, Jiamusi, Jixi, and Qitaihe. The respondents are 20 to 50 years of age. A total of 900 questionnaires were distributed, 875 valid questionnaires were retrieved, and the effective questionnaire recovery rate was 97.2%.

The content of the questionnaire is divided into three parts. The first part investigates the basic situation of the respondents, including the age, whether is the only child, the nature of household registration, education level, economic condition, and child-bearing condition. The second part investigates the fertility intention including the fertility plan, the ideal number of children, whether to be willing to have the second child, and the time for planning to have second child. The third part investigates the main factors influencing the second-child fertility intention

**B. Survey Results of Heilongjiang Residents' Fertility Intention**

*1) The basic situation of the respondents*

TABLE I. THE BASIC SITUATION OF THE RESPONDENTS

		N	%
Age	18-24	130	14.9
	25-29	163	18.6
	30-34	177	20.2
	35-39	241	27.5
	40-years-old or Above	166	18.9
Whether is the Only Child	Yes	392	44.8
	No	483	55.2
The Nature of Household Registration	Agricultural	206	23.5
	Non-agricultural	669	76.5
Education Level	Junior High School	105	12.0
	Senior High School	82	9.4
	Junior College	173	19.8
	Undergraduate College	466	53.3
	Postgraduate	49	5.6
Child-bearing Conditions	No Children	285	32.6
	One Child	515	58.9
	Two Children	73	8.3
	More than Three	2	0.2
Economic Conditions	Poor	189	21.6
	General	618	70.6
	Better	68	7.8

From TABLE I, it can be seen that the ages of the respondents in this survey are mainly concentrated in the age groups of 30-34 and 35-40. The total number of these two groups accounts for 47.7%. The only child and non-only child are respectively accounted for 44.8% and 55.2%. Non-agricultural households account for 76.5% of the total, and the undergraduates group is relatively large, making up 53.3% of the total. The number of respondents who have only one child accounted for 58.9%. And the number of respondents with

general economic condition is taking up 70.6%. From the basic situation of respondents, we can see that the main body of respondents is the 30-40 years old fertility group who has only one child. This group is the main target group for the "Universal Two-child" Policy. Thus, the investigation is representative, and it can be more accurate to analyze the second-child fertility intention of the respondents.

*2) The fertility plan and the ideal number of children in different groups*

TABLE II. THE FERTILITY PLAN IN DIFFERENT GROUPS

		One child		Two children		More than three	
		N	%	N	%	N	%
Age	18-24	7	5.5	94	73.4	27	21.1
	25-29	23	14.1	93	57.1	47	28.8
	30-34	21	11.9	113	63.8	43	24.3
	35-39	46	19.1	148	61.4	47	19.5
	40-years-old or Above	27	16.3	95	57.2	44	26.5
Whether is the Only Child	Yes	58	14.8	224	57.1	110	28.1
	No	66	13.7	319	66.0	98	20.3
The Nature of Household Registration	Agricultural	28	13.6	149	72.3	29	14.1
	Non-agricultural	96	14.3	394	58.9	179	26.8
Education Level	Junior High School	18	17.6	65	63.7	19	18.6
	Senior High School	16	19.8	54	66.7	11	13.6
	Junior College	20	12.0	121	72.9	25	15.1
	Undergraduate College	65	13.6	276	57.7	137	28.7
	Postgraduate	5	10.4	27	56.3	16	33.3
Economic Condition	Poor	27	14.3	126	66.7	36	19.0
	General	94	15.2	378	61.2	146	23.6
	Better	3	4.4	39	57.4	26	38.2

The ideal number of children refers to the people's desire to have children of their own lifetime without considering fertility policies, economic conditions and realities. Fertility planning refers to people's expectations and arrangements for their own fertility intentions and behaviors in combination with the constraints of policy environment, economic condition, and individual physical fitness. From TABLE II and TABLE III, it can be seen that no matter which group, the actual number of children is significantly lower than the ideal number of children, which indicates that the fertility intentions of Heilongjiang residents are greatly influenced by various restrictive factors, and many families are not "unwilling to give birth" but "dare not to give birth." "The influence of restrictive factors on fertility behavior can be mitigated through the guidance and encouragement of various policies.

From the view of whether is the only-child, the difference between the actual number of children and the ideal number of children of the only-child is bigger than that of the non only-child. This shows that the only-child's fertility behavior is more vulnerable to the constraints of the actual conditions. This is mainly due to the fact that the only-child is deeply affected by the family planning policy, they are more inclined to the one-child fertility concept and pay more attention to the quality of children. From the perspective of the nature of

household registration, the number of children that rural residents plan to have is higher than that urban residents plan to have, which is mainly due to the fact that the rural households need more labor to engage in agricultural work. From the age point of view, the older are less willing to have more children. The main reason is that the risk of childbirth gradually increases with age. From economic condition perspective, the number of children that the two groups with poorer economic condition and better economic condition plan to have are more than the general economic condition group. And the better the economic condition is, the more the ideal number of children is.

TABLE III. THE IDEAL NUMBER OF CHILDREN IN DIFFERENT GROUPS

		No children		One child		Two children		More than three	
		N	%	N	%	N	%	N	%
Age	18-24	13	10.2	46	35.9	67	52.3	2	1.6
	25-29	18	11.0	99	60.7	46	28.2	0	0.0
	30-34	7	4.0	121	68.4	46	26.0	3	1.7
	35-39	17	7.1	174	72.2	45	18.7	5	2.1
	40-years-old or Above	20	12.0	103	62.0	38	22.9	5	3.0
Whether is the Only Child	Yes	35	8.9	258	65.8	93	23.7	6	1.5
	No	40	8.3	285	59.0	149	30.8	9	1.9
The Nature of Household Registration	Agricultural	9	4.4	115	55.8	78	37.9	4	1.9
	Non-agricultural	66	9.9	428	64.0	164	24.5	11	1.6
Education Level	Junior High School	6	5.9	61	59.8	34	33.3	1	1.0
	Senior High School	4	4.9	59	72.8	17	21.0	1	1.2
	Junior College	12	7.2	111	66.9	40	24.1	3	1.8
	Undergraduate College	43	9.0	291	60.9	135	28.2	9	1.9
	Postgraduate	10	20.8	21	43.8	16	33.3	1	2.1
Economic Condition	Poor	15	7.9	93	49.2	79	41.8	2	1.1
	General	51	8.3	422	68.3	133	21.5	12	1.9
	Better	9	13.2	28	41.2	30	44.1	1	1.5

3) *The Second-child Fertility Intention*

As can be seen from TABLE IV., the non-only child are more willing to have the second child than the only-child, 36.6% of non-only child are willing to give birth to the second child. This is mainly because the residents' fertility concept has changed with the family planning policy and handed down between generations. Compared with urban residents, rural residents are more likely to have the second-child. This may be due to the fact that rural families need more family labor. The fertility concept of "Bring sons to support parents in their old age" and "More happiness comes with more offspring" still exist. For those groups with educational background above college degree, the higher the education level is, the weaker the second-child fertility intention will be, which is mainly affected by two aspects. On the one hand, with the increasing of education level, they more easily miss the best childbearing age. On the other hand, the higher education level, the more emphasis will be placed on the quality of their children. 59.2% families who have had one child are reluctant to give birth to the second child. This shows that the influence and execution of the "Universal Two-child" policy are not enough. The families who have had one child

are easily affected by the cost of raising children and the pressure of work and life.

TABLE IV. THE SECOND-CHILD FERTILITY INTENTION OF DIFFERENT GROUPS

		The Second-child Fertility Intention					
		Have		Not Have		Not Sure	
		N	%	N	%	N	%
Age	18-24	63	49.2	29	22.7	36	28.1
	25-29	64	39.3	72	44.2	27	16.6
	30-34	50	28.2	82	46.3	45	25.4
	35-39	57	23.7	143	59.3	41	17.0
Whether is the Only Child	Yes	109	27.8	202	51.5	81	20.7
	No	177	36.6	218	45.1	88	18.2
The Nature of Household Registration	Agricultural	87	42.2	72	35.0	47	22.8
	Non-agricultural	199	29.7	348	52.0	122	18.2
Education Level	Junior High School	31	29.5	47	44.8	27	25.7
	Senior High School	21	25.6	46	56.1	15	18.3
	Junior College	65	37.6	74	42.8	34	19.7
	Undergraduate College	154	33.0	231	49.6	81	17.4
	Postgraduate	15	30.6	22	44.9	12	24.5
Child-bearing Conditions	No Children	114	40.0	99	34.7	72	25.3
	One Child	126	24.5	305	59.2	84	16.3
	Two Children	46	63.0	15	20.5	12	16.4
Economic Conditions	More than Three	0	0.0	1	50.0	1	50.0
	Poor	69	36.5	72	38.1	48	25.4
	General	186	30.1	325	52.6	107	17.3
	Better	31	45.6	23	33.8	14	20.6

From the data of different age groups, it can be seen that the age groups below 40 years old, the older they are, the lower proportion of willing to give birth to the second child. But the 40-years-old or above group has 31.3% respondents willing to have the second child, which is higher than the 30-34 and 35-39 age groups. It is because the residents' fertility intention is affected by both physical and economic pressure below 40 years old. For the residents over 40 years old, their first child has grown up. The economic pressure is relatively small, in the case of the better physical condition they are more willing to have the second child. In addition, the second-child fertility intention of the families with general economic condition is lower than that of the poorer and better economic condition families.

4) *The Time for Planning to Have Second-child*

TABLE V shows the statistics of the second-child childbearing time for 286 respondents who have the second child fertility intention. 47.6% of the respondents who have the second-child fertility intention choose to have the second-child after 2022. The proportion of respondents who choose to give birth second-child from 2018 to 2021 is more balanced and distributed in a ladder. It can be seen that the effect of "Universal Two-child" policy will not appear within a short period of time. And the accumulation of new population will not appear in the next five years. After five years, the second-child fertility climax will appear. This shows that the resources of medical, infant and baby care and education will

not be in short supply in the next five years. There is enough time for the establishment and improvement of the birth support system.

TABLE V. THE TIME FOR PLANNING TO HAVE SECOND-CHILD

Year	N	%
2018	33	11.50%
2019	30	10.50%
2020	57	19.90%
2021	30	10.50%
After 2022	136	47.60%

5) *Factors influencing the second-child fertility intention*

TABLE VI shows the statistical analysis of the factors influencing the second-child fertility intention. First, it can be seen that the most important influencing factor is economic pressure. 61% percent of respondents believe that economic stress is the most significant factor. Second, the working pressure and having no person to take care of the child also have obvious influence on the second-child fertility intention. Third, one-child fertility concept is also an important influencing factor of the second-child fertility intention. This shows that Heilongjiang residents' fertility intention are affected by many factors. To increase the residents' fertility intention, encouragement and support are needed from various aspects.

TABLE VI. FACTORS INFLUENCING THE FERTILITY INTENTION FOR THE SECOND-CHILD

Factors	Frequency	Percentage of Total Respondents
Economic Pressure	531	61.0%
One-child Fertility Concept	216	24.8%
Working Pressure	292	33.5%
Having No Person to Take Care of the Child	287	33.0%
Wife is Infertile	9	1.0%
Fertility Risk	114	13.1%
The Spouse does not Want to Give Birth	36	4.1%
Other Influencing Factors	120	13.8%

III. CONCLUSIONS AND SUGGESTIONS

A. *Heilongjiang residents have lower second-child fertility intention*

Judging from the survey results, Heilongjiang residents have lower second-child fertility intention. The fertility intention of most families has not changed under the "Universal Two-child" policy. On January 1, 2016, the "Universal Two-child" policy was implemented. Moreover, Heilongjiang Province has implemented the three-child policy for the border population in April 2016. However, these fertility policies has not achieved the expected effect. Heilongjiang's fertility rate is 6.12‰ in 2016, only 0.12‰ increased. In addition to strengthening the publicity of the fertility policy, the government should promulgated relevant measures to change the fertility concept and reduce fertility pressure for the residents.

B. *"Universal Two-child" Policy will not cause new population accumulation in the short term*

Only 32.69% respondents have the second-child fertility intention. And 47.6% of them plan to have the second child after 2022. "Universal Two-child" policy will not cause new population accumulation in the short term. And during the five years from 2018 to 2022, the number of second-child will not challenge the existing social resources. The effect of the "Universal Two-child" policy will take some time to appear. And it also gives a period of time for the popularization of policies and the improvement of social institutions and facilities.

C. *Fertility costs is the main influencing factor of the second-child fertility intention*

Fertility costs include economic costs and time costs of childbearing, and the cost of work that the couple needs to pay. The economy condition is the most important factor that families need to consider. In addition, the time cost and work cost are also the main factors affecting the second-child fertility intention. Many couples who have one child have very busy works. Their parents are old and have no helper to take care of the second child. For the reasons above, we can reduce the fertility costs through the following aspects in order to encourage residents to have the second child.

- Provide maternity subsidies and tending subsidies to fertility families in order to alleviate the fertility pressures.
- Improve maternity insurance benefits and prolonging maternity leave for second-born women to reduce the childbearing pressure.
- Encourage family intergenerational support to ease the burden of fertility through subsidizing the grandparents' care for children and reducing tuition and miscellaneous fees.

REFERENCES

- [1] Leibenstein. H. Pitfalls in Benefit-cost Analysis of Birth Prevention [J]. Population Studies, 1969 (23):21-27.
- [2] Bongaarts J. Fertility and Reproductive Preferences in Post-transitional Societies [J]. Population and Development Review, 2001 (28) : 36-41.
- [3] Feng Xiaotian, Zhang Qingsong. Study on the Transition of Fertility Desire among Rural and Urban Residents in the Past Twenty Years [J]. Market and Population Analysis, 2002(9):21-31. (In Chinese)
- [4] Zhang Xiaoqing, Huang Caihong, Zhang Qiang, Chen Shuangshuang, Fan Qipeng. Fertility Intention for the Second Child under the Selective and Universal Two-Child Policies: Comparisons and Implications [J]. Population Research, 2016(1):87-97. (In Chinese)
- [5] Fang Xingming, Ma Liang, Lei Zhen, Cai Xiaochen. Does Only Child's Gender Affect the Fertility Desire of Only-child Parents to Bear a Second Child? [J]. Population Journal, 2016(6):17-26. (In Chinese)
- [6] Wang Jun, Wang Guangzhou. A Study on the Difference between Fertility Intention and Fertility Behavior with China Low Fertility Level [J]. Population Journal, 2016(2):5-17. (In Chinese)