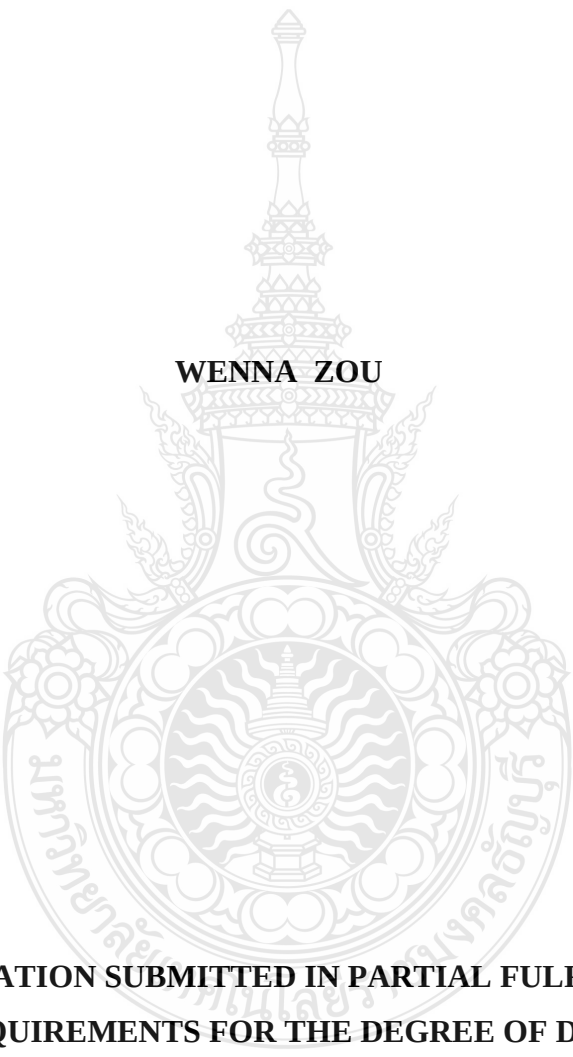


INFLUENCE OF HUMAN CAPITAL ON FERTILITY INTENTIONS IN CHINA

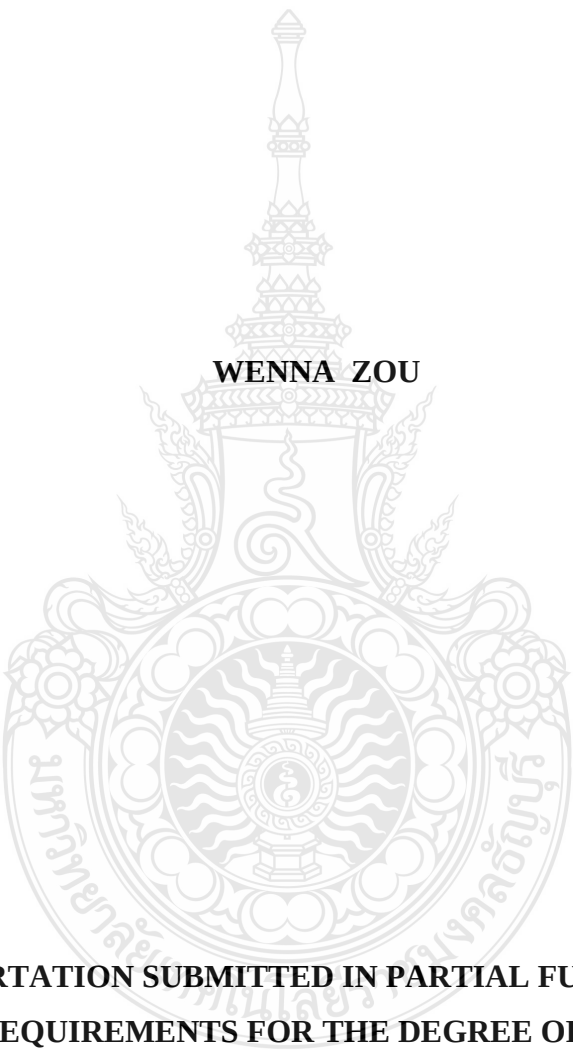
WENNA ZOU



**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY PROGRAM IN BUSINESS ADMINISTRATION
FACULTY OF BUSINESS ADMINISTRATION
RAJAMANGALA UNIVERSITY OF TECHNOLOGY THANYABURI
ACADEMIC YEAR 2024
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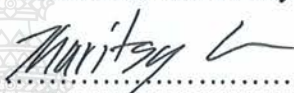


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Dissertation Title	Influence of Human Capital on Fertility Intentions in China
Name-Surname	Miss Wenna Zou
Program	Business Administration (Management)
Dissertation Advisor	Miss Thanwarat Suwanna, Ph.D.
Dissertation Co-Advisor	Mr. Krisada Chienwattanasook, D.B.A.
Academic Year	2024

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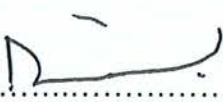

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ABSTRACT

In recent years, low fertility rates have become a global challenge, highlighting the importance of fertility intention in predicting behavior. This study explores how human capital influences fertility intention and whether subjective well-being mediates this relationship. It also examines the moderating effects of occupational flexibility and leave policy satisfaction. A mixed methods approach was used. Qualitative analysis involved in-depth interviews with 12 experts, while quantitative analysis was based on 1,180 questionnaire responses.

The research results showed that both human capital and subjective well-being have a positive impact on fertility intention. A significant discovery lies in the mediating analysis, revealing that subjective well-being partially mediates the relationship between human capital and fertility intentions, addressing a gap in the prior literature. In addition, occupational flexibility positively moderates the impact of human capital on fertility intention, indicating the important role of occupation in fertility intention. However, leave policy satisfaction has no moderating effect between human capital and fertility intentions. This noteworthy observation adds significant value to the current research landscape.

This study proposes a strategy to address declining fertility rates and promote social sustainability. It recommends enhancing individual human capital to boost well-being and fertility intentions. Additionally, occupational flexibility could reduce the childbirth penalty. These interconnected measures aim to foster an environment supportive of personal development and family planning, crucial for long-term social sustainability.

Keywords: human capital, fertility intention, subjective well-being, occupational flexibility, leave policy satisfaction

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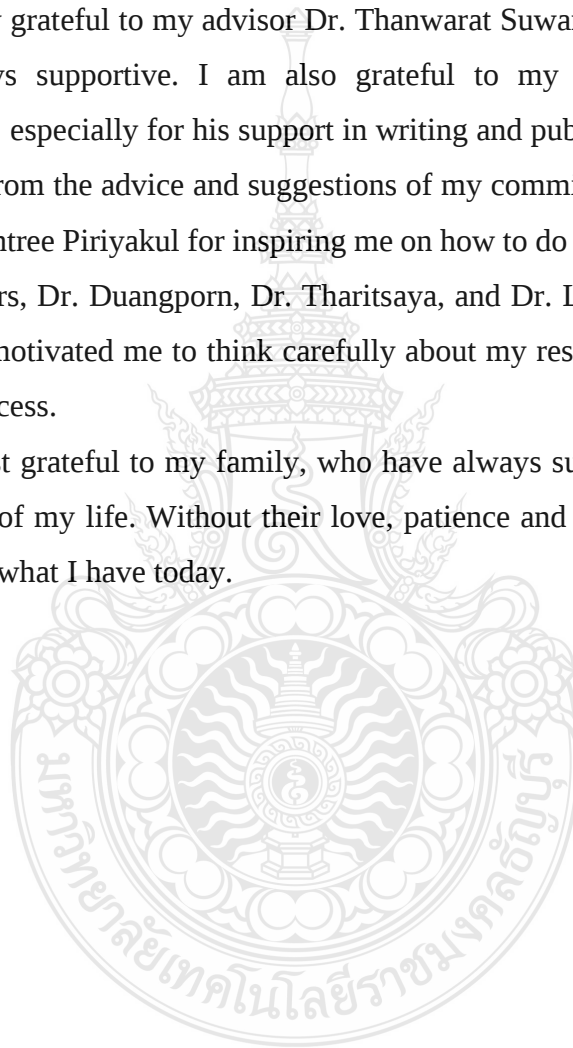


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CHAPTER 1

INTRODUCTION

As the global population ages and fertility rates continue to decline, fertility has become a hot topic. Studies have shown that fertility intention plays a very important role in fertility behavior (Morgan & Rackin, 2010) (Schoen et al., 1999). Previous studies on human capital have shown that with the continuous advancement of science and technology and the changes in social structure, human capital is not only an individual's educational level and vocational skills, but also involves subjective feelings, physical health, and cognition and attitude towards the fertility policy. Against this development background, people's understanding of the relationship between human capital and fertility intention requires a more in-depth and comprehensive examination. This paper studies the impact of human capital on fertility intention, using subjective well-being as the mediating variable, occupational flexibility and leave policy satisfaction as the moderating variables. Previous literature has described the impact of human capital on subjective well-being. In recent years, many scholars have also studied the impact of subjective well-being on fertility intention. Therefore, this dissertation studies subjective well-being as a mediating variable. In this study, occupational flexibility and leave policy satisfaction are used as moderating variables to observe whether they have a moderating effect on human capital and fertility intention. This study aims to deeply explore the impact mechanism of human capital on fertility intention and explore the mediating and moderating variables in order to comprehensively analyze this complex and critical social phenomenon.

In this chapter, the rationale for the study is described and an overview of the study is given. This chapter first introduces the background and statement of the problem. Next is the research questions. Then, the conceptual framework and hypothesis, purpose of the study, research scope, research hypothesis, significance of the study, definition of terms, and research gap are described respectively. The following four chapters further explore this relationship, sort out the existing research through literature review, clarify the research design and data analysis path through research methods, present the research findings through results and discussions, and summarize the main findings of the research in conclusions and suggestions. Discover and make recommendations for future research and policy.

1.1 Background and Statement of the Problems

1.1.1 Background of the Problems

With the improvement of medical advancement, the average life expectancy of residents continues to increase, and the problem of global population aging is becoming more and more serious. In this context, the long-term and persistent decline in the birth rate is also one of the reasons for the more prominent problems in the age structure of the population. Therefore, the fertility rate is considered to be one of the important indicators of the economic and social development of a country or region. Fertility rates have generally declined in many countries, especially developed countries, posing major challenges to demographic and socioeconomic stability.

According to a study published in the Lancet by Vollset et al. (2020), the total global population peaked at 9.73 billion in 2065 and then began to decline, entering an era of negative growth. By 2100, the total global population will drop to 8.79 billion people. The global total fertility rate has also declined steadily due to the popularization of modern contraceptive measures and the education rate of the new generation, from 2.37 in 2017 to 1.66 in 2100, far below the minimum fertility rate of 2.1 necessary to maintain the population replacement level. In the report, it is also predicted that China's population will reach its peak (about 1.43 billion) in 2024, and then enter negative population growth. The fertility rate will be as low as 1.47 by 2100 (Vollset et al., 2020) (Figure 1.1). Despite the relaxation of the one-child policy, China's fertility rate has fallen sharply in recent years. According to data from the National Bureau of Statistics of China, China's fertility rate will reach a record low of 6.77‰ in 2022 (Figure 1.2). By the end of the year, the national population will decrease by 850,000 compared with the previous year. For the first time in many years, negative growth has occurred, which means that China has entered an era of negative growth (China National Bureau of Statistics in 2022). Against the background of the low fertility rate, to promote the sustainable development of the population and economy, China has continuously adjusted and improved its fertility policy. Although due to the 2014 “alone two-children” and the policy-based compensation for births caused by the implementation of the “universal two-child” policy in 2016 led to a slight increase in the fertility rate in 2014 and 2016, but then quickly fell into the “low fertility trap”. According to the seventh national census data, China's birth

rate dropped to the lowest value since the 20th century. Therefore, in 2021, each province in China has launched policies to extend maternity leave and has implemented different policies in different regions.

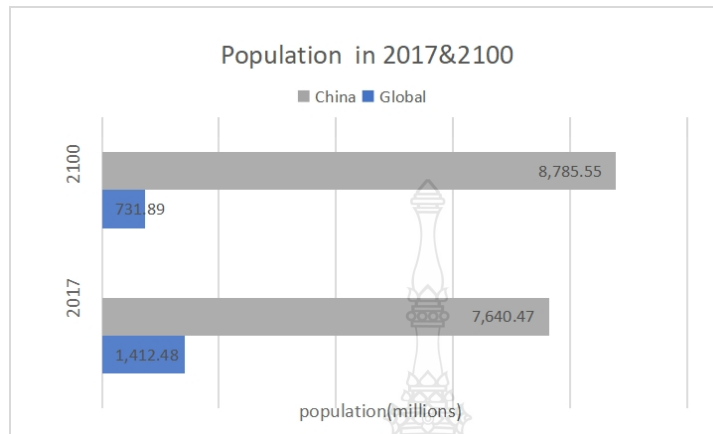


Figure 1.1 Population in 2017&2100 Reference Scenario (organized by the author)

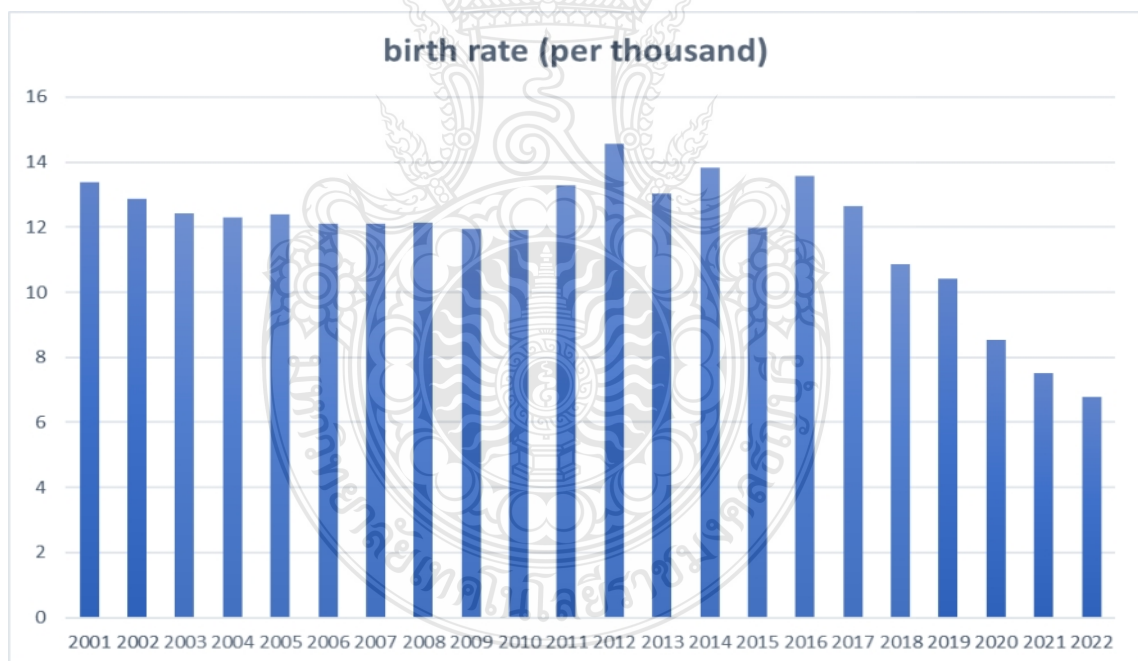


Figure 1.2 Birth Rate in China 2000-2022 (Data from China National Bureau of Statistics)

The fertility rate depends on fertility behavior, and fertility intention are an important indicator of fertility behavior. Therefore, it is imperative to fully understand the fertility intention of the population of fertility age.

1.1.2 Statement of the Problems

The impact of individual human capital on individual fertility intention cannot be ignored. One of the theories that studies the impact of fertility intention from an economic perspective is the marginal child rational choice theory (Becker & Hecken, 2009). Whether a family wants to have children depends on the analysis of the costs and benefits of children. With the progress and development of society, individual human capital, especially female human capital, is constantly improving, and the impact on fertility has also changed. On the one hand, the improvement of human capital means that a better material foundation can be provided and the cost of fertility can be reduced; on the other hand, the improvement of human capital will inevitably squeeze the time for fertility. Yang and Morgan (2003) showed that women who graduated from college still have fewer children than women with high school education or below. Furthermore, Iacovou and Tavares (2011) also found that women with higher education levels lowered their fertility intention more frequently than women with lower education levels. Therefore, from the perspective of factors affecting fertility behavior, the impact of individual human capital on personal fertility intention is worth studying.

In addition, research shows that fertility attitudes and individual cognition are also important factors affecting fertility intention. Nicoletta, Billari Francesco and Melinda (2013) found that when a person receives emotional support from society, he or she is also more likely to plan to have a second child, a result that applies to both men and women. Imrie et al. (2023) studied the impact of socioeconomic status identity on annual fertility concerns in rural areas and found that happiness partially mediated the relationship between socioeconomic status identity and fertility intention. Therefore, it is worth exploring what role subjective well-being plays in the impact of human capital on fertility intention.

Time cost is a very critical factor affecting individual fertility intention. In recent years, many countries have faced population problems such as declining fertility rates and aging, which have posed severe challenges to the sustainable development of society. Therefore, many countries have tried to alleviate fertility problems by providing generous leave policies. The results of previous studies have not reached a unified conclusion on whether leave policies are effective. In addition, from a micro perspective,

individual occupational flexibility usually means having more time to prepare for childbirth and raise children, but whether it has an impact on fertility intentions needs further verification. Therefore, this study takes individual satisfaction with leave policies and occupational flexibility as moderator variables from a micro perspective to study whether human capital has influence on fertility intention.

1.2 Research Questions

Based on the perspectives of human capital, subjective well-being, and fertility intentions, this study primarily explored whether human capital directly effects fertility intention or indirect impact fertility intention via subjective well-being, and whether the direct effect was conditioned on occupational flexibility and leave policy satisfaction. To achieve the main research objectives, the following research questions are formulated:

RQ1: What is the effect of human capital on fertility intention?

RQ2: Does subjective well-being mediate the effect of human capital on fertility intentions?

RQ3: Do occupational flexibility and leave policy satisfaction moderate the effect of human capital on fertility intentions?

1.3 Conceptual Framework

In the framework model part, this paper combines theory and previous research to establish a conceptual framework that comprehensively considers human capital, subjective well-being, occupational flexibility and leave policy satisfaction. This model aims to provide insight into the complex relationships between these variables and their combined impact on fertility intentions.

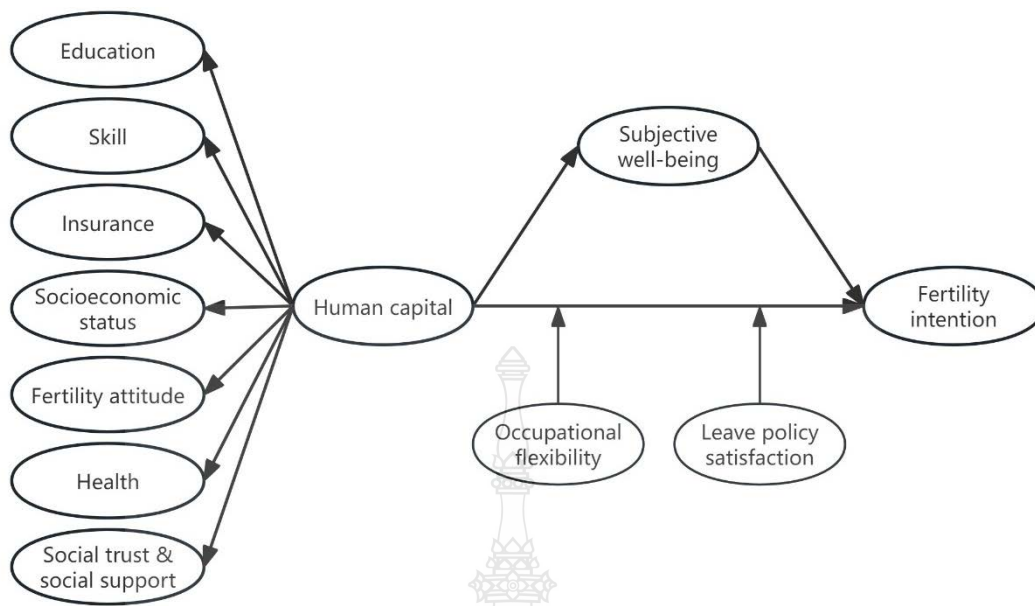


Figure 1.3 Conceptual Framework

1.4 Purpose of the Study

The purpose of this study is to empirically study the relationship between human capital and fertility intention, as well as the mediating effect of subjective well-being. With an in-depth understanding of the impact mechanism of human capital on fertility intention, this study hoped to provide profound insights and innovative ideas for understanding and responding to the demographic challenges facing contemporary society. Therefore, the purpose of this study is as follows:

- 1) The impact of human capital on fertility intention.
- 2) The mediating effect of subjective well-being on human capital and fertility intention.
- 3) The moderating effect of occupational flexibility and leave policy satisfaction on the impact of human capital on fertility intention.

These research objectives were derived from a literature review of previous studies and can be further described in terms of the following research questions. The methods used in this study include qualitative analysis and quantitative analysis. Qualitative analysis adopted the method of in-depth interviews. Quantitative analysis was conducted using a questionnaire survey method.

1.5 Research Scope

The main purpose of this research is to study the relationship between human capital and fertility intention, to better understand the impact of human capital on fertility intention, and the mediating role of subjective well-being on fertility intention. The dependent variable of this study is fertility intention, and the independent variables are human capital and subjective well-being. Human capital includes education, skills, insurance, socioeconomic status, fertility attitudes, health status, social trust and support. At the same time, this study uses occupational flexibility and leave policy satisfaction as moderating variables to see whether they have moderating effect on human capital and fertility intention.

This study adopts an analytical method that combines qualitative and quantitative analysis. Quantitative analysis takes the form of a questionnaire to collect data. Based on the information provided by the Seventh Census of the National Bureau of Statistics, China's top five most populous provinces were selected to collect data by a two-stage stratified sampling scheme and a proportional allocation of samples. The questionnaire was targeted at people aged 20 to 49 in China. Qualitative analysis used in-depth interviews. By interviewing 12 experts, scholars and government staff in the field of population and fertility, the study conducted a more in-depth discussion of the issues of this study in the form of interviews. Therefore, their responses were considered valid and reliable.

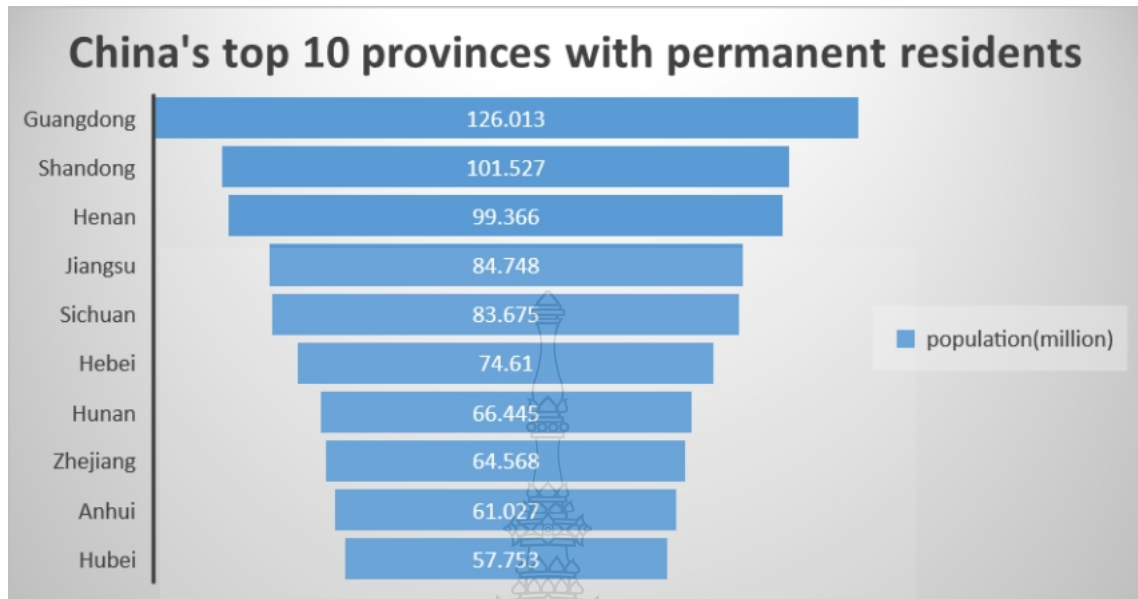


Figure 1.4 China's Top 10 Provinces with Permanent Residents (Data from China national bureau of statistics)

The distribution period was from November to the end of December 2023. This study collected data through online questionnaires and face to face interviews. Questionnaires were sent to age-appropriate individuals for their responses.

1.6 Research Hypothesis

To verify the research questions, this study proposes the following four research hypotheses based on the human capital theory, rational choices of marginal children theory, children quantity-quality alternative theory, intergenerational wealth flows theory, household bargaining theory, etc., where human capital is reflective-reflexive higher order component (HOC) in a hierarchical component model (HCM). The lower order components (LOCs) are education, skill, insurance, socioeconomic status, fertility attitude, health and social trust & support.

Table 1.1 Hypothesis of this Research

Hypothesis	Contents
Hypothesis 1:	Human capital has an effect on fertility intention.
Hypothesis 2:	Subjective well-being has a mediate impact on human capital and fertility intention.
Hypothesis 3:	Occupational flexibility has a moderate impact on human capital and fertility intention.
Hypothesis 4:	Leave policy satisfaction has a moderate impact on human capital and fertility intention.

1.7 Significance of the Study

Above all, the significance of this study lies in its potential to provide valuable insights into the intricate relationship between human capital, subjective well-being, and fertility intention. By delving into these interconnected factors, the study contributes to several important areas:

1)Informing policy and decision-making. Understanding how human capital, subjective well-being, and fertility intention interact can inform the development of policies and programs aimed at addressing demographic challenges, such as declining fertility rates and population aging. Policymakers can use the findings to design targeted interventions that promote sustainable population growth and socio-economic development.

2)Advancing academic development. The study contributes to the body of knowledge in fields such as economics, demography, and social sciences by offering new insights into the mechanisms underlying fertility decision-making. By building upon previous research and addressing gaps in the literature, this study enhances our understanding of the complex factors influencing fertility intention.

3)Improving individual well-being. By exploring the impact of human capital and subjective well-being on fertility intention, the study sheds light on factors that contribute to individuals' overall well-being and life satisfaction. Understanding these dynamics can help identify strategies to enhance individuals' quality of life and promote positive outcomes at both the personal and societal levels.

4)Methodological innovation. The study employs a mixed-method approach, combining qualitative and quantitative analyses, to provide a comprehensive understanding of the research topic. This methodological approach not only contributes to methodological advancements in the field but also highlights the importance of integrating diverse research methods for studying complex social phenomena.

In summary, this study's significance lies in its potential to inform policy, advance scientific knowledge, improve individual well-being, and contribute to methodological innovation. By addressing pressing societal challenges and offering valuable insights, the study has the potential to make a meaningful impact in both academic and practical domains.

1.8 Definition of Terms

For a better understanding of this study, the following terms are defined in the context of this research.

Human capital: It refers to the sum of knowledge, skills, experience, and health condensed in people, and summarized it as innovation ability, the ability to learn, to deal with economic imbalances, to do useful work in individual. Human capital includes education, skill, insurance, socioeconomic status, fertility attitude, health, and social trust& support.

Education: Education is the level by which individuals acquire knowledge, theory and general skills through formal learning and training systems. It involves the study of a systematic subject at school, university or other educational institution. In this study, respondents were assessed by asking subjects about their level of education and importance.

Skill: Skill involves learning specific knowledge relevant to a particular job or industry. It can be acquired through workshops, on-the-job training, vocational courses, and professional development programs. Skill helps individuals adapt to changing job requirements and enhances their efficiency and effectiveness in their roles.

Insurance: The extent of personal investment in social insurance and commercial insurance.

Socioeconomic status: Socioeconomic status refers to the economic and social level position of a person or group in the social structure. It is used to describe its relative status and power in society.

Fertility attitude: Fertility attitude refers to an individual's concepts and emotional tendencies towards fertility and family planning.

Health: Health is a broad concept that encompasses physical, mental, and social well-being. It involves more than the absence of disease and includes personal satisfaction, mental well-being, and the attainment of one's potential.

Social trust & support: Social trust & support refer to the degree of trust an individual has in others in social interactions and the degree of support they can receive when facing difficulties.

Fertility intention: Fertility intention refers to an individual's plans, expectations and wishes for future fertility. This concept involves an individual's concepts and intentions regarding whether to have children, when to have children, and how many children to have. In this study, the author chose three dimensions: child-bearing, child-timing, and child-number. Respectively represent whether you want to have children, the time of birth, and the number of children.

Subjective well-being: Subjective well-being concerns peoples' self-reported assessment of their own well-being; an individual's appraisal of a person's environmental circumstances, a person's behavioral response and the subjective consequences of that process (Michaelson, Mahony, & Schifferes, 2012). The author used the modified BBC subjective well-being scale (BBC-SWB) from Pontin et al. (2013) with 22 questions.

Occupational flexibility: Occupational flexibility refers to the degree to which a job or occupation is adaptable and adjustable to different working conditions, needs and environments.

Leave policy satisfaction: Parental, maternity and paternity leave policies (henceforth 'leave') refer to state mandated arrangements for parents to take time off work during pregnancy or after childbirth.

1.9 Research Gap

(1) subjective well-being as a mediator.

In these research fields, there are indeed certain research gaps in the impact of human capital on fertility intention and the mediating role of subjective well-being in it. Although some research focuses on the direct impact of human capital on fertility intention and the impact of subjective well-being on fertility intention, there is a lack of in-depth research on the mediating role of subjective well-being between human capital and fertility intention. Some studies can support this view. Vignoli, Mencarini and Alderotti (2020) confirmed that the impact of job uncertainty on fertility intentions is mediated by subjective well-being, and that job uncertainty has a strong relationship with individual human capital levels. Furthermore, Pertold-Gebicka (2022) found that parents' subjective well-being reveals the subjectively perceived costs and benefits of raising children and is considered by many to be a proxy for utility. The financial and time costs of raising children contribute to a decrease in happiness for many parents and indirectly affect the desire to have children. That is, parents with higher socioeconomic status and those living in countries with generous family support generally have positive fertility intentions. Socioeconomic status can also be considered as one part of individual human capital. In addition, Xiao, Chang and Lian (2023) found that happiness plays an important mediating role between residential mobility and fertility intention. People with higher individual human capital tend to have lower residential mobility. The above papers only study the mediating role of subjective well-being from a certain aspect of individual human capital.

In modern society, the level of human capital which including investments in education, skills, insurance coverage, socioeconomic status, health, social support, is considered a key factor in individual economic capabilities and social adaptability. With the changes in society and the evolution of concepts, people's pursuit of career is no longer just about material success, but also about subjective well-being and life satisfaction. At the same time, as an important factor in determining family size and population structure, fertility intention has a profound impact on the sustainable development of society. Therefore, a more comprehensive understanding of the scope of human capital and an in-depth study of the impact mechanism of human capital on fertility intention, especially

through the mediating role of subjective well-being, are of great significance for understanding the decision-making process of population behavior and formulating corresponding policies.

(2) occupational flexibility and leave policy satisfaction as moderator.

The relationship between human capital, occupational flexibility and leave policy satisfaction is very strong. Occupational flexibility and leave policy satisfaction represent an individual's flexibility and job satisfaction in the work environment. These factors directly affect an individual's quality of life and work-life balance, and therefore their desire to have children. Individuals with different human capital have different occupational flexibility and different satisfaction with leave policy. By studying the impact of human capital on fertility intention and taking into account the moderating role of occupational environment, it is possible to better focus on the individual's work-life balance. For policymakers, it helps to reveal the impact of work policies on fertility intentions.

For the perspective of occupational flexibility, Kreyenfeld and Andersson (2014) found that being unemployed or working in a temporary (or low-wage) job reduces people's willingness to have a first or second child, simply from the perspective of economic pressure. Additionally, Shreffler et al. (2016) indicate that women who work in more professional jobs (e.g., occupations with greater prestige, autonomy, complexity, and supervisory characteristics) are more likely to postpone childbearing than women employed in jobs with lower scores on professional characteristics, the study is judged from the perspective of different occupational categories. Xue (2022) found that in terms of a male's perspective, occupational flexibility makes it easier for individuals to balance career and family responsibilities, thereby affecting their fertility intention, but there is a lack of a female perspective. This study adheres to Goldin (2014), defining flexibility as an occupational feature that enables workers to choose their work hours and location without facing penalties. According to Benny, Bhalotra and Fernández (2021), occupational flexibility is divided into five aspects from O*NET database in the US.

In terms of leave policy satisfaction, Goldscheider, Bernhardt and Lappegård (2015); Tamm (2019) found that leave increases domestic gender inequality, which has been identified as a key cause of low fertility. Thomas et al. (2022) also found that leave

policy can moderate fertility intentions especially the leave policy is gorgeous. However, Bergsvik, Fauske and Hart (2020) review of the effect of family policies on fertility concludes that the effect of leave on fertility is ambiguous. Similarly, whether taking time off actually increases fertility is still a controversial issue (Balbo, Billari, & Mills, 2013) (Olivetti & Petrongolo, 2017). From the above research findings, it reveals that leave policies have a more important impact on fertility intentions than other family policies. However, the results on the impact on fertility intentions are not uniform because leave policies differ in each region. Since various provinces in China revised their leave policies in 2021, there has been no literature research on leave policy satisfaction. This paper aims to fill this gap.



CHAPTER 2

REVIEW OF THE LITERATURE

2.1 Introduction

With changes in social structure and values, people's fertility intention is affected by many factors. This paper aims to explore the impact of human capital on fertility intention, with special attention to the multi-dimensional composition of human capital, including education, skills, insurance protection, socioeconomic status, fertility attitudes, health and social support. This chapter focuses on reviewing the relevant literature on the impact of human capital, subjective well-being and fertility intention. Specifically, the study conducted an in-depth study of the impact of human capital and fertility intention, and the mediating effect of subjective well-being on human capital and fertility intention. At the same time, this chapter also elaborates on occupational flexibility and leave policy satisfaction as moderating variables. This chapter is divided into four parts: introduction, theoretical framework, related research and conceptual framework.

2.2 Theoretical Framework

In the theoretical part, this study deeply explores the status and role of human capital theory in the study of fertility intention. The core of this theoretical framework is that the knowledge accumulated by individuals through education, skills and work experience has an impact on their future economic returns. This paper reviews the development of human capital theory and discusses in detail its application in the study of fertility intention, as well as possible theoretical controversies and deficiencies in this field. This study combines relevant international and domestic research results to conduct a comprehensive analysis of the relationship between human capital and fertility intention. International research provides a broad perspective, showing the relationship between variables under different cultural and policy environments, while domestic research provides important clues for understanding China's unique social background and policy impacts. By integrating these studies, a theoretical framework on the impact of human capital on fertility intention is established.

In addition, other relevant theories are examined to construct a more comprehensive theoretical framework. Through in-depth theoretical analysis, more clear research hypotheses are provided for subsequent empirical research, and theoretical support is provided for the establishment of a framework model.

This section encompasses various theories including human capital theory, the theory of rational choice of marginal children, the children quantity-quality alternative theory, the intergenerational wealth flows theory, and the household bargaining theory.

2.2.1 Human Capital Theory

This theory holds that individuals accumulate human capital through investments in education, training, and health, thereby improving their productivity in the labor market. In studying demography, human capital theory provides insights into how an individual's investment decisions affect their fertility intention, while also providing a framework for understanding individuals' subjective well-being.

The representative of classical economics---Smith (1937) ---first proposed the concept of human capital in 1776 in *The Wealth of Nations*. He found that fixed capital contained useful abilities acquired by all inhabitants or members of society. This talent is acquired through processes such as education, schooling, and apprenticeship, often at real cost, and can therefore be considered a fixed, realized capital of the individual. American economist Fisher (1906) put forward the concept of human capital for the first time in his book *"The Nature of Capital and Income"* and incorporated it into the theoretical framework of economic analysis. Schultz (1961) boldly expounded on the concept and nature of human capital, the content and methods of human capital investment, and the role of human capital in the economy. Most scholars accept Schultz's definition of human capital, that is, human capital is the knowledge, ability, and health embodied in the human body. However, some scholars have conducted a more in-depth exploration of this concept. Some scholars believe that human capital can be divided into primary and advanced. The former refers to the physical strength, experience, production knowledge, and skills of healthy people. The latter refers to the concentrated manifestation of the discovery of human talents, talents, and potential resources wisdom(Zhou, 1997). In theory, human capital is a broader concept than education. But in practice, most empirical studies use education to measure human capital. The theory of human capital based on

immaterial investment provides new ideas for explaining the diversity and inequality of personal development. American economist Becker (1962) proposed two concepts: "implicit human capital" and "explicit human capital". Individual investments in education, training, and health can be viewed as investments in human capital, analogous to firms' investments in productive capital. He divided investment in people's knowledge, skills and health into two categories, one is explicit human capital, which can be obtained through formal education and training; the other is explicit human capital. The other is tacit human capital, covering the emotional aspects of skills, knowledge, and observation that are difficult to measure. Based on human capital theory, this paper measures human capital at a micro level and explores the impact of human capital on fertility intention from seven different dimensions.

1) Education

One of the core concepts of human capital theory is education. Education is the level by which individuals acquire knowledge, theory and general skills through formal learning and training systems. It involves the study of a systematic subject at school, university or other educational institution. In terms of childbearing intention, individuals with higher educational levels are more likely to recognize the positive impact of education on career success and may therefore delay childbearing in order to pursue more career opportunities and economic income. At the same time, high education levels may also increase individuals' fertility intention, because education may make them more responsible and capable of family planning (Jalovaara et al., 2019).

2) Skill

Human capital theory also emphasizes the importance of skills training in improving labor productivity. Individuals can adapt to changing labor market needs through continuous learning and upgrading of skills. The higher a person's work skills are, the better his or her ability can help them cope with family or the remaining problems. In terms of fertility intention, having diverse skills and occupational flexibility may influence individuals' decisions about fertility. Occupational flexibility makes it easier for individuals to balance career and family responsibilities, thereby affecting their fertility intention (Xue, 2022).

3) Insurance

Insurance protection covers health, financial and occupational risks. Individuals with a sound insurance system may be more willing to consider having children because they are relatively better equipped to face potential risks and uncertainties. In addition, insurance protection is also directly related to family economic status and well-being, which in turn affects individuals' decisions about childbearing (Zhang & Cao, 2023).

4) Socioeconomic status

Socioeconomic status reflects an individual's position in the social hierarchy. Higher socioeconomic status may be associated with better economic conditions and resource allocation, thereby affecting individuals' fertility intention. Socioeconomic status may also be related to factors such as social expectations and occupational pressure, which in turn may have an impact on fertility decision (Auer & Danzer, 2016) (Jalovaara et al., 2019).

5) Fertility attitude

An individual's fertility attitudes encompass beliefs, expectations, and preferences regarding reproduction. This factor plays an important role in human capital theory because individuals' attitudes often reflect their perceptions of the balance between family life and career. Positive fertility attitudes may be associated with higher fertility intention.

6) Health

Human capital theory also includes the health status of an individual. Physical health is a part of human capital that can affect an individual's labor productivity and quality of life. In terms of fertility intention, health status may influence an individual's perception of the physical strength and energy required to have children. Relatively healthy individuals may feel more confident about meeting the challenges of parenting without worrying about the negative impact of health problems on family life (Alderotti & Trappolini, 2022).

7) Social trust & support

Social trust & support includes trust & support from family, friend, and community. Individuals with higher levels of social trust & support may be more

confident in striking a balance between career and childbearing, thereby influencing their childbearing intention. Social trust & support is also directly related to happiness, providing a basis for subsequent analysis of the mediating effect of subjective well-being (Esping-Andersen & Billari, 2015).

2.2.2 The Theory of Rational Choice of Marginal Children

The rational choice theory of marginalized children is a principle of family fertility decision-making. This theory analyzes from the perspective of fertility cost-utility and incorporates changes in fertility rate into economic principles. The more human capital an individual invests in his/her personal life, the more economic benefits he or she will usually receive, which can lay a good material foundation for fertility wishes. But it also means more time is taken up, which affects the desire to have children.

This theory was proposed by Becker and Hecken (2009). He believes that when a couple decides on the number of children they want, they should do a cost-utility analysis of the children they have. Keep the utility and negative utility brought by the limited number of children in the balance. From the perspective of cost, it refers to the various support expenses, education expenses, medical expenses, and other expenses of the mother from pregnancy to raising the child to become independent, as well as the time lost by parents for educating their children. This cost can be broken down into two parts. The first part is direct costs. Direct costs are money or kind spent on children. Indirect costs are the opportunity costs of raising children. Such as the reduction in wage income generated by couples for pregnancy and raising children, and the time sacrificed for raising children. From the perspective of utility, the utility of raising children can be divided into many dimensions. The first is consumption utility: treating children as "consumer goods" or "durable consumer goods" can bring joy and emotional satisfaction to parents. The second is labor-economic utility. Referring to the economic benefits brought by children as laborers to the family. The third is insurance utility. It means that when the parents are old, the children provide the source of life and provide support for the elderly parents. The fourth is the utility of economic risk. It refers to the utility that starts from the time when the child bears the risk of success or failure of the family's economic activities. The fifth is the effect of long-term maintenance of family status. It refers to the social responsibilities that children may assume in the future. Some societies

regard sons as having the effect of maintaining the family's social status for a long time. The sixth is the utility of extended family contribution. This refers to the fact that people regard having children as the only way to make the family prosperous and prosperous.

According to the theory of cost-utility analysis, Becker and Hecken (2009) believes that as the per capita income of families increases with economic development, the utility cost of children also increases. But the child's marginal utility, or marginal child's utility, falls. Therefore, the economic decision for the birth of marginal children is as follows:

(1) When the cost of children decreases with the increase in family income, the number of children the family is willing to have decreases.

(2) When the cost of children increases with the increase of family income, the utility of children decreases with the increase of family income, and parents' demand for children decreases.

(3) When the utility cost of children decreases with the increase of per capita income, the number of children families want to have decreased.

For families of different economic levels, the impact results are also different. For very rich families, the cost of having children is negligible, and the expected utility demand for children is also very small, so they will have more children than the middle class. But very rich households make up such a small proportion of the population that they are negligible in the analysis. For poor families, the family income is very low, and the family expenditure is mainly used to purchase necessities of life. When the income of poor families increases, it will weaken their restrictions on the purchase of commodities to maintain food and clothing, so the number of children that families want may increase, and the fertility rate will show an upward trend. However, if household income continues to rise to the point where food and clothing are no longer necessary, the demand for various durable consumer goods will increase. Rising household income at this time may lead to fewer families wanting to have children. Therefore, for poor families, the impact of rising family income on the number of children they have has an inverted U-shape.

In addition, the theory also cites socioeconomic factors that affect fertility, which indirectly affect fertility through cost-utility. For example, the weakening of religious awareness and traditional concepts has reduced the family's need for child-

rearing. Population urbanization will reduce the birth rate. The nuclearization of the family structure weakens the stimulating effect of the small environment of the traditional extended family on fertility, which will also lead to a decrease in the fertility rate. The improvement in women's education status and women's socioeconomic status will make women tend to have fewer children. Economic development has increased the flow of the labor force population. To adapt to this change, parents will tend to have fewer children. As the cost of raising children rises with economic development, parents' incentives to have children will be weakened. The increasingly perfect endowment insurance guarantee will reduce the demand for childbearing. In addition, the decline in parents' preference for boys, the reduction in infant mortality, and the introduction and dissemination of various contraceptive knowledge and medicines have also reduced fertility intention.

2.2.3 Children Quantity-Quality Alternative Theory

The theory focuses on how individuals trade off quantity (having more children) and quality (providing children with higher education) in their educational investments and fertility decisions. The theory holds that when families decide how many children to have, they need to weigh the trade-offs between having more children and providing each child with a better education. This trade-off is driven by a household's limited resources, including time, money, and energy. As the level of education increases, individuals tend to pursue quality rather than quantity. Well-educated people are more aware of the importance of providing high-quality education to their children and therefore may prefer to have fewer children in order to provide better education in their reproductive decisions. From the perspective of human capital, different human capital levels will have different fertility decisions on the quantity and quality of children. This is also the connection between this paper and this theory.

Becker (1960) proposed in the research "Economic Analysis of Fertility Rate of Demographic and Economic Changes in Developed Countries" that the theory of consumer behavior is also applicable to economic decision-making in analyzing fertility rates. He believes that when parents treat children and various commodities, they regard them as "durable consumer goods", all to satisfy their desires to the maximum extent. Therefore, he proposed a quantity-quality alternative theory of parenting (Becker & Tomes, 1976). In Western developed countries, many families choose the quality of their children

rather than the quantity. From the perspective of the utility obtained by parents, the quantity and quality of children can be substituted for each other. As household income rises, parents would rather choose fewer but higher-quality children than a larger number of lower-quality children. The demand for the number of children is influenced by the benefits provided by children, the market price of the good for raising children, the stipend provided to mothers who raise children, and the opportunity cost of a mother's time. Taking inspiration from Becker (1965). New Home Economics, by incorporating "time allocation," significant progress has been made family members can use time in different ways, such as caring for children or doing paid work outside the home. Of course, the use of time will depend on the income from this activity and the cost of raising children. An increase in family income also means an increase in the ability to raise children. If the quality of children per unit does not change, the increase in family income will stimulate the family's demand for the number of children. But this stimulating effect will be offset by the following factors: 1. The increase in income means that mothers will get higher wages for working at the same time. This opportunity will reduce the family's need for children. 2. An increase in family income means that parents are willing to spend more on children's education and training to improve the quality of their children. Therefore, the quantity-quality substitution relationship of children makes families choose to have fewer children, which ultimately leads to a decline in fertility (Galor, 2005; Lee & Miller, 1990).

Leibenstein (1977) made a summary presented at the IUSSP conference in Mexico City in which the author assesses the "benefits and costs of children" approach, specifying the various dimensions of the concept and examining the relationship between income and number of children. In this research, rich people do not choose to have small families because they want "higher quality" children, as assumed by Becker (1960), for example, but because the rich spend more money on children than the poor. To maintain their social standing, rich people buy status goods and this reduces the amount of income available for children. But the author goes further, by proposing to relax the rational assumption.

2.2.4 Intergenerational Wealth Flows Theory

This theory starts from the perspective of wealth flow and believes that within a family, different wealth flows constitute completely different fertility levels. When evaluating individual human capital, this paper takes the social trust and support an individual receives

as an indicator. The flow of wealth within the family changes individual human capital, which in turn affects fertility intention.

Australian population economists Caldwell, Reddy and Caldwell (1982) put forward the theory of wealth flow from the perspective of population economics. He pointed out that within a family, different flows of wealth constitute completely different levels of fertility. When the wealth of the family economy flows from the younger generation to the older generation, there is often a high fertility rate, because at this time the parents regard children as an important source of wealth, and they are more inclined to have children. In modern society, the family structure has changed, and wealth usually flows from the father to the offspring. People tend to reduce the cost of raising children, and the number of children is also reduced. Due to the influence of traditional culture and the economic structure of the family, this principle of equivalent exchange deviates from reality. Intergenerational resource exchange does not strictly follow this principle. There are likely to be members in the family who sacrifice their interests to maximize family utility. and time resources flow to the disadvantaged (Becker, 1974). For example, parents not only invest time and money in their children when they are young but also may continue to provide financial support and intergenerational care support for their children when they become adults (Silverstein & Bengtson, 1997). Transferring family resources to children can allow children to allocate more energy in the labor market with wealth returns. This intergenerational exchange strengthens intergenerational economic dependence and filial piety (Jellal & Wolff, 2002), and adult children are more likely to give back to their parents by having more children.

2.2.5 Household Bargaining Theory

Household Bargaining Theory belongs to the theory of development economics, which is used to analyze decision-making, resource allocation, and power distribution among family members. According to this theory, people with higher human capital have higher power distribution in the family, which in turn affects the generation of fertility intention, especially for women.

Household bargaining theory holds that women's improvements in education, income, and occupational status increase their family's bargaining power, thereby shifting fertility decision-making in favor of their preferences (Adair & Brase, 2017; Woldemicael, 2009). Although different measurement indicators are used, most studies

have shown that there is a significant negative correlation between women's family bargaining power and the number of children (Doepke & Kindermann, 2016; Doepke & Tertilt, 2018), and a positive relationship with delayed childbearing (Seebens, 2006; Upadhyay & Hindin, 2005). Some studies have found that with the increase of women's household bargaining power, their fertility autonomy is also enhanced, and the number of children is changed from the husband's expectation (can only passively accept the husband's fertility arrangement) to the couple's minimum expected childbearing (Doepke & Kindermann, 2016); With changes in the labor market, women's employment and their career development play a crucial role in alleviating the risk of family economic collapse and maintaining the quality of life of the family throughout the life cycle important (Oppenheimer, 1997; Robert & Bukodi, 2002), especially early career development can significantly affect the possibility of promotion to higher positions (Rosenfeld, 1978), so women have more control over family decisions greater decision-making power.

This theory explores how different members of the family negotiate and decide how to allocate time, labor, property, and other resources. Household bargaining theory attempts to explain the dynamics and power relations behind decisions within the family and how these decisions affect the well-being of family members.

2.3 Related Research

In the related research section, this study systematically reviews domestic and foreign research on the relationship between human capital and fertility intention. By reviewing the existing literature, previous research methods, main findings, and existing controversies and deficiencies were summarized. This helps to fully draw on previous experience when establishing research questions, and at the same time points out problems that have yet to be solved, providing a basis for the contribution points of this study. In a review of international research, this research highlights cultural, policy and economic differences between countries and regions, and the impact these factors may have on research findings. At the same time, in-depth analysis of domestic research can better understand the particularity of the relationship between human capital and fertility intention under China's unique social, cultural and policy environment. The comparison and synthesis of these two aspects will provide a more in-depth and comprehensive

foundation for the establishment of subsequent framework models.

This section is divided into five parts. The first part is the study of the impact of human capital on fertility intention. The second part is the study of the impact of human capital on subjective well-being. The third part is a study on the impact of subjective well-being on fertility intention. The fourth part is the summary of related research on fertility intention. The last part is the portrait of the two moderating variables.

2.3.1 Related Research on Human Capital with Fertility intention

This research studies seven aspects of human capital. They are education, skills, insurance, socioeconomic status, fertility attitude, health and, social trust & support.

Research Related to Education

When discussing the impact of education on fertility issues, a large number of existing literatures have confirmed that education does have an important impact on fertility issues. Existing literature, when systematically analyzing the number of children, including the factors affecting the number of children they want to have and the number of children they have, all agree that education is a statistically significant factor (Jain, 1981; Kravdal & Rindfuss, 2008; Skirbekk, Kohler, & Prskawetz, 2004).

Testa (2014) found a positive relationship between a woman's education level and her lifetime fertility intentions. In an institutional context that allows highly educated women to have large families, women of childbearing age are more likely to invest in human capital and family size because these choices are not seen as incompatible. People with higher education are more likely to prefer three or more children and less likely to prefer no children or only one child (Heiland, Prskawetz, & Sanderson, 2005). Women with higher education are more likely to intend to have three children, and men with higher education are more likely to intend to have four children (Berrington & Pattaro, 2014). Additionally, people with higher education are more likely to prefer three or more children and less likely to prefer no children or only one child (Bernardi, Mynarska, & Rossier, 2014; Heiland, Prskawetz, & Sanderson, 2005). They explained that highly educated people have relatively superior incomes, and the burden of raising children does not seem to be that difficult for them. Besides, people with higher education levels desire larger family scales.

On the contrary, the specific impact is mainly reflected in delaying childbearing time (Chen & Jin, 2011; Zhou, 2005). Changing gender preferences (Guo, 2008; Zhao, 2019) and others have an impact on the number of births (Chen, 2002; He & Yu, 2017; Jain, 1981). In the theoretical model derivation and empirical model regression analysis that added a series of social, economic, family, and personal characteristics variables, the influencing factors of education level, including the education level of women and the education level of husbands, showed good statistical significance.

1) Education delays the entry into marriage and childbearing. The extension of years of education inevitably delays the time for people to enter into marriage (Liu, 2016; Yang & Zhang, 2018b). Constrained and limited by physiological conditions, whether male or female, the best time for childbearing is limited, so the extension of years of education has directly occupied the time for marriage and childbearing, which has largely led to a reduction in the number of children born (Black, Devereux, & Salvanes, 2008). This effect is obvious and direct. In the past few decades, the age of the first marriage of the marriageable population has generally been delayed (Liu & Zhao, 2009). According to the national data of the 2010 census, compared with the cohort born in 1960, the proportion of late married men born in 1980 increased from 24.3% to 29.9%, and women increased from 28.3% to 36.9% (Yang & Zhang, 2018a). Chen (1991) analyzed the delay in the age of first marriage and early marriage. And Liu (2016) found that higher education is more conducive to female individuals' economic ability and has a greater impact on future economic ability. The increase in expectations reduces women's economic dependence on their partners and thus delays marriage and childbirth. Women in high-income families generally have a higher level of education, and the extension of education time has greatly delayed the time for women to enter the marriage market for matching (Liu, Li, & Geng, 2017). However, another type of research points out that education will delay women's age of marriage and childbearing, but it will not significantly reduce the number of children they have in their lifetime. Monstad, Propper and Salvanes (2008) used Norway's compulsory education reform as a quasi-natural experiment to study whether there is a causal relationship between the extended years of education and the reduced number of children born. The results showed that the reduction in the number of children born was not caused by the increase in the level of education.

2) Education leads to an increase in the opportunity cost of childbearing. Due to the improvement in the education level, the improvement in the personal employment environment, and the increase in the wage level have significantly increased the opportunity cost of raising children (Duan, Su, & Zhang, 2020; Zheng, Li, & Liao, 2009). Although income improvement of the level has reduced the economic pressure of raising children to a certain extent, the resulting loss of opportunity cost is more severe. In modern society, where competition is constantly increasing, the impact of childbearing on career development cannot be ignored. This significant increase in opportunity cost has forced people to reduce the number of children they have. Yang and Zhang (2018b) used the quasi-natural experiment formed by the implementation of the Compulsory Education Law in 1986 to demonstrate that the deepening of education significantly reduced the number of births and constructed a utility function model with time as input, expounding the influence of preference effect and opportunity cost effect mechanism.

3) Education has changed people's concept of childbearing. On the one hand, education can effectively change people's concept of the number of children to a large extent, and education can improve people's understanding of self-realization (Song & Yu, 2017), making people pay more attention to themselves, so it will sacrifice the number of children and pursue the realization of personal value more so that the number of children that people want to have and the number of children they have shown a downward trend. From the perspective of Chinese society, due to the large proportion of the peasant population, people have long tended to have a large number of children, thereby increasing the labor force. With the advancement of production technology and the continuous improvement of the level of education, people of different age groups are influenced by traditional fertility concepts to different degrees, with different educational levels and different levels of intention to have children. Statistical analysis of the census data shows that among women with primary school education and those who have never attended school, the number of women who have two or more children is far greater than the number of women who have no or one child. Reduction (Gao, 2017; Hu, Li, & Zhen, 2018). In the study of long-term changes in education level and fertility level, some existing research results show that there is a U-shaped relationship between the two. In families with higher or lower average education levels, the number of births will increase

to achieve the effect of population Maximizing.(Zhang & Wan, 2019) Yang and Hu (2019); Zhao (2019) pointed out that in the post-demographic transition period, a large number of studies on developed countries have found that women's education level and fertility level are positively correlated, the reason may be that families with higher levels of education have more harmonious gender relations, which leads to higher fertility levels. At the same time, education will change people's traditional ideas about gender preference. Restricted by the demand for labor in production in an agricultural society, people have a natural preference for male births. In addition, traditional marriage customs make marrying a daughter-in-law increase the family's labor force while marrying out a daughter reduces the family's labor force. Therefore, in the traditional concept, there is a more persistent pursuit of fertility in males. Especially in the years when family planning was strictly enforced and the number of births was strictly controlled, the sex selection preference for birth was further strengthened. The continuous improvement of women's average education level will affect the number of children they intend to have and the number of children they have by changing the traditional concept of gender preference for childbearing. However, with the general increase in education levels in recent years, the average education level of women has even surpassed that of men, which has brought about significant improvements in women's employment conditions and wages, and the overall gender identity of women has also continued to rise. These changes brought about by education have reversed the cost-benefit comparison of child-rearing, which is conducive to improving the sex ratio at birth (Zhao, 2019). On the other hand, education will change people's concept of child-rearing, so that in the long run, the quality of children will gradually replace the quantity of children. This trend is also inevitable in terms of economic development and social progress(Becker & Barro, 1986), This effect is indirect but real. Testa et al. (2016) found that using the first wave of the Generations and Gender Survey for four countries (Austria, Bulgaria, Italy, and Norway), and analyze the relationship between a mother's socioeconomic status and daughter's fertility intention, controlling for daughter's socioeconomic status and size. The positive role of a mother's socioeconomic status on the daughter's fertility decision-making offers a valuable interpretation of the positive link between education and fertility intention which goes beyond the alternative explanations referring to self-selection, partner effect, or time squeeze.

However, the specific relationship between educational attainment and the intention to have children and the number of children is still controversial. Some studies believe that there is simply a negative correlation between the two. Some studies believe that it is a "U"-shaped relationship that first declines and then rises. In addition, there are also a small number of targeted studies that believe that the level of education has no significant impact on the intention to have multiple children. For example, Feng (2010) based on the survey data of married youths in five major cities, using non-single couples as a reference, described and analyzed the intention of "single couples" to have a second child and its related influencing factors, found that the level of education does not affect their intention to have a second child.

Table 2.1 Summary of Research on the Effect of Education on Fertility Intention

Variables Impact	Findings	Authors(year)
(1) Education →fertility intention	People with higher education are more likely to prefer three or more children and less likely to prefer no children or only one child.	Bernardi, Mynarska and Rossier (2014); Heiland, Prskawetz and Sanderson (2005)
	Increased years of education inevitably delay marriage.	Liu (2016); Yang & Zhang (2018)
	In 1960 and 1980, with the general improvement in the level of education, the proportion of women marrying later has increased.	Yang & Zhang (2018)
	Higher education is more conducive to individual women's economic capabilities, and the increase in expectations of future economic capabilities reduces women's desire for marriage.	Liu (2016)

Table 2.1 Summary of Research on the Effect of Education on Fertility Intention (Cont.)

Variables Impact	Findings	Authors(year)
	The extension of education time has greatly delayed the time for women to enter the marriage market to choose a mate.	Liu, Li, & Geng (2017)
	The decrease in the number of children born is not due to the increase in the level of education.	Monstad, Propper and Salvanes (2008)
	The improvement of the level of education indirectly increases wage income, which significantly increases the opportunity cost of raising children.	Duan, Su, & Zhang (2020)
	Taking the implementation of the Compulsory Education Law in 1986 as an experiment, it was demonstrated that the deepening of education significantly reduced the number of births.	Yang & Zhang (2018)
	Education improves people's awareness of self-realization and makes people pay more attention to themselves. They will sacrifice the number of children and pursue the realization of personal value more.	Song & Yu (2017)
	With the improvement of educational background, the number of children willing to have children gradually decreases.	Gao (2017); Hu, Li, & Zhen (2018)
	In families with higher or lower average education levels, the number of births will increase to achieve the effect of population maximize.	Zhang & Wan (2019) ; Yang & Hu (2019)
	The average level of education of women exceeds that of men, leading to improvements in women's employment conditions and wages, and an increase in women's overall gender identity.	Zhao (2019)

Table 2.1 Summary of Research on the Effect of Education on Fertility Intention (Cont.)

Variables Impact	Findings	Authors(year)
	The positive role of a mother's socioeconomic status on the daughter's fertility decision-making offers a valuable interpretation of the positive link between education and fertility intention which goes beyond the alternative explanations referring to self-selection, partner effect, or time squeeze.	Testa et al. (2016)
	In an institutional context that allows highly educated women to have large families, women of childbearing age are more likely to invest in human capital and family size because these choices are not seen as incompatible.	Testa (2014)
	People with higher education are more likely to prefer three or more children and less likely to prefer no children or only one child	Heiland, Prskawetz and Sanderson (2005)
	Women with higher education are more likely to intend to have three children, and men with higher education are more likely to intend to have four children	Berrington and Pattaro (2014)
	According to the quantity-quality theory of children, the improvement of education level makes people pursue the quality rather than the quantity of children.	Becker, Cinnirella, & Woessmann (2013)
	There is no correlation between education and fertility intention.	Feng (2010)

Related Research to Skill

Skill involves learning specific knowledge relevant to a particular job or industry. It can be acquired through workshops, on-the-job training, vocational courses, and professional development programs. Skill helps individuals adapt to changing job requirements and enhances their efficiency and effectiveness in their roles. Skill affects fertility intention in the following ways:

1) Economic factors: Having more skills and education generally increases an individual's employment opportunities and wages. This may affect parental intention, as couples with better-off households may be more confident in bearing the cost of child-rearing. However, if individuals pursue career advancement and economic stability, childbearing may be delayed to concentrate on their careers. Bao, Chen and Zheng (2017) found that women with more economic and familial/social resources are more likely to want a second child, while women who work in non-agriculture sectors and have higher decision-making power in the family are less inclined to have a second child. Shreffler (2007) demonstrates that occupational characteristics differ by race/ethnicity, and several characteristics have implications for women's fertility intention and ideals and individual well-being as assessed by life satisfaction. At the same time, high-income families may be better off. Therefore, high-income families have a higher intention to have children (Boyd, 1973), which can be called the "income effect" where income affects fertility; and the increase in income not only makes parents more inclined to have more children. Children will increase the opportunity cost of childbirth because, for high-income groups, the time cost of giving up work and earning money when choosing to have children is more expensive than for low-income groups (Jamison et al., 1996; Raz-Yurovich, 2016). Therefore, they may reduce their demand for children based on the principle of maximizing their utility. This effect can be regarded as the "substitution effect" of income affecting fertility. The relative magnitudes of these two effects ultimately determine how income affects households' fertility choices.

2) Time allocation: Possessing a wealth of skills may mean that individuals need to devote more time and energy to work. This can lead to challenges in allocating time between family and parenting, which can affect fertility intention. Some occupations may require long hours of work, coupled with continuous updating and learning of skills,

which may cause individuals to delay childbearing to better balance career and family. Miller (2011) found that motherhood delay leads to a substantial increase in earnings of 9% per year of delay, an increase in wages of 3%, and an increase in work hours of 6%. Xue (2022) found that previous families' Gender division of labor prompts women to bear more childbearing costs, which cover energy, time, and opportunity costs of giving up employment. Cheng and Hsu (2020) found that the career prospects and emotional satisfaction greatly increased the opportunity cost of childbirth.

3) Occupational stress: Highly skilled occupations often come with greater work stress and responsibilities. This can make it difficult for individuals to juggle careers and parenting at the same time. Therefore, some people may choose to postpone childbearing to think about family after a more stable career. Shreffler et al. (2016) indicate that women who work in more professional jobs (e.g., occupations with greater prestige, autonomy, complexity, and supervisory characteristics) are more likely to postpone childbearing than women employed in jobs with lower scores on professional characteristics. Women in more professional jobs do not want fewer children, however, and they report higher intention to give birth. These findings suggest that women in more professional jobs face greater barriers to having children than they want to have. Zhou, Zhao and Dong (2021) also insisted the view that professional skill had opposite effect on fertility intention due to opportunity cost.

4) Family support. Skilled individuals generally have better access to family and social support. Such support can include more flexible work arrangements, childcare services, etc., and can help alleviate individual conflicts between career and parenting, which may have a positive impact on fertility intention. Supporting a human capital story, the advantage is largest for college-educated women and those in professional and managerial occupations. The association between fertility and women's labor force activity reflects the incompatibility between caring for children and participating in economically productive work that typifies industrialized societies (Weller, 1977). Different occupational characteristics also have an impact on fertility intention. Zheng et al. (2016) found that compared with female farmers, women in other occupations intended to have fewer children. However, Heath and Jayachandran (2016) analyzed from the perspective of family status improvement. He found that the increase in women's labor

force participation rate and the increase in educational opportunities will strengthen women's status in the family while giving women more choices, it will reduce women's intention to bear children. Another research shows men and women in management want more children than those in lower-skilled jobs (Kreyenfeld et al., 2022).

Generally speaking, the influence of skills on fertility intention is complex and diverse, because it involves individual values, family status, social and cultural background, and other factors. While skill may in some cases influence individuals to delay childbearing, many other factors can interact to shape the final decision. The exact extent of this effect will vary between individuals and circumstances.

Table 2.2 Summary of Research on the Effect of Skill on Fertility Intention

Aspect	Findings	Authors(year)
1) Economic factors	Women with more economic and familial/social resources are more likely to want a second child, while women who work in non-agriculture sectors and have higher decision-making power in the family are less inclined to have a second child. The cost of giving up work and earning time to choose to have children is more expensive for high-income groups than for low-income groups.	Bao, Chen and Zheng (2017) Jamison et al. (1996); Raz-Yurovich (2016)
2) Time allocation	Motherhood delay leads to a substantial increase in earnings of 9% per year of delay, an increase in wages of 3%, and an increase in work hours of 6%. The previous gender division of labor in the family has prompted women to bear more childbearing costs, which cover energy, time, and opportunity costs of giving up employment. The career prospects and emotional satisfaction greatly increased the opportunity cost of childbirth.	Miller (2011) Xue (2022) Cheng and Hsu (2020)

Table 2.2 Summary of Research on the Effect of Skill on Fertility Intention (Cont.)

Aspect	Findings	Authors(year)
3) Occupational stress	Women who work in more professional jobs are more likely to postpone childbearing than women employed in jobs with lower scores on professional characteristics.	Shreffler et al. (2016)
	Professional skill had opposite effect on fertility intention due to opportunity cost.	Zhou, Zhao and Dong (2021)
4) Family support	Compared with female farmers, women in other occupations intended to have fewer children.	Zheng et al. (2016)
	From the perspective of family status improvement, it is found that the increase in women's labor force participation rate and the increase in educational opportunities will strengthen women's status in the family, which will reduce women's intention to bear children while giving women more choices.	Heath and Jayachandran (2016)
	Men and women in management want more children than those in lower-skilled jobs.	(Kreyenfeld et al., 2022)

Related Research to Insurance

When discussing the impact of China's insurance protection on fertility intention, most researchers proceed from China's national conditions. Since the insurance protection system of each country is different, when studying the impact of human capital on fertility intention in China, the insurance part of the literature comes from Chinese scholars. The research shows that: 1. Maternity insurance has a positive impact on the intention to bear children. The more complete the maternity insurance, the stronger the women's intention to bear children. 2. The traditional Chinese concept of raising children for old age has become less important with the supplement of endowment insurance. 3. From the perspective of women, the more complete the employment insurance protection, the more women are willing to have children, because the opportunity costs and time costs they have to pay for this are both reduced. 4. Medical insurance is very important for the floating population.

In line with LeGrand et al. (2003), who found that although insurance coverage may have a substitution effect, insurance is positively related to fertility intentions, and

people still need support, companionship, and continuation of offspring in old age. Additionally, Zhang and Cao (2023) found that insurance protection is directly related to family economic status and well-being, which in turn affects individuals' decisions about childbearing. Xing et al. (2022) found that Low fertility rates among China's rural floating population with strong fertility are aggravating these challenges. Previous research has confirmed the relationship between health insurance and fertility intention. Participating in the Basic Medical Insurance System (BMISUR) significantly improved rural floating populations' fertility intention in China. The impact of health insurance policies on the fertility intention of the rural migrant population varies by gender, age, and inflow areas. There is regional heterogeneity in the impact of endowment insurance and rearing cost on fertility desire. There is no significant difference in the impact of endowment insurance on fertility desire between urban and rural areas. Xiong et al. (2022) from the perspective of population flow, the impact on fertility intention is explored. In recent years, more and more women have participated in population migration, and most of them have reached childbearing age. In the multivariate analysis, age, gender, and age of the first child, fertility health education, employment status, and medical insurance were found to be significant influencing factors of fertility intention. While education level and household registration type were not associated with the desire to have a second child. Jiang (2017) pointed out that women face problems such as low levels of residual security, narrow coverage, and lack of corresponding employment security. The improvement of the social security system is one of the ways to effectively solve the contradiction of "needing to give birth but not daring to give birth". The coverage of maternity insurance should be further expanded to improve the level of employment security. Household registration, geographical boundaries, and other boundaries should be broken so that all women can enjoy undifferentiated maternity protection. Zhang and Cui (2020) regard the level of insurance protection as a component of explicit human capital. And divided into, basic medical insurance participation, basic endowment insurance participation, and commercial insurance participation as dummy variables. Emotion regulation ability, social ability, and gender difference cognition were selected as the measurement variables of other cognitive abilities, and the relevant influencing factors were analyzed by using the Probit model. Using the D probit model to further measure the true effect of each

explanatory variable on urban women's intention to have a second child. To make up for the problem that the parameters obtained by the Probit model are not the real marginal utility of the index.

Table 2.3 Summary of Research on the Effect of Insurance on Fertility Intention

Aspect	Findings	Authors(year)
Insurance positive impacts fertility intention.	Although insurance coverage may have a substitution effect, insurance is positively related to fertility intentions, and people still need support, companionship, and continuation of offspring in old age.	LeGrand et al. (2003)
Basic insurance system affects fertility intention.	Participation in basic medical insurance has significantly increased the willingness of China's rural floating population to have children.	Xing et al. (2022)
Endowment insurance on family fertility desire perspective.	Endowment insurance has an inhibitory effect on family fertility desire. There is regional heterogeneity in the impact of endowment insurance and rearing cost on fertility desire.	Zhang and Cao (2023)
Medical insurance affects fertility intention.	In the multivariate analysis, age, gender, and age of the first child, fertility health education, employment status, and medical insurance were found to be significant influencing factors of fertility intention for the female floating population.	Xiong et al. (2022)
The impact of insurance and employment security on fertility intention.	Women's intention to bear children is reduced due to incomplete maternity insurance and employment security.	Jiang (2017)
The impact of insurance on fertility intention.	Basic medical insurance, basic endowment insurance, and commercial insurance participation affect women's willingness to bear children.	Zhang and Cui (2020)

Related Research to Socioeconomic Status

Socioeconomic status (SES) refers to the position of individuals, families, households, or other aggregates on one or more dimensions of stratification. These dimensions include income, education, prestige, wealth, or other aspects of standing that

members of society deem salient (Bollen, Glanville, & Stecklov, 2001). Anderson et al. (2001) proposed another type of social status based on socioeconomic status sociometric status (SMS). This concept originated from research on social acceptance of children and adolescents, emphasizing the status of individuals in the group they belong to, often taking respect, envy, and influence as measurement indicators.

Therefore, socioeconomic status is divided into subjective socioeconomic status and objective socioeconomic status. Subjective socioeconomic status represents the perception of one's socioeconomic position or rank relative to that of others in the social class hierarchy (Tan et al., 2020). As subjective socioeconomic status is often ascribed subjective meaning that is influenced by the situational or broader social context, such as other individuals to whom an individual compares his or her income or educational level (Destin, Rheinschmidt-Same, & Richeson, 2017), the subjective perception of social class has more important insights than objective SES into psychological processes, such as self-perceptions (Fisher, O'Donnell, & Oyserman, 2017), system justification belief (Li et al., 2020), and subjective well-being (Tan et al., 2020). In contrast, the fertility choices of individuals with higher subjective SES are more likely to be driven by their internal states, personal goals, and emotions (Kraus et al., 2012). The relationship between SES and fertility is as follows:

- 1) Socioeconomic status affects fertility decision-making. Cunha and Heckman (2007) start with individual skills and believe that individual skills are a process of continuous accumulation, and the skills produced in the early stage will enhance the ability to acquire the skills later, thus forming a virtuous circle. Therefore, early human capital investment is the most efficient, and early investment in children's education has an important and continuous impact on the improvement of educational development in adulthood. Based on this theoretical framework, a large number of empirical studies have further confirmed that there is a correlation between the differences in the educational development of offspring in families with different socioeconomic statuses and the family's early investment. Parents influence the number of children by providing care support and increasing the possibility of having a second child (Jin, Zhao, & Song, 2018). The higher the occupational status of women, the more open and modern their concept of gender roles, the stronger their awareness of gender equality, and they will make more rational fertility decisions.

2) Intergenerational income differences affect the parents' intention to bear children (Xu, 2022). The improvement of the socioeconomic status of elderly parents in the family will help increase the family's fertility probability. The impact of intergenerational income differences on the family's choice of "second child" has obvious urban-rural differentiation. In rural areas and low-income groups, families with parents with higher socioeconomic status are more likely to have a "second child", which may be Because parental status is higher in rural and low-income groups. The higher the parents' socioeconomic status in the family, the more likely they are to share the childbearing costs faced by their children when they make childbearing decisions by providing material help and intergenerational care to their children and strengthening their children's intention to bear children, which will help families Increases in fertility, especially the need for more children.

3) Occupation, as an aspect of socioeconomic status, also affects fertility intention. Some studies focus on the impact of women's job types and employment opportunities on their fertility behavior. Bloom et al. (2009); Kalwij (2000) believe that another direct determinant related to fertility behavior is women's occupational status. Bratti (2003) pointed out that women's fertility outcomes or preferences are related to their employment status and the type of work they do. Another study found that employment opportunities have an impact on fertility behaviors (such as gender preference) and levels (Ushie et al., 2011). Women who are employed in the formal sector have fewer children despite studies linking unemployment to declining fertility rates (Babalola & Akor, 2013). Auer and Danzer (2016) studied the impact of having or not having a fixed-term contract on fertility based on data from the German Social and Economic Council and found that the more stable the career, the stronger the negative impact on female fertility.

4) The relationship between individual socioeconomic status and fertility rate. Previous studies have explored the extent to which indicators of an individual's socioeconomic status are linked to the process of family formation, particularly fertility (Bar et al., 2018; Begall & Mills, 2013; Dribe et al., 2017; Gray & Evans, 2019; Impicciatore & Tomatis, 2020; Jalovaara et al., 2019; Sobotka, Beaujouan, & Van Bavel, 2017). Associations with fertility varied according to socioeconomic status indicators and the culture of interest. For example, higher personal social status is negatively associated with fertility in many high-income countries(Begall & Mills, 2013; Skirbekk, 2008). Whereas in Nordic countries,

especially among men, there is a positive relationship between social status and fertility relationship (Jalovaara et al., 2019). In line with these findings, previous studies suggest higher sexual activity among males of higher socioeconomic status (Pérusse, 1993; Skirbekk, 2008). Dribe et al. (2017) found that changing socioeconomic differences in marital fertility are examined and related to common theories of reproductive behavior. The idea that the upper classes act as forerunners by lowering fertility before other groups are found. As the literature review above shows, higher social positions bring several benefits for individuals, and in particular for males. This also applies to childbearing, for which positive correlations with SES have been found among males in Sweden and other Nordic countries.

Table 2.4 Summary of Research on the Effect of Socioeconomic Status on Fertility Intention

Aspect	Findings	Authors(year)
1) Socioeconomic status influences fertility decisions	The fertility choices of individuals with higher subjective SES are more likely to be driven by their internal states, personal goals, and emotions.	Kraus et al. (2012)
	Socioeconomic status determines how much care support parents provide, which increases the likelihood of having a second child to affect the number of children born.	Jin, Zhao and Song (2018)
2) Intergenerational socioeconomic status affects parents' willingness to bear children	The high socioeconomic status of elderly parents in the family is conducive to increasing the family's fertility probability. However, there are significant urban-rural differences.	Xu (2022)
3) Occupation status Affects fertility intention	Employment opportunities have an impact on fertility behavior (such as gender preference) and levels.	Ushie et al. (2011)
	Women employed in the formal sector have fewer children despite studies linking unemployment to falling fertility rates.	Babalola and Akor (2013)
	The more stable the career, the stronger the negative impact on female fertility.	Auer and Danzer (2016)

Table 2.4 Summary of Research on the Effect of Socioeconomic Status on Fertility Intention (Cont.)

Aspect	Findings	Authors(year)
4) Relationship between individual socioeconomic status (SES) and fertility	Higher personal social status is negatively associated with fertility in many high-income countries, whereas in Nordic countries, especially for men, there is a positive relationship between social status and fertility.	Begall and Mills (2013); Jalovaara et al. (2019); Skirbekk (2008)
	Changing socioeconomic differences in marital fertility are examined and related to common theories of reproductive behavior. The idea that the upper classes act as forerunners by lowering fertility before other groups are found.	Dribe et al. (2017)
	Higher socioeconomic status is linked to better health outcomes and lower levels of stress, which can positively influence fertility intentions.	Myrskylä and Margolis (2014)

Related Research to Fertility Attitude

At the current stage, both paths point to the cost effect of economic factors on fertility behavior. The cultural perspective based on ideology emphasizes the important influence of cultural factors rather than family bargaining power endowed by economic resources on women's fertility behavior (Alesina, Giuliano, & Nunn, 2013; Giavazzi, Schiantarelli, & Serafinelli, 2013; Kishor & Subaiya, 2008; Lesthaeghe & Jolly, 1995; Vitali & Billari, 2017). The culture here mainly refers to social norms, personal beliefs, or personal values and preferences (Alesina, Giuliano, & Nunn, 2013), especially as the "core" ideology of individuals, which have a significant impact on women's behavioral decisions (Giavazzi, Schiantarelli, & Serafinelli, 2013). The spread of postmodern values has eroded the traditional view of family life and promoted the formation of more individualistic lifestyles and the emphasis on "higher-order" needs such as self-actualization (Esping-Andersen & Billari, 2015). Miller and Pasta (1995) pointed out that

from fertility intention to fertility behavior is a sequential decision-making and action process, that is, fertility motivation → fertility intention → fertility intention → fertility behavior → fertility rate. Women's fertility attitudes, subjective norms, and behavioral control all have a significant impact on the differences between fertility intention and fertility behaviors, and the formulation of family planning is an important driving force for the realization of fertility intention (Mao & Luo, 2013). The impact of childbearing policy on childbearing behavior is gradually weakening. The childbearing behavior of modern women of childbearing age is greatly influenced by personal characteristics. Childbearing behavior has gradually shifted from passive to active, and childbearing choices tend to be rational (Wang, Liang, & Peng, 2015; Zhou, Wu, & An, 2018). Khorram et al. (2017) believed that fertility attitude has a positive impact on fertility intention. Holland and Keizer (2015) found that underlying fertility attitudes have a strong impact on fertility motivation.

Table 2.5 Summary of Research on the Effect of Fertility Attitude on Fertility Intention

Factors	Findings	Authors
Fertility attitudes	The important influence of cultural factors rather than family bargaining power endowed by economic resources on women's fertility behavior.	Vitali and Billari (2017)
	Societal norms, personal beliefs, or personal values and preferences have an impact on fertility.	Alesina, Giuliano and Nunn (2013)
	As the "core" ideology of individuals, which have a significant impact on women's behavioral decisions.	Giavazzi, Schiantarelli and Serafinelli (2013)
	The spread of postmodern values has eroded traditional views of family life, favoring smaller family sizes.	Esping-Andersen and Billari (2015)
	Fertility attitude has a positive impact on fertility intention.	Khorram et al. (2017)
	Underlying fertility attitudes have a strong impact on fertility motivation.	Holland and Keizer (2015)
	Attitudes towards motherhood desire, partner expectations towards fertility, and beliefs in population fertility policies are significant predictors of fertility intention.	Matera et al. (2023)

Table 2.5 Summary of Research on the Effect of Fertility Attitude on Fertility Intention (Cont.)

Factors	Findings	Authors
	There is a negative relationship between attitudes towards fertility and intentions to use contraceptive methods.	Öner and Sis Çelik (2023)

Related Research to Health

Generally speaking, mothers who are relatively satisfied with their family status have higher happiness. According to Oswald, Proto and Sgroi (2015); Schnall, Roper and Fessler (2010), people with higher levels of happiness tend to have a good vision for the future, and they not only have more positive emotions but also tend to engage in altruistic behavior. And having children and letting them share happiness can be regarded as a manifestation of altruistic behavior (Zhu & Yang, 2017). There are personality aspects, such as extraversion, conscientiousness, or neuroticism, that have been studied to be associated with fertility outcomes (Jokela, 2012; Siedlecki et al., 2014). Mehta et al. (2018) studied Thailand's fertility incentive policy and surveyed fertility intention after Thailand's fertility incentive policy. The study shows that government livelihood financial support to build a public environment conducive to a fertility climate is conducive to achieving policy goals, and at the same time, the government should make active fiscal measures in response to population changes.

This is supported by previous findings suggesting that the role of partnership status for fertility is well understood (Balbo, Billari, & Mills, 2013). Cohabiting individuals have higher fertility than non-cohabiting individuals (Baizán, Aassve, & Billari, 2003; Laplante & Fostik, 2015), and fertility is higher for married than for cohabiting couples (Spéder & Kapitány, 2009). Besides, there is evidence to suggest that individuals with health issues tend to have less desire for having children compared to those who are healthy (Cvancarova et al., 2009). Tocchioni (2018) proved that health issues may decrease one's chances of entering into a stable marriage, while remaining single is one of the primary pathways to childlessness in developed countries.

Table 2.6 Summary of Research on the Effect of Health on Fertility Intention

Factors	Findings	Authors
Health	People with higher levels of happiness tend to have a good vision for the future, and they not only have more positive emotions but also tend to engage in altruistic behavior.	Schnall, Roper and Fessler (2010), Oswald, Proto and Sgroi (2015)
	Poor health negatively affects migrants' fertility intention, net of a wide array of control variables (including employment and reason for migration).	Alderotti and Trappolini (2022)
	Improved health status has a significant impact on fertility intention.	Huang, Miao and Lyu (2023)
	Having children and letting them share happiness can be regarded as a manifestation of altruistic behavior.	Zhu and Yang (2017)
	Individuals with health issues tend to have less desire for having children compared to those who are healthy.	Cvancarova et al. (2009)
	Health issues may decrease one's chances of entering into a stable marriage, while remaining single is one of the primary pathways to childlessness in developed countries.	Tocchioni (2018)

Related Research to Social Trust & Support

For women who have achieved intergenerational upward mobility, they will have more resources and social relations than their parents. And generally speaking, the expected consumption level of offspring is mainly shaped by the family environment in early childhood and changes little thereafter (Easterlin, 1968). Therefore, after satisfying their own material and cultural consumption needs, they will use more surplus resources to expand the family size. Finally, in families with a higher husband's participation in housework, wives are more likely to perceive an equal gender division of housework/childcare and may have a correspondingly stronger desire to have children without delaying childbirth (Esping-Andersen & Billari, 2015). Family support from parents or in-laws (Tanskanen & Rotkirch, 2014; Yoon, 2017). Social support for couples' pregnancy and raising (Lois & Becker, 2014), and reduction of corporate social security expenditures Enterprise support such as increasing tax incentives and encouraging new work models (Cao, 2017) has a positive effect on the actual childbearing behavior of women of childbearing age. Kulkova and Sharin (2020), who focused on

examining the impact of factors such as subsidies for young families, benefits for each child, and the assistance of older parents in raising children on fertility intentions. In terms of social trust and support, research shows that the intention to have a child is supported by family and friends, the more likely they are to want a child now (Dommermuth, Klobas, & Lappegård, 2011).

Table 2.7 Summary of Research on the Effect of Social Trust & Support on Fertility Intention

Factors	Findings	Authors
Social trust & support	In families with a higher husband's participation in housework, wives are more likely to perceive an equal gender division of housework/childcare and may have a stronger desire to have baby.	Esping - Andersen and Billari (2015)
	Those with family support from parents or in-laws had a stronger desire to have children.	Tanskanen and Rotkirch (2014); Yoon (2017)
	Obtaining social support through increasing the reduction or exemption of corporate social security expenses affect couples' pregnancy.	Lois (2014)
	Social trust & support has a positive effect on the actual childbearing behavior of women of childbearing age.	Cao (2017)
	The intention to have a child is supported by family and friends, the more likely they are to want a child now.	Dommermuth, Klobas, & Lappegård (2011)
	The impact of factors such as subsidies for young families, benefits for each child, and the assistance of older parents in raising children on fertility intentions.	Kulkova and Sharin (2020)

2.3.2 Related Research on Human Capital with Subjective Well-being

The definition of well-being is: "the ability to develop one's potential, work creatively, build strong and positive relationships with others, and contribute to the community" (Beddington et al., 2008). The term "well-being" encompasses several different concepts, involving aspects such as life satisfaction, social functioning, and quality of life, among other practical dimensions (Diener, 2009; Kahneman & Krueger,

2006; Kashdan, 2004; Ryff & Keyes, 1995). Distinguishing between an individual's subjective concept of well-being and the objective or external factors that drive or influence well-being can be useful. Separating external factors may prove beneficial.

Subjective well-being involves individuals' self-reported assessments of their own happiness; an individual's evaluation of their environmental conditions, behavioral responses, and the subjective consequences of this process (Michaelson, Mahony, & Schifferes, 2012). Subjective indicators of well-being refer to asking individuals about their feelings, experiences, and how they assess their overall life (Michaelson, Mahony, & Schifferes, 2012). In contrast to more traditional approaches that use objective indicators, which do not consider human perceptions, human perceptions form the basis for understanding individual well-being (Bergsma, 2010).

Objective and subjective well-being are the foundation of many international economic strategic recommendations, and there is an increasing need for measurement and monitoring in policy formulation and evaluation (Michaelson, Mahony, & Schifferes, 2012). Therefore, the effective and reliable measurement of subjective well-being is a crucial topic in economics and social sciences (Easterlin, 2004).

Human capital is the sum of abilities and resources acquired by an individual in the social and economic environment. The relationship between human capital and subjective well-being has always been a research topic of great concern in the field of social sciences, with many literatures exploring various aspects of human capital.

A range of studies have shown a relationship between education level and subjective well-being. Well-educated individuals are usually better able to adapt to social changes and have stronger problem-solving abilities, which are crucial to satisfying individuals' intrinsic needs and improving subjective well-being. Witter et al. (1984) pointed out that education has a positive impact on subjective well-being (SWB). Higher education, especially a college degree, is associated with higher levels of subjective well-being (Jiménez, Caselles, & Jiménez, 2011). However, secondary education (such as high school) has no significant impact on subjective well-being (Kristoffersen, 2018). The relationship between academic performance and subjective well-being is small to moderate (Bücker et al., 2018). In terms of skills, the more people believe they have achieved what they value in their careers and demonstrated positive progress towards

their goals, the more they experience happiness in life and the more they are able to thrive at work (Oliveira-Silva & Porto, 2021). Job resources (which include skill utilization and personal growth) are positively related to overall subjective well-being (Claes et al., 2023). Besides, practical skills may make individuals more competitive and help better adapt to changes in the work environment, which may enhance subjective well-being. Furthermore, access to health insurance plays an important role in improving subjective well-being (Kim & Koh, 2022). Low-achieving students do not necessarily report low well-being, nor do high-achieving students automatically experience high levels of well-being (Yakovlev & Leguizamon, 2012). In addition, Zhao (2022) found that Employment, education level, income level and regional medical level will significantly contribute to an individual's subjective well-being. Subjective well-being is considered to include cognitive judgment dimensions reflecting life satisfaction and Emotional appraisals, characterized by positive and negative affect, are associated with important outcomes. For example, research shows that happy people tend to have greater social rewards, better work results, greater coping skills, better immune systems, are more cooperative, prosocial, and charitable, and live longer than unhappy people (Lyubomirsky, King, & Diener, 2005). Fathers are always happier than non-fathers, no matter the circumstances of the country where they reside (Aassve, Mencarini, & Sironi, 2015). The association between socioeconomic status and subjective well-being depends on whether socioeconomic status is objectively or subjectively assessed. Subjective socioeconomic status measures are more strongly associated with subjective well-being than objective socioeconomic status measures (Tan et al., 2020). Health status is also positively related to higher subjective well-being, and improving people's health status is a means for governments around the world to improve citizens' subjective well-being (Ngamaba, Panagioti, & Armitage, 2017). In addition, social trust & support is also directly related to happiness, providing a basis for subsequent analysis of the effect of subjective well-being (Esping-Andersen & Billari, 2015). In terms of social trust and support, Siedlecki et al. (2014) found that social support has an important impact on subjective well-being, and has a very important influence in different age group.

Table 2.8 Related Research on Human Capital with Subjective Well-being

Author	Main conclusion	Method	Gap	Contribution
Witter et al. (1984)	Education is positively related to subjective well-being. The relation is stronger in women and older adults.	Meta-analytic research synthesis. Coding process and statistical analysis.	No differences found between whites and blacks. Relation between education and well-being is small.	Education is a small but positive contributor to adult subjective well-being. The relation between education and subjective well-being is stronger in samples of women than men and in older than younger adults.
Jiménez, Caselles and Jiménez (2011)	Education has varying effects on subjective wellbeing across the distribution. Good skills or training, unmet aspirations lead to psychological cost.	Quantile regression analysis. Analysis of educational mismatches.	Education's impact on subjective well-being varies across the distribution. The "aspiration mechanism" weakens as we move along the distribution.	Impact of education on subjective wellbeing varies across the distribution. Education generates aspirations for job expectations.
Kristoffersen (2018)	Moderate rightward drifts in satisfaction with life. Positive associations with financial circumstances and health.	Panel data analysis from HILDA Survey. Evaluation of differences in reference points across education levels.	Scarce, inconsistent, and poorly understood evidence. Negative association between education and subjective well-being.	Examines association between education and subjective well-being. Evaluates differences in reference points across education levels.

Table 2.8 Related Research on Human Capital with Subjective Well-being (Cont.)

Author	Main conclusion	Method	Gap	Contribution
Bücker et al. (2018)	SWB and academic achievement have a small to medium positive correlation ($r = .164$) - There is little evidence for a file-drawer problem in the meta-analysis.	Meta-analysis of 47 studies with 38,946 participants. Investigated association between SWB and academic achievement.	Predominantly White/Caucasian samples used in studies. Lack of data on ability level, intelligence, motives, test anxiety, academic engagement, and socioeconomic status.	Investigated association between SWB and academic achievement. Explored demographic and methodological moderators.
Yakovlev and Leguizamon (2012)	Higher education has a positive effect on subjective well-being (SWB). There is no statistically significant educational spillover on SWB across state borders.	3SLS model used to estimate impact of education, income, and health on subjective well-being. Spatial weight matrix used to test for spillover effect of neighboring states' educational attainment.	Data limitations for investigating effects of educated migrants. Lack of exploration of within-state spatial spillover effects.	Estimating the impact of education on subjective well-being. Exploring the role of education in self-reported happiness.
Zhao (2022)	Employment, education level, income level and regional medical level will significantly contribute to an individual's subjective well-being.	Logic regression model. Using OLS, Robustness test of probit model and adding control variables.	The selection range of variables is small, and the selection of the number of variables is unconvincing.	Research has found that there is an "inverted U-shaped" relationship between the number of siblings and individual subjective well-being.

Table 2.8 Related Research on Human Capital with Subjective Well-being (Cont.)

Author	Main conclusion	Method	Gap	Contribution
Tan et al. (2020)	Objective SES and subjective SES are moderately correlated. Subjective SES is more strongly related to SWB than objective SES.	Meta-analysis of 357 studies. Synthesis of objective and subjective socioeconomic status measures.	Common method variance in subjective SES-SWB association. Role of social comparisons and other processes in SES-SWB links.	Objective SES and subjective SES are moderately associated. Subjective SES has a larger association with SWB compared to objective SES.
Siedlecki et al. (2014)	Subjective well-being was predicted by enactment and perceived support, with no differences across age groups.	Collect data through online questionnaire survey and use structural equation model for measurement.	The findings may not be generalizable to unhealthy and relatively independent populations; the sample consisted primarily of white participants; longitudinal studies cannot be done.	Social support is further divided into the following components - social integration or embeddedness, enacted support and perceived support.

2.3.3 Related Research on Subjective Well-being with Fertility Intention

Traditional economic theory of fertility (Becker, 1960), the Value of Children approach (Hoffman & Christianson, 1978; Hoffman, 1973) and intergenerational wealth mobility theory (Caldwell, Reddy, & Caldwell, 1982) all explain the persistence of high fertility rates, recognizing that having a large number of children is seen as a value because the children represent a source of labor and support as they grow, thus benefiting primarily older parents.

In addition to tangible value, children also bring intangible value to their parents' stage of life. This feature has prompted a series of studies that measure the potential benefits of childbearing by reporting life satisfaction or subjective well-being and assess the costs and benefits of children in terms of economic outcomes. However, this line of research on fertility intentions or behavior mainly involves developed countries (Aassve, Goisis, & Sironi, 2012; Myrskylä & Margolis, 2014; Nomaguchi & Milkie, 2003; Pollmann-Schult, 2014).

Subjective well-being has been found to have an impact on fertility intentions (Matsuo & Matthijs, 2016; Vignoli, Mencarini, & Alderotti, 2020). The level of subjective well-being (including factors such as life satisfaction, work-life balance, and welfare provision) affects the relationship between uncertain working conditions and fertility intentions (Buh, 2023). When subjective well-being is relatively low, jobs with uncertain conditions will have a negative impact on fertility intentions (Amare et al., 2019; Le Moglie, Mencarini, & Rapallini, 2015). After controlling the role of personality traits, it was found that increased subjective well-being will positively affect fertility behavior. In addition, objective well-being factors at the individual level have a greater impact on fertility intention than subjective well-being factors at the individual level and well-being factors at the national level (Zhang & Gong, 2022). The importance of country-level well-being effects on fertility intentions increases with age and parity. Subjective well-being therefore plays an important role in shaping fertility intentions, and policies aimed at improving well-being, particularly related to working conditions and country-level factors, can have a positive impact on fertility.

According to the above related literature, the impact of human capital on subjective well-being and the impact of subjective well-being on fertility intention. Some

researched have proved this point. Vignoli, Mencarini and Alderotti (2020) has confirmed that the impact of job uncertainty on fertility intention is mediated by subjective well-being, and that job uncertainty has a strong relationship with individual human capital levels. Further, Pertold-Gebicka (2022) found that parents' subjective well-being reveals the subjectively perceived costs and benefits of having children, and is considered by many to be a proxy for utility. The financial and time costs of raising children contribute to a decrease in the happiness of many parents and indirectly affect the desire to have children. That is, parents of higher socioeconomic status and those living in countries with generous family support generally have positive fertility intentions. In addition, Xiao, Chang and Lian (2023) found that happiness plays an important mediating role between residential mobility and fertility intention. Higher residential mobility means lower human capital, which leads to lower subjective well-being and lower fertility intentions. This study uses subjective well-being as a mediate variable. From the perspective of child cost-benefit theory, it is believed that different levels of human capital affect subjective well-being from the perspective of personal cognition and economic costs. From the perspective of benefits, if children are regarded as one of the intangible values and sources of happiness, subjective well-being will have an impact on the willingness to have children.

2.3.4 Summary of Related Research on Fertility Intention

Fertility intention refers to people's attitudes and views on fertility behavior, including four aspects: number, gender, time, and motivation the number of children they wish to have, their gender, birth interval, and purpose of childbearing. Fertility intention reflects people's fertility needs and determines and affects fertility decision-making to a certain extent. Although there may be a certain degree of deviation between childbearing intention and actual childbearing behavior, it is of great significance to scientifically judge the future birth rate by understanding the current fertility needs of urban and rural residents and the socio-economic factors affecting childbearing behavior through childbirth intention surveys.

To sum up, the factors affecting the intention to bear children are complex. In terms of personal factors, age, education level, ethnicity, household registration status, child structure, gender preference, and occupational income. Zhang and Wang (2015)

affect the intention to bear children. In addition, physical health (Cheng & He, 2018) and mobility intention (Zang & Liu, 2017) are also important influencing factors. In terms of family factors, family structure (Snopkowski & Sear, 2013), family income level (Zhou, 2018), parental preference (Axinn, Clarkberg, & Thornton, 1994; Kumar, Bordone, & Muttarak, 2016), and cost of child-rearing Chen and Gu (2014); Jin, Zhao and Song (2018) have become important factors affecting the intention to bear children. In terms of social factors, the level of economic development is significantly negatively correlated with the intention to have children (Hou, Huang, & Xin, 2014; Zakaria et al., 2017), and the guiding and restrictive role of the birth policy is gradually weakening (Jia & Luo, 2018). The change in the modern concept of childbearing has weakened childbearing intention to a certain extent, and the influence of social interaction has become prominent. With the expansion of family size, the demand for housing also increases accordingly. When housing prices rise rapidly, families will face greater pressure in raising children and buying houses for their children to marry (Yi & Yi, 2008) and may not be conducive to the release of family fertility wishes.



Table 2.9 Summary of Research on the Effect of Fertility Intention

Variables	Methodology	Findings	Gap	Authors
Policy changes, family economic status, educational attainment, and occupation type	Statistical analysis of the Chinese Happy Families Survey sample.	Policy changes, family economic status, education level, and occupation type all affect the second-child birth, and there are regional heterogeneous differences.	Only quantitative methods were considered, which may not provide sufficient insight into underlying motivations and mindsets.	Zhang and Wang (2015)
Economic status, family support, education level, and occupational choice	Questionnaires and Markov chain analysis models type.	Economic status and family support are key factors affecting women's willingness to have a second child. Educational level and occupational choice also influence reproductive decisions. More flexible work and parenting support can boost women's desire to have children	Research limited by data availability and model assumptions; some underlying sociocultural factors that may influence women's desire to have children were not considered.	Cheng and He (2018)
Intention to have a second child	The probit model was established and analyzed by sporadic regression.	Families with higher levels of participation in endowment insurance may be more inclined to consider having a second child; willingness to migrate may affect rural residents' willingness to have children.	Quantitative data collection can be subject to sample selection bias while qualitative research can be subject to respondents' subjective awareness and bias.	Zhang (2017)

Table 2.9 Summary of Research on the Effect of Fertility Intention (Cont.)

Variables	Methodology	Findings	Gap	Authors
Kin influences play a significant role in shaping fertility decisions	Mixing qualitative and quantitative: In-depth interviews and questionnaires.	Kin influence plays an important role in reproductive decision-making in Thailand. Individuals with larger, more supportive kin networks tend to have higher fertility rates.	Potential variations in kinship influence across different socioeconomic and cultural contexts in Thailand have not been thoroughly examined.	Snopkowski and Sear (2013)
Fertility preference	Qualitative research design, mainly using in-depth interviews and focus group discussions.	Family size is influenced by parents, siblings and other family members. Family expectations, cultural norms, and economic considerations are also important factors influencing preferences.	The qualitative nature of the study may limit its ability to quantify the influence of families in different contexts and demographics.	Axinn, Clarkberg and Thornton (1994); Kumar, Bordone and Muttarak (2016)
Childcare costs	Logistic regression, discrete-time event history analysis and SEM model.	The willingness of Shanghai residents to have children with the improvement of education level and the increase of career opportunities, some families are more inclined to the concept of small family.	It is necessary to further explore the long-term impact of factors such as urbanization, social policies, and social concepts on changes in fertility intention.	Chen and Gu (2014)

Table 2.9 Summary of Research on the Effect of Fertility Intention (Cont.)

Variables	Methodology	Findings	Gap	Authors
The level of economic development	Cross temporal meta-analysis.	With the development of social economy and the adjustment of policies, the willingness to bear children is gradually diversified.	Future research can further explore the impact of social policies, family structure, education and other factors on the changes in the willingness of the Chinese population to have children.	Hou, Huang and Xin (2014)
Economy development	OLS model, FMOLS and DOLS procedures.	Higher levels of financial development, including improved access to credit, banking services, and economic opportunities, might correlate with lower fertility rates.	The study might face limitations related to data availability, cultural differences, and the complexity of demographic behaviors.	Zakaria et al. (2017)
Fertility policy	In-depth interviews and statistical survey analysis.	The early studies of my country's fertility intention research focused on the implementation and impact of the family planning policy, and later gradually focused on the impact of social and economic development, education level, family structure, and family and marriage concepts on fertility intention.	The complex relationship between social change and reproductive intention needs further research.	Jia and Luo (2018)

2.3.5 Portrait of Moderator Variables

Through some literature reviews and interviews with experts and scholars in related fields, the author found that occupational flexibility and local leave policy satisfaction may have a moderating effect on human capital's impact on fertility intentions. Therefore, this paper uses occupational flexibility and satisfaction with leave policies in various regions as moderating variables, which has important theoretical and empirical significance for studying the impact of human capital on fertility intentions. The following is explanation of these two moderator variables.

Occupational Flexibility

This study adheres to Goldin (2014), defining flexibility as an occupational feature that enables workers to choose their work hours and location without facing penalties. According to Benny, Bhalotra and Fernández (2021), occupational flexibility is divided into five aspects. The five aspects are derived from the O*NET database, which lists detailed information on occupational characteristics based on surveys of the U.S. employers and has been used in research. Because China's national conditions are different from those of the United States, when conducting a questionnaire survey in this paper, subjects will evaluate their occupational flexibility based on a score of 1-5 and then use the average score to determine whether the subject's occupation is flexible. These five aspects are as follows:

1) Time Pressure: The frequency of requiring workers to complete tasks within strict deadlines. The lower the time pressure, the more flexible the occupation is, as workers do not need to consistently meet deadlines.

2) Interaction with Others: The extent to which a job requires workers to interact with others whether face-to-face, via telephone, or through other means—to accomplish tasks. The more contact required by the job, the less flexibility, as employees may have limited control over their schedules.

3) Building and Maintaining Interpersonal Relationships: Assessing the importance of interpersonal relationships in the job and the extent to which workers need to establish and maintain constructive and cooperative working relationships with others (such as clients or colleagues). The more relationships employees need to maintain, the less flexible their work hours.

4) Structured vs. Unstructured Work: The degree to which a job structures tasks for workers, as opposed to allowing them to determine tasks, priorities, and goals. The fewer restrictions imposed by the job, the greater the flexibility.

5) Decision-making Autonomy: Measuring how much decision-making autonomy is provided when working unsupervised. Higher levels of decision-making autonomy indicate that the job is specifically tailored for the worker, making it difficult for other workers to perform the same tasks, thereby reducing flexibility.

This concept is particularly important in the context of family fertility decision-making. Higher occupational flexibility may have a positive impact on fertility intentions by making it easier for individuals to balance work and family responsibilities. For individuals who pursue occupational development but care about family life, occupational flexibility provides more choices and may alleviate the negative impact of work pressure on fertility intentions. Particularly in women's careers, occupational flexibility may become an important decision-making factor. Women are more likely to consider their future childbearing responsibilities while pursuing occupational development. Therefore, increased occupational flexibility may make women more willing to consider having children, especially to find a better balance between work and family responsibilities. Occupational flexibility may also moderate the relationship between human capital and fertility intentions. Having greater flexibility in the work environment may compensate for the negative impact of human capital on fertility intentions, making it easier for individuals with high human capital to balance career and family.

This paper hypothesizes that occupational flexibility plays a moderating role in the influence of human capital on fertility intention. Based on Becker's (1991) theory, children are considered consumer goods and therefore compete with other household consumption; Just like any other commodity, children provide utility to their parents, but they also require an investment of money and time. It should be noted that occupational flexibility in this study refers to job's flexibility (whether time is flexible, whether there is independent decision-making power, etc.), rather than occupational instability. Fiori et al. (2013); Kreyenfeld and Andersson (2014) has shown that being unemployed or having a temporary (or low-paid) job reduces people's willingness to

have a first or second child. This study only discusses occupational flexibility. The impact of career instability on fertility intentions will be studied in depth in future papers.

The flexibility of the profession reduces the cost of time and provides more time for parenting from the perspective of time cost. From a cost-benefit perspective, parents can reap more benefits from their children. From the perspective of economic costs, flexible occupations represent income instability to some extent, which may have a depressing effect on fertility intentions (Alderotti et al., 2021; Modena, Rondinelli, & Sabatini, 2014). Additionally, Shreffler et al. (2016) indicate that women who work in more professional jobs (e.g., occupations with greater prestige, autonomy, complexity, and supervisory characteristics) are more likely to postpone childbearing than women employed in jobs with lower scores on professional characteristics. Women who are employed in the formal sector have fewer children despite studies linking unemployment to declining fertility rates (Babalola & Akor, 2013). Moreover, Auer and Danzer (2016) studied the impact of having or not having a fixed-term contract on fertility based on data from the German Social and Economic Council and found that the more stable the career, the stronger the negative impact on female fertility. In terms of a male's perspective, occupational flexibility makes it easier for individuals to balance career and family responsibilities, thereby affecting their fertility intention (Xue, 2022). Therefore, this paper hypothesizes that occupational flexibility increases or inhibits the impact of human capital on fertility intention. And there are differences according to different human capital and different genders. Having children provides the opportunity to play the role of housewife and mother as an alternative to paid employment (Mills et al., 2008).

Leave Policy Satisfaction

Some literatures have found that leave policy has an important impact on fertility intentions. Governments in low-fertility countries use family policies to boost fertility (Raute, 2019; Rindfuss, Choe, & Brauner-Otto, 2016). Family policy usually aims to in supporting parents in meeting their caring responsibilities and improving the well-being of parents and children (Eydal, Rostgaard, & Hiilamo, 2018). Family policies can be categorized as child-related cash transfers, childcare subsidies, or financial support

through the tax system (OECD, 2019a). In cash transfers for children, parental, maternity and paternity leave policies (hereinafter referred to as "leave") refer to state-mandated arrangements for parents to take leave during pregnancy or after childbirth. This research focuses on leave policy, rather than other family policies, because leave increases domestic gender inequality, which has been identified as a key cause of low fertility (Goldscheider, Bernhardt, & Lappegård, 2015; Tamm, 2019). Additionally, researchers have increasingly argued that increasing tensions between career ambitions and ongoing gendered family obligations mean that women's abilities with family life become more limited, which in turn appears to lead to lower fertility (Baizan, Arpino, & Delclós, 2016; Duvander et al., 2016; Meier & Rainer, 2017). However, whether taking time off actually increases fertility is still a controversial issue (Balbo, Billari, & Mills, 2013; Hoem, 2008; Olivetti & Petrongolo, 2017). Similarly, Bergsvik, Fauske and Hart (2020) review of the effect of family policies on fertility concludes that the effect of leave on fertility is ambiguous. Thomas et al. (2022) also found that leave policy can moderate fertility intentions especially the leave policy is generous. Differences in leave policies in different regions may lead to significant differences in individual childbearing decisions. Satisfaction with a leave policy may reflect an individual's perception of whether the policy contributes to work and family balance. Friendly leave policies in some regions may make individuals more confident in balancing occupational and family, thus having a positive impact on fertility intentions. In terms for female, based on previous literature review, a reasonable explanation for the results of this study is that for a woman, the "fertility penalty" she faces due to childbirth cannot be offset by longer vacation time (Evertsson & Duvander, 2011). In fact, the opportunity cost of childbearing faced by women ---- time and energy, as well as the inability to effectively guarantee employment is too high (Raute, 2019). It may provide more social support and make individuals more confident to face the challenges of childbearing. When faced with the conflict between occupational development and childbearing responsibilities, a highly satisfying leave policy may reduce the social cost of childbearing, thereby promoting fertility intentions. Social, cultural and economic differences across regions may lead to significant differences in leave policies satisfaction. Therefore, using leave policy satisfaction as a moderating variable helps to take into account the impact of regional factors on the

relationship between human capital and fertility intentions. The picture below shows the leave policies of the top five most populous provinces in China. Since 2021, Chinese mainland provinces have successively revised the Regulations on Population Planning and Childbirth, and the leave system of each province has changed compared with before (120 days parental leave), and different provinces also have different regulations. This policy has been revised in 2022. In the questionnaire survey, subjects are asked about their satisfaction with the policy based on the latest policy to evaluate the effect of the leave policy.

Table 2.10 Leave Policies of the Top Five Most Populous Provinces in China in 2022

Province	New leave policy		
	Maternity(female)	Paternity(male)	Parental leave
Guangdong	178	15	None
Shandong	158	7	Husband and wife can take no less than 10 days of leave each year until the child reaches the age of 3
Henan	190	30	Husband and wife can take 10 days off each year until the child reaches the age of 3
Jiangsu	128	15	Males are encouraged to take no less than 5 days of leave per year in their employers
Sichuan	158	20	Husband and wife can take a total of 10 days of leave each year until the child reaches the age of three

By using occupational flexibility and leaving policy satisfaction in various regions as moderating variables, this paper is expected to deeply explore the detailed moderating effects of these two factors on the relationship between human capital and fertility intentions and provide a more comprehensive and accurate understanding of fertility decisions.

2.4 Conceptual Framework

In the framework model part, this paper combines theory and previous research to establish a conceptual framework that comprehensively considers human capital, subjective well-being, occupational flexibility and leave policy satisfaction. This model aims to provide insight into the complex relationships between these variables and their combined impact on fertility intentions. In the next chapter, the measurement methods and operational definitions of each variable are explained in detail, and the methods and analysis strategies that will be used in the study are clarified to lay the foundation for subsequent empirical research.

Through the literature review in these four parts, on the basis of introducing the research background, the theory and related research are systematically sorted out, and a specific framework model is constructed to provide strong support for the subsequent development of this study.

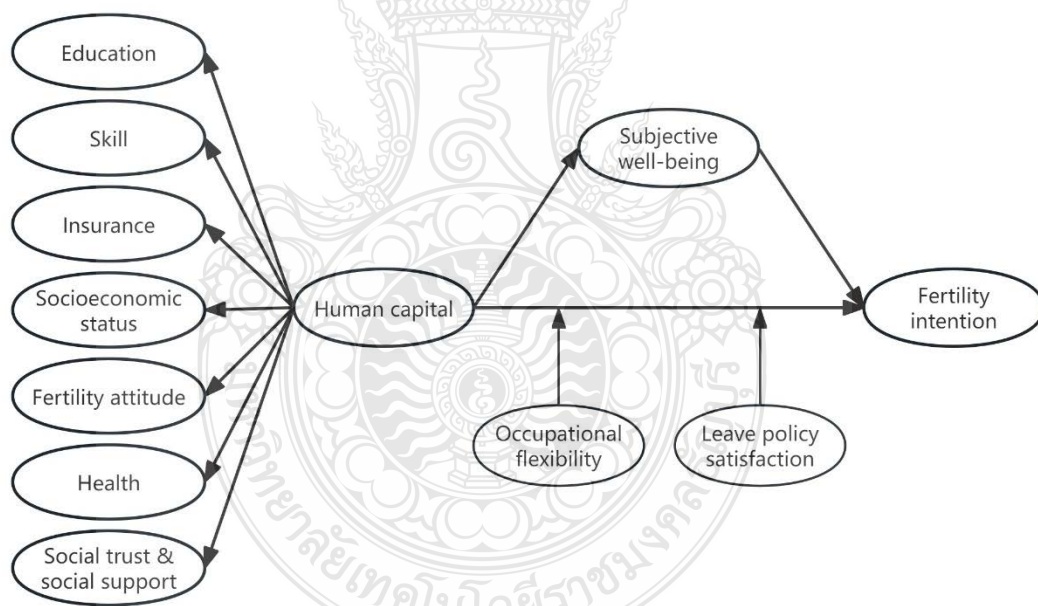


Figure 2.1 Conceptual Framework

HC is human capital (EDUC is education, SKILL is skill, ISR is insurance, SES is socioeconomic status, FA is fertility attitude, HLTH is health, ST&SP is social trust & support), FI is fertility intention, SWB is subjective well-being, OF is occupational flexibility, LPS is leave policy satisfaction.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the author adopts a mixed-methods approach, incorporating both qualitative and quantitative analyses. The focus centers around these key questions: The impact of human capital on fertility intention, the mediating effect of subjective well-being on human capital and fertility intention, the moderating effect of occupational flexibility and leave policy satisfaction on human capital and fertility intention. This study conducted a sample survey in the five most populous provinces in China in the form of a questionnaire survey. The chapter is divided into the following seven sections: introduction, research design, population and sample, data collection, research instrumentation, content validity and instrument reliability, and interpretation of analysis.

3.2 Research Design

This research explains the relations of human capital (education, skill, insurance, socioeconomic status, fertility attitude, health and social trust & support) that influence fertility intentions. The model treats subjective well-being as a mediating factor, occupational flexibility and leave policy satisfaction as moderating factors. In this study, human capital is a high order component, which is reflective-reflective HOC in a hierarchical component model (HCM). Human capital is high order component (HOC), the lower order components (LOCs) are education, skill, insurance, socioeconomic status, fertility attitude, health, and social trust & support.

This study used Smart pls 4 to evaluate the measurement model, and then SPSS PROCESS is used to test hypothesis. PLS-SEM method has flourished in various management fields in recent years and has become one of the multivariate analysis methods. Compared with SEM of LISREL and AMOS, the PLS method has lower requirements for measurement scales, sample size and residual distributions. The main advantages of PLS-SEM include relaxing the normal distribution assumption required by the maximum likelihood method for estimating models using CB-SEM, and the ability of PLS-SEM to estimate more complex models with smaller sample sizes (Hair et al., 2019;

Khan et al., 2019; Shiau, Sarstedt, & Hair, 2019). Additionally, SPSS PROCESS can analyze the model in more detail, so PROCESS is used to examine the path coefficient.

Table 3.1 The Definition and Abbreviation of Each Variable

Definition	Abbreviation
Subjective well-being: Subjective well-being concerns peoples' self-reported assessment of their own well-being; an individual's appraisal of a person's environmental circumstances, a person's behavioral response and the subjective consequences of that process (Michelson, 2012). The author used the modified BBC subjective well-being scale (BBC-SWB) from Eleanor et al. (2013) with 22 questions.	SWB
Fertility intention: Fertility intention refers to an individual's plans, expectations and wishes for future fertility. This concept involves an individual's concepts and intentions regarding whether to have children, when to have children, and how many children to have. In this study, the author chose three dimensions: child-bearing, child-timing, and child-number. Respectively represent whether you want to have children, the time of birth, and the number of children.	FI
Education: Education is the level by which individuals acquire knowledge, theory and general skills through formal learning and training systems. It involves the study of a systematic subject at school, university or other educational institution. In this study, respondents were assessed by asking subjects about their level of education and importance.	EDUC
Skill: Skill involves learning specific knowledge relevant to a particular job or industry. It can be acquired through workshops, on-the-job training, vocational courses, and professional development programs. Skill helps individuals adapt to changing job requirements and enhances their efficiency and effectiveness in their roles.	SKILL
Insurance: The extent of personal investment in social insurance and commercial insurance.	ISR
Social economic status: Socioeconomic status refers to the economic and social level position of a person or group in the social structure. It is used to describe its relative status and power in society.	SES
Fertility attitude: Fertility attitude refers to an individual's concepts and emotional tendencies towards fertility and family planning.	FA

Table 3.1 The Definition and Abbreviation of Each Variable (Cont.)

Definition	Abbreviation
Health: Health is a broad concept that encompasses physical, mental, and social well-being. It involves more than the absence of disease and includes personal satisfaction, mental well-being, and the attainment of one's potential (National Institutes of Health).	HLTH
Social trust & support: Social trust & support refer to the degree of trust an individual has in others in social interactions and the degree of support they can receive when facing difficulties.	ST&SP
Human capital: It refers to the sum of knowledge, skills, experience, and health condensed in people, and summarized it as innovation ability, the ability to learn, to deal with economic imbalances, to do useful work in individual. Human capital has two parts: implicit human capital and explicit human capital, which includes education, skill, insurance, socioeconomic status, fertility attitude, health, and social trust& support.	HC
Occupational flexibility: Occupational flexibility refers to the degree to which a job or occupation is adaptable and adjustable to different working conditions, needs and environments.	OF
Leave policy satisfaction: Parental, maternity and paternity leave policies (henceforth 'leave') refer to state mandated arrangements for parents to take time off work during pregnancy or after childbirth.	LPS

3.3 Population and Sample

This research mixed method research design between qualitative and quantitative methodology. Qualitative analysis utilizes an in-depth interview methodology. Quantitative analysis employs the method of questionnaire surveys.

3.3.1 Qualitative Methodology

Qualitative methods provide detailed explanations and descriptions of the procedures, situations, communication, experiences, and knowledge related to the research questions. Qualitative methods define two distinct levels of data collection, namely individual surveys and individual interviews. All of these levels encouraged a deep level of responses in an open-ended environment in the data collection process (Roberts et al., 2005). The study follows the concept outlined by Nastasi and Schensul (2005), who suggest interviewing key informants or conducting in-depth interviews with 12 individuals to obtain reliable insights into fertility intentions.

3.3.2 Quantitative Methodology

This study conducts theoretical validation by performing hypothesis testing on the multivariate variables within the research framework. This approach involves the collection, analysis, and integration of quantitative data. The research employs a questionnaire survey method for sample collection.

The size of the sample is prescribed to comprise of at least 10 - 20 examples per item (Hair Jr, Babin, & Anderson, 2010). Bentler and Chou (1987); Kline (2015) recommended that the sample size should be 10 times the number of items (ideally 20 times). A sample size of less than 5 times is insufficient for conducting significant tests of model effects. In this study, there are 59 items. Hence, the number of sampling items multiple 20 times should be 1,180 samples. Utilizing online survey sampling methods, samples were obtained through avenues such as social media and online survey platforms. Hence, the final number of samples issued was 1,180.

Data collection commenced from November to the end of December 2023, spanning a duration of two months. According to the data from the Seventh National Population Census of China (Table 3.2), the questionnaire survey for this study was conducted from the top five provinces with the largest population, and the subjects were people aged 20-49 (In China, the age of marriage for women must not be less than 20 years old. Besides, since the age of childbearing is postponed year by year, this study sets the latest age of the research object at 49 years old, which is also the age set by the China Fertility Survey).

Table 3.2 China's Top 10 Provinces with Permanent Residents

Rank	Province	Population (million)
1	Guangdong	126.013
2	Shandong	101.527
3	Henan	99.366
4	Jiangsu	84.748
5	Sichuan	83.675
6	Hubei	74.61
7	Hunan	66.445
8	Zhejiang	64.568

Table 3.2 China's Top 10 Provinces with Permanent Residents (Cont.)

Rank	Province	Population (million)
9	Anhui	61.027
10	Hubei	57.753

Stratified two-stage sampling scheme and a proportional allocation of samples were used to collect data. The first stage: four provinces were randomly selected among the top five provinces. The second stage: Determine the sample size of each province based on the proportion of its population. The final result is as follows (Table 3.3).

Table 3.3 Distribution Data of Population in four Provinces

Province	Population	Proportion	Sample Size
Guangdong	1,260,130	.307	362
Shandong	1,015,270	.247	291
Henan	993,660	.242	286
Sichuan	836,750	.204	241
	4,105,810		1,180

Data from Sichuan Provincial Census Yearbook and managed by author

3.4 Data Collection

The data collection for the questionnaire survey lasts for two months. This study finally collected sample data from four provinces according to the 7th China Census. Then allocated the number of people surveyed according to the proportion of each province in the table (Table 3.1). Samples were obtained through social media and online survey platforms.

The use of in-depth interview methods deep the understanding of research results by providing information generated by relevant questions. This interview included a total of 12 Chinese experts and scholars in related fields— manager in company human resource, manager in health committee, manager in population statistics bureau, expert in population development, professor in university human resource, professor in sociology, professor in psychology. A mixed methods approach was used to synthesize quantitative and qualitative data to more fully answer the research question.

3.5 Research Instrumentation

3.5.1 Qualitative Research

The in-depth interviews employ a semi-structured interview approach. This method not only focuses on predetermined questions but also allows respondents to introduce new topics or delve deeper into specific subjects during the interview process. The interviews are formulated by the researcher, then reviewed and improved by the supervisor, and subsequently categorized, analyzed, and summarized. The interview questions were divided into two parts:

Part 1: Inquiries about the respondents' demographic information, which included age, gender, household registration, marital status, salary (per month), and education level.

Part 2: Main questions regarding the influence of human capital and subjective well-being on fertility intentions were as follows:

- (1) How important do you think the concept of human capital is to understanding fertility intention?
- (2) Do you think human capital has influence on subjective well-being? Why?
- (3) In your research or professional experience, is there a relationship between subjective well-being and fertility intentions?
- (4) What factors do you think may moderate the impact of human capital on fertility intention? Why?
- (5) Do you think policy satisfaction may be a key variable moderating the relationship between human capital and fertility intention?
- (6) Starting from the personal professional field, in what ways does occupational flexibility moderate the impact of human capital on fertility intentions?

3.5.2 Quantitative Research

The research instrumentation was a specifically designed survey questionnaire that encompassed all variables within the framework. The instruments for this study were divided into six sections, which together constitute a single questionnaire.

(1) The first section of the questionnaire investigated the demographic information of the respondents, including age, gender, nature of household registration, marital status, salary range, and education degree.

(2) The second section of the questionnaire was human capital, which included education, skill, insurance, socioeconomic status, fertility attitude, health and social trust & support. Educational levels were categorized into different levels and importance (Wang & Wang, 2016). Skill was quantified using the frequency of skills training, frequency of professional field job training and professionalism in work by Zhang and Cui (2020) and CGSS data. Insurance was determined based on the extent of individual participation in social insurance and commercial insurance (Zhang & Cui, 2020). Socioeconomic status was evaluated through the feelings of power (Anderson, John, & Keltner, 2012). Fertility attitudes were assessed by posing questions to participants about their viewpoints on fertility (Söderberg et al., 2013). Health was evaluated through self-assessment of physical and mental well-being (Chin-Ching et al., 2018). Social trust & support were gauged based on individuals' perceived level of trust and support within both family, friends and society from CGSS.

(3) The third section of the questionnaire was subjective well-being, which was from a UK validation of a general measure of subjective well-being scores including 22 questions.

(4) The fourth section of the questionnaire was fertility intentions, which included child-bearing, child-timing, and child-number (Miller, 2011).

(5) The fifth section of the questionnaire was to collect the occupational flexibility of respondents according to Benny, Bhalotra and Fernández (2021).

(6) The last section of the questionnaire was to ask the respondents whether they were satisfied with local leave policy or not.

As the independent variable, human capital was a higher-order construct (HOC), which included seven lower-order constructs (LOC): education, skill, insurance, socioeconomic status, fertility attitude, health and social trust & support. Here below were the scales on lower order construct (Table 3.4). As the mediate variable, the author used the modified BBC subjective well-being scale (BBC-SWB) from Myrskylä and Margolis (2014). As the dependent variable, according to the fertility intention questionnaire in

Brzozowska and Beaujouan (2021) and the model prediction of fertility intention in Miller (2011), fertility intentions were divided into three parts. In this study, occupational flexibility and leave policy satisfaction were moderators. Occupational flexibility was based on the five questions evaluated by O*NET (Benny, Bhalotra, & Fernández, 2021). Here below were the scales on occupational flexibility and leave policy satisfaction (Table 3.7).

This study simplified data processing and interpretation by coding variables. The abbreviations used for variables and scale were shown in Table 3.4.

Table 3.4 Abbreviation and Sources of Constructs

Construct		Sources
Human capital (HC)	Education (EDUC)	Educ1. In terms of average education degree, I have a relatively good education level. Educ2. The education I received allows me to adapt to different work tasks. Educ3. The education I received helped me manage and plan my life. Educ4. My education level helps my career development.
	Skill (SKILL)	Skill1. I think acquiring specific career skills is helpful for being more productive at work. Skill2. I often participate in various seminars or trainings to improve my personal skills. Skill3. If given the opportunity, I am willing to take the initiative to learn new skills to adapt to the changing industry. Skill4. Compared with others, I have better professional skills.

Table 3.4 Abbreviation and Sources of Constructs (Cont.)

Construct		Sources
Insurance (INS)	Ins1. I have adequate basic medical insurance. Ins2. I have adequate basic pension insurance. Ins3. I have adequate commercial medical and health insurance to cover the risk. Ins4. I have adequate commercial pension insurance for retirement.	Zhang and Cui (2020)
Social-economic status (SES)	Ses1. I have authority in front of others. Ses2. I have self-determined and independent. Ses3. I have respect in the eyes of others. Ses4. My current financial situation meets my expectations of living standards.	Anderson et al., (2012)
Fertility attitude (FA)	Fa1. Family is important to individuals. Fa2. Having children will make me happier and more content. Fa3. Fertility is important for personal growth and development. Fa4. I support a multi-child family structure.	Söderberg et al. (2013)
Health (HLTH)	Hlth1. My physical health condition is good. Hlth2. My emotional condition is good. Hlth3. I have vitality during work and life. Hlth4. I can handle the stress of life and work well.	Chin-Ching et al. (2018)

Table 3.4 Abbreviation and Sources of Constructs (Cont.)

Construct		Sources
Social trust & support (ST&SP)	St&sp1. I trust my family and friends. St&sp2. I often get help from others at work. St&sp3. When facing difficulties or stress in life, I can feel supported by my social network. St&sp4. I keep in touch with people in social networks regularly.	Chinese General Social Survey (CGSS)
Subjective well-being (SWB)	Swb1. I'm happy with my ability to work. Swb2. I am happy with access to health services. Swb3. I am happy with my ability to perform daily living activities. Swb4. I don't feel depressed or anxious. Swb5. I feel able to enjoy life. Swb6. I feel I have a purpose in life. Swb7. I feel optimistic about the future. Swb8. I feel in control of my life. Swb9. I feel happy with myself as a person. Swb10. I am happy with my looks and appearance. Swb11. I feel able to live my life the way I want. Swb12. I am confident in my own opinions and beliefs. Swb13. I feel able to do the things I choose to do. Swb14. I feel able to grow and develop as a person.	Myrskylä and Margolis (2014)

Table 3.4 Abbreviation and Sources of Constructs (Cont.)

Construct		Sources
	Swb15. I am happy with myself and my achievements. Swb16. I am happy with my personal and family life. Swb17. I am happy with my friendships and personal relationships. Swb18. I am comfortable about way I relate and connect with others. Swb19. I am happy with my sex life. Swb20. I am able to ask someone for help with a problem. Swb21. I am happy that I have enough money to meet my needs. Swb22. I am happy with my opportunity for exercise/leisure.	
Fertility intention (FI)	Fi1. I have strong will that want to have a (another child. Fi2. I wish to have child early if possible. Fi3. I wish to have more children.	Brzozowska and Beaujouan (2021)
Occupational flexibility (OF)	Of1. I get pressure during work time. Of2. My job needs to contact with others. Of3. My job needs to establish and maintain interpersonal relationships. Of4. I have structure job imposes on me. Of5. I don't have decision-making freedom.	Benny, Bhalotra and Fernández (2021)
Leave policy satisfaction (LPS)	Lps. Are you satisfied with the local leave policy?	

3.6 Content Validity and Instrument Reliability

Here was a portion of the reliability and validity of the survey:

(1) Review of literature and previous studies on variables. The research reviewed the literature and existing studies related to the variables outlined in the framework.

(2) Thoughtful design of questions appropriate for fertility intention survey in China.

(3) Expert assessment questionnaire. Review and validation of questionnaire content. Each questionnaire was reviewed for linguistic accuracy, comprehensiveness, and relevance to the study. A content validity assessment was then conducted on the questionnaire, encompassing the following aspects:

Index of item congruence: IOC as viewed by three experts, followed by alterations and amendments as suggested by the experts before the study. In this research, the questions listed within the questionnaires contain IOC between .60- 1.00. The evaluation assessments are as follows:

If the expert was sure that the item congruent to objective = +1

If the expert was unsure that the item congruent to objective = 0

If the expert was sure that the item is not congruent to objective = -1

Using the below formula

$$IOC = \frac{\sum R}{N}$$

R = the sum of experts' opinion

The IOC for this research was evaluated by three experts, the IOC score of all items was .67 – 1.00 which was considered acceptable by Rovinelli and Hambleton (1976). Another study found that .80 or higher was considered reliable (Field, 2009) The suggestion of the wording had been adjusted following the expert to improve the validity of the questionnaires.

Assessment of reliability is done by comparing the answers of one respondent to another (Visser, Krosnick, & Lavrakas, 2000). A reliable questionnaire should elicit the same responses from respondents. The pilot questionnaire was distributed to 50 respondents from four different provinces in China. Data collected from the pretest allowed for an initial assessment of reliability. Cronbach's alpha pretest coefficient

was .875, indicating that the items used in this study had high internal consistency and the questionnaire was acceptable.

Table 3.5 Pretest Reliability Statistics from SPSS

Reliability Statistics			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items
.873	.875		59

Evaluate measurement models. Evaluated each construct of the model in LOC and HOC to assess the indicator reliability, internal consistency, convergent validity and discriminant validity of each component. Table 3.6 showed the item, criterion and source for evaluating measurement model.

Table 3.6 Criterion Basis for Evaluating Measurement Model

Item	Criterion	Source
Indicator reliability	standardized factor loading>.70	Hair et al. (2012)
	standardized factor loading>.50	Hulland (1999)
Internal consistency reliability	Cronbach's alpha is the lower bound, the composite reliability is the upper bound for internal consistency reliability. ρ_A usually lies between these bounds and may serve as a good representation of a construct's internal consistency reliability, assuming that the factor model is correct	Gefen, Straub and Boudreau (2000); Nunnally (1994); Vinzi et al. (2010)
	Minimum .70(or .60 in exploratory research)	
	Maximum of .95 to avoid indicator redundancy, which would compromise content validity	
	Recommended .70~.90	

Table 3.6 Criterion Basis for Evaluating Measurement Model (Cont.)

Item	Criterion	Source
	Test if the internal consistency reliability is significantly higher(lower) than the recommended minimum(maximum) thresholds. Use the percentile method to construct the bootstrap-based confidence interval; in case of a skewed bootstrap distribution, use the Bias-Corrected and Accelerated method	
Convergent validity	$AVE \geq .50$	Bagozzi and Yi (1988); Fornell and Larcker (1981)
Discriminant validity (Cross loading)	The factor loading of an indicator on the construct it belongs to should be greater than the loading between the indicator and other constructs in the model	F. Hair Jr et al. (2014); Fornell and Larcker (1981); Vinzi et al. (2010)
Discriminant validity (Fornell & Larcker Criterion)	The square root of AVE of each construct should be greater than the correlation coefficient between the construct and other constructs in the model	Fornell and Larcker (1981)
Discriminant validity (HTMT)	A threshold of .90 or less	Teo, Tsai and Yang (2013)
Multicollinearity	The threshold of multicollinearity to be $VIF \leq 5$. Theoretically, $VIF = \frac{1}{1-R_i^2}$ where R_i^2 is a R^2 from equation $X_i = f(\text{other } X \text{ except } X_i)$. Some researchers tolerable for R_i^2 of .90 but some researchers are tolerable at .80, .75, .60. These R_i^2 reflect in VIF of 10, 5, 4, 2.5. Tolerance value is equal to $1/VIF$, which should be greater than or at least equal to .20.	Fornell and Bookstein (1982)

3.7 Interpretation of Analysis

Here below are symbols and meanings of symbols used to represent variables.

Table 3.7 Data Analysis Indicator Abbreviations and Meanings

Abbreviation	Meanings
$\bar{X}$	Arithmetic Mean
t-value	Test statistic with a t-distribution (t-distribution)
p-value	The critical region of the error is the area beyond the rejection region, and it is a value that can be calculated from observed data (Observed Significance Level)
β	path coefficient
R^2	The proportion of the total variation in the dependent variable that is explained by the model
F	Statistics that test the overall significance of the regression model

CHAPTER 4

RESEARCH RESULTS

This chapter presents the results of both qualitative and quantitative analyses. In qualitative analysis, semi-structured interview findings with 12 experts and scholars are introduced. Through interviews, experts in each field generally believe that human capital and subjective well-being have an impact on fertility intentions. Occupational flexibility and leave policy satisfaction may have a moderating effect on the impact of human capital on fertility intention. There are 5 sections in quantitative analysis: data preparation, demographic profile of the respondents, descriptive statistics for latent and observation variables, measurement model evaluation, and hypothesis testing.

According to the suggestions of scholars such as Anderson and Gerbing (1988) and Williams and Hazer (1986), in PLS-SEM analysis, the measurement model establishes the reliability and validity of the construct. The structural model ascertains the significance of hypothesized relationships. In this study, the independent variable human capital is the higher order construct with 7 subdimensions, which is calculated by repeated indicator approach method. In measurement model, each research construct and its measurement items were evaluated to understand the indicator reliability, internal consistency, convergent validity and discriminant validity. In hypothesis testing, this chapter examines the causal effects of human capital, subjective well-being and fertility intention by SPSS PROCESS. Path analysis was conducted on the relationship to verify the mediating effect of subjective well-being. Analyze the moderating effects of occupational flexibility and leave policy satisfaction as well.

4.1 Qualitative Results

This part is qualitative research. This section summarizes the interview results to substantiate the quantitative study. The qualitative findings corroborated the quantitative results through in-depth interviews.

4.1.1 Research Tools

The research tool in this section is a semi-structured interview, that is, an interview previously set up for the main questions, which serves as a guideline for

conducting the interview and can be added or adjusted as appropriate during the interview process. Chapter 3 explains the six in-depth interview questions. This interview included a total of 12 Chinese experts and scholars in related fields— manager in company human resource, manager in health committee, manager in population statistics bureau, expert in population development, professor in university human resource, professor in sociology, professor in psychology. Here below is a detailed answer with experts from relative departments and universities in China.

4.1.2 In-depth Interview Results

Here below is a detailed answer with experts from relative departments and universities in China.

Table 4.1 Results of the In-depth Interview Question Number 1 (How important do you think the concept of human capital is to understanding fertility intention?)

Interviewee	Answer for the question
Interviewee 1	By studying the level of human capital in the population, fertility rate trends can be better predicted and explained, and policy recommendations based on human capital can be provided to promote the sustainable development of society. Education and professional skills, as well as people's fertility attitude, are all important points to fertility intention.
Interviewee 2	Understanding the human capital levels of different groups can not only predict changing trends in fertility behavior, but the improvement of human capital is also closely related to economic development and the health of the labor market. People's health, whether they have enough medical insurance and pension, are crucial to affect their choice whether they want to have kids.
Interviewee 3	An individual's education level and skill level are often related to their rationality and planning for family planning and fertility decisions. By analyzing the level of human capital in the population, future labor supply and demand can be better predicted, providing governments and businesses with recommendations on education, training and employment policies.
Interviewee 4	By focusing on factors such as education level and skill level, the Bureau of Statistics can provide targeted policy recommendations to governments and businesses. Understanding fertility intentions can also be explained by digging deeper into differences in human capital, providing a more complete insight into demographic behavior and social trends.

Table 4.1 Results of the In-depth Interview Question Number 1 (How important do you think the concept of human capital is to understanding fertility intention?) (Cont.)

Interviewee	Answer for the question
Interviewee 5	We will collect questionnaire data on individual information, including insurance coverage, personal socioeconomic status, and attitudes towards fertility, in order to better assess individuals' willingness to have children.
Interviewee 6	This concept helps to understand how reproductive behavior is related to health status. Individuals with higher human capital generally pay more attention to health and medical care, and their reproductive decisions may be affected by their health status.
Interviewee 7	With information on human capital, health committees can optimize reproductive health services and formulate relevant policies to meet the needs of different groups and promote healthy fertility and family planning.
Interviewee 8	Human capital is closely related to employees' fertility choices. We provide comprehensive insurance coverage, increased trust and support, and better support for employees' work-life balance, indirectly influencing their fertility intentions.
Interviewee 9	This is very important. Companies typically enhance employees' human capital levels through training and development programs to foster the sustainable development of the organization. We believe that increased trust and support, a more positive attitude towards reproduction, better income, and individuals with higher socioeconomic status are more likely to have stronger fertility intentions.
Interviewee 10	The concept of human capital is very important. At the same time, I am also very concerned about the role of social, cultural, economic and other factors, as well as the impact of social support, cultural concepts and institutional factors on individual fertility decisions.
Interviewee 11	The concept of human capital is crucial to fertility intentions. Improving human capital can reduce fertility rates because higher educational levels and career advancement are often associated with delayed childbearing. However, people with high education level and skills may also have higher fertility intention, because which means they have better financial situation and power to manage their life. Besides, generally higher socioeconomic status may also lead to increased desire to have children.

Table 4.1 Results of the In-depth Interview Question Number 1 (How important do you think the concept of human capital is to understanding fertility intention?) (Cont.)

Interviewee	Answer for the question
Interviewee 12	The concept of human capital plays a key role in understanding fertility intentions. I pay more attention to the impact of individual attitudes, beliefs and mental health on fertility decisions, emphasizing the individual's inner motivation and psychological state.

In conclusion, the concept of human capital is integral to understanding fertility intentions and demographic behavior. By analyzing human capital levels, predicting fertility trends become more accurate, enabling the formulation of targeted policies for sustainable societal development. Additionally, factors such as education, skills, socioeconomic status, and health influence fertility decisions, emphasizing the need for comprehensive approaches. Moreover, addressing individual attitudes and psychological factors is crucial for understanding fertility intentions within the broader context of human capital.

Table 4.2 Results of the In-depth Interview Question Number 2 (Do you think human capital has influence on subjective well-being? Why?)

Interviewee	Answer for the question
Interviewee 1	From the perspective of the population development, the enhancement of human capital can increase individuals' employment opportunities and economic strength, improving their living conditions and thereby enhancing their subjective well-being.
Interviewee 2	The improvement of human capital helps to enhance the quality of the workforce and economic development level, fostering societal prosperity and stability, indirectly influencing people's subjective well-being.
Interviewee 3	From the viewpoint of health management, the improvement of human capital is often associated with healthier lifestyles and better healthcare, promoting individuals' physical and mental health, and thus increasing their subjective well-being.

Table 4.2 Results of the In-depth Interview Question Number 2 (Do you think human capital has influence on subjective well-being? Why?) (Cont.)

Interviewee	Answer for the question
Interviewee 4	The improvement of human capital may imply that more people can access better job opportunities and higher income levels, which can enhance their life satisfaction and subjective well-being.
Interviewee 5	Higher human capital means employees' development and growth in their careers, as well as better working conditions and career development opportunities, which can strengthen employees' job satisfaction and subjective well-being.
Interviewee 6	The enhancement of human capital means more individuals have higher social status and economic strength, which can increase their sense of identity and belonging in society, thereby enhancing their subjective well-being.
Interviewee 7	The enhancement of human capital can strengthen individuals' health awareness and literacy, contributing to reducing disease occurrence and healthcare expenditures, resulting in a positive impact on subjective well-being.
Interviewee 8	The elevation of human capital implies employees' comprehensive skills and abilities are enhanced, fostering team cohesion and creativity, thereby enhancing employees' job satisfaction and subjective well-being.
Interviewee 9	The improvement of human capital can enhance individuals' social status and economic strength, increasing their sense of belonging and identity in society, thus positively affecting subjective well-being.
Interviewee 10	From a psychological standpoint, the enhancement of human capital means individuals has more resources and abilities to achieve self-goals and meet inner needs, which can enhance their self-esteem and happiness.
Interviewee 11	From the viewpoint of sociology, the enhancement of human capital contributes to raising society's overall development level and people's quality of life, leading to increased subjective well-being.
Interviewee 12	As in psychology, the elevation of human capital can bolster individuals' self-realization and self-esteem, facilitating the fulfillment of their inner needs and pursuit of happiness, thereby positively impacting subjective well-being.

In conclusion, the multifaceted perspectives provided on the relationship between human capital and subjective well-being underscore its significance across various domains. From the population development standpoint, human capital enhancement correlates with improved employment prospects and economic strength, directly impacting living standards and subjective well-being. Similarly, from the perspective of health management, the association between human capital and healthier lifestyles underscores its role in promoting physical and mental well-being, thereby enhancing subjective well-being. Moreover, the socioeconomic implications of increased human capital, such as higher income levels and social status, contribute to individuals' sense of identity and belonging, positively influencing subjective well-being. Furthermore, the psychological and sociological perspectives highlight the intrinsic and societal benefits of enhanced human capital, reinforcing the positive impact on subjective well-being through increased self-esteem, self-realization, and overall societal development. In essence, the convergence of these viewpoints accentuates the pivotal role of human capital in shaping individuals' and societies' well-being, advocating for continued investment and development in this critical resource.

Table 4.3 Results of the In-depth Interview Question Number 3 (In your research or professional experience, is there a relationship between subjective well-being and fertility intentions?)

Interviewee	Answer for the question
Interviewee 1	When individuals perceive that they have strong happiness, they are more likely to have positive fertility intentions. In recent years, China's fertility policy has been continuously adjusted, which is also based on this consideration.
Interviewee 2	The two are closely related. This relationship may be affected by many factors, including socioeconomic status, job satisfaction, family support, etc. Improving happiness and promoting positive fertility intentions have a positive impact on the country's demographic structure and economic development.
Interviewee 3	The answer is undoubtedly. Human resources mainly take these factors into consideration when formulating employee welfare and work environment improvement policies to promote the overall subjective well-being of employees, thereby helping them to achieve a more positive desire to have children.

Table 4.3 Results of the In-depth Interview Question Number 3 (In your research or professional experience, is there a relationship between subjective well-being and fertility intentions?) (Cont.)

Interviewee	Answer for the question
Interviewee 4	According to research and professional experience, there is a complex relationship between subjective well-being and fertility intentions. Higher subjective well-being may make individuals more willing to welcome new life and regard children as part of the happiness of the family.
Interviewee 5	Certain groups may be more inclined to delay childbearing while pursuing career development or life satisfaction and thus may show a tendency toward higher subjective well-being but relatively lower fertility intentions.
Interviewee 6	A higher sense of well-being represents, to a certain extent, an individual's physical and mental health. These people are not physically troubled by fertility problems and may have stronger wishes.
Interviewee 7	From a health perspective, some patients have difficulty in having children due to physical reasons, but they still have a strong desire to have children. Therefore, this question is difficult to answer, characterized by complexity and heterogeneity.
Interviewee 8	Factors such as the company's welfare system and family-work balance may be directly related to employees' subjective well-being and fertility intentions.
Interviewee 9	In terms of subjective well-being, companies usually pay more attention to employees' job satisfaction and their ability to balance work and life. Because it helps improve employee performance. A good work environment and satisfaction will also affect personal family structure decisions.
Interviewee 10	The influence of the Internet has caused social culture and values to have a profound impact on individual subjective well-being, and will also affect their reproductive decisions to some extent.
Interviewee 11	Research shows a relationship between subjective well-being and fertility intentions. Higher happiness is usually related to more positive fertility intentions, because happy individuals are more willing to invest in family life and form a positive family atmosphere.

Table 4.3 Results of the In-depth Interview Question Number 3 (In your research or professional experience, is there a relationship between subjective well-being and fertility intentions?) (Cont.)

Interviewee	Answer for the question
Interviewee 12	From a psychological perspective, subjective well-being has a great relationship with an individual's physical and mental health. Existing literature shows that a healthier body and mind will have a positive impact on an individual's desire to have children. Therefore, there is a relationship between them.

There is a strong relationship between subjective well-being and fertility intentions. Research shows that individuals are more likely to express positive fertility intentions when they experience higher subjective well-being. This relationship is affected by many factors, including socioeconomic status, job satisfaction, family support, etc. When formulating policies and corporate welfare systems, factors that enhance individual subjective well-being should be considered to promote positive fertility decisions. At the same time, it is important to note that different groups may have complex balances between career development and fertility wishes, which makes understanding and meeting different individual needs even more critical.

Table 4.4 Results of the In-depth Interview Question Number 4 (What factors do you think may moderate the impact of human capital on fertility intention? Why?)

Interviewee	Answer for the question
Interviewee 1	Social policies and regulations, such as maternity leave and parental leave policies, may have an impact on the relationship between human capital and fertility intentions. The degree of policy support may change a woman's balance between work and family, affecting her willingness to have children.
Interviewee 2	Spousal time allocation and family income may affect the relationship between human capital and fertility intention. Both are directly related to the family's burden and ability to bear the cost of raising children.

Table 4.4 Results of the In-depth Interview Question Number 4 (What factors do you think may moderate the impact of human capital on fertility intention? Why?) (Cont.)

Interviewee	Answer for the question
Interviewee 3	Job flexibility and benefit policies, such as flexi time, childcare services, may play a moderating role in balancing work and family responsibilities. The friendliness of the work environment and welfare measures may make employees more willing to embrace childbirth.
Interviewee 4	Cultural differences based on regions and social groups may influence the correlation between human capital and fertility intentions. Because different cultures have different attitudes toward women's roles, family expectations, and childbearing.
Interviewee 5	According to previous questionnaires, young people's working hours and stress status have a great impact on their fertility intentions. Additionally, accurate data collection methods need to be considered.
Interviewee 6	Working hours and health are closely related. Adequate health services may increase confidence in childbearing due to better medical support.
Interviewee 7	I think different occupational groups have a big impact on fertility. Nowadays, young people often work overtime and are under great pressure from work. It is difficult for them to have the energy to become parents. In addition, health education and reproductive health knowledge may have a moderating effect on the relationship between human capital and fertility intention.
Interviewee 8	As a human resources manager in a company, I believe that a good company culture and a supportive work environment may encourage employees to be more proactive about fertility issues. It is very necessary to provide employees with a flexible workspace as much as possible.
Interviewee 9	Emphasizing flexible work arrangements, providing childcare support, and creating a family-friendly work environment are key to mediating the impact of human capital on fertility intentions. Through these measures, companies can attract and retain employees who want to have children while increasing employee productivity and loyalty.
Interviewee 10	From a government perspective, the introduction of various childcare policies in recent years, whether it is more childcare leave or subsidies of varying amounts in various regions, are all efforts to promote the birth of young people.

Table 4.4 Results of the In-depth Interview Question Number 4 (What factors do you think may moderate the impact of human capital on fertility intention? Why?) (Cont.)

Interviewee	Answer for the question
Interviewee 11	Policies that favor family balance, a culture that encourages women of childbearing age to participate in the workplace, and social networks that provide childcare support can all reduce the negative impact of human capital on fertility decisions.
Interviewee 12	Many young people fear becoming parents because modern young people are under a lot of work pressure and find it difficult to have free time to take care of their families apart from work. Therefore, adequate vacation is important for releasing psychological stress.

To sum up, the factors that influence human capital's regulation of fertility intention involve multiple levels. First, social policies and regulations, such as maternity leave and parental leave policies, may directly affect women's work-family balance and thus regulate their fertility intentions. Secondly, spouse's time allocation and family income have a direct impact on the relationship between human capital and fertility intention, which is related to the family's burden and the affordability of child support expenses. Factors such as work flexibility, welfare policies, and cultural differences also play a moderating role in balancing work and family responsibilities, affecting fertility intentions. In addition, factors such as health status, work stress, company culture and supportive work environment can influence an individual's confidence and decision-making regarding fertility. The government's childcare policy and the company's supportive measures both play a positive role in mediating the relationship between human capital and fertility intention.

Table 4.5 Results of the In-depth Interview Question Number 5 (Do you think policy satisfaction may be a key variable moderating the relationship between human capital and fertility intention?)

Interviewee	Answer for the question
Interviewee 1	The extent to which policies support childbearing is directly related to the realization of population development goals. Policy satisfaction can reflect the actual effect of the policy and have a direct impact on fertility intention.
Interviewee 2	Population economics and policy are closely related. Policies with high satisfaction levels may stimulate fertility, and population economists need to pay attention to the implementation effects of policies.
Interviewee 3	Work environment policies are directly related to employee satisfaction and reproductive decisions. The quality and adaptability of policies are critical to supporting employees' family planning.
Interviewee 4	The implementation of policies affects the collection and statistics of social data. Policies with higher levels of satisfaction may lead to more accurate and comprehensive data reflections.
Interviewee 5	Judging from the new policies introduced by various provinces in China, financial subsidies and extended holidays have been added to previous policies. From its implementation to the present, the fertility rate has indeed had an effect of increasing.
Interviewee 6	From a fertility perspective, satisfaction with health policies is directly related to public confidence in health services. Policy successes and failures will affect demand for health services.
Interviewee 7	The actual effects of policies and public satisfaction with them are directly related to the quality of statistical data. The reliability of data depends on the effectiveness of policies.
Interviewee 8	Satisfaction with the policy reflects employees' perceptions of society as a whole supporting the family. Each company also has different policies on a legal basis as employee benefits. Employee satisfaction and stickiness with the company are directly related to the company's attitude towards its employees.
Interviewee 9	Yes. Some companies implement family-friendly policies, such as retaining original positions during parental leave and providing material incentives and financial support. These policies are additional benefits based on national policies, which are very helpful in retaining talents, and can especially reduce the burden on young people of childbearing age.

Table 4.5 Results of the In-depth Interview Question Number 5 (Do you think policy satisfaction may be a key variable moderating the relationship between human capital and fertility intention?) (Cont.)

Interviewee	Answer for the question
Interviewee 10	Sociologists focus on how social structure and culture respond to policy. Policies with high levels of satisfaction may reflect society's positive attitudes toward childbearing.
Interviewee 11	Active family support policies can reduce the negative impact of human capital on fertility intentions and enhance family sustainability. The degree of policy perfection is directly related to social support for fertility decisions.
Interviewee 12	Policies are directly related to the living and professional circumstances of individuals. Satisfaction with a policy may reflect individuals' assessment of whether the policy meets their needs and expectations.

Overall, policy satisfaction may be a key variable moderating the relationship between human capital and fertility intention. The degree of policy support for childbearing is directly related to the realization of population development goals, while policy satisfaction reflects the public's evaluation of the actual effect of the policy. Satisfaction with policies is directly related to various levels, including health policies, work environment policies, family support policies, etc. High-satisfaction policies may stimulate fertility and have a positive impact on health service demand and employee fertility decisions. Therefore, policy satisfaction plays a key role in moderating the relationship between human capital and fertility intention.

Table 4.6 Results of the In-depth Interview Question Number 6 (Starting from the personal professional field, in what ways does occupational flexibility moderate the impact of human capital on fertility intentions?)

Interviewee	Answer for the question
Interviewee 1	Occupational flexibility can encourage individuals to flexibly arrange the relationships between family and work, and it also has a positive effect on the upbringing of the next generation.
Interviewee 2	Flexible occupation is especially important for women. Many women with high human capital choose to give up childbearing or work because they cannot balance work and family, and they bear a lot of pressure. Flexible careers allow women to have more economic status and power distribution within the family.
Interviewee 3	Companies that offer occupational flexibility may be more attractive, and employees may be more likely to consider having children in a relatively relaxed work environment.
Interviewee 4	According to previous data, flexibility may affect employee job satisfaction, which in turn affects job performance and engagement. Employees with higher levels of satisfaction may be more motivated to consider family planning, which has a positive impact on the labor market.
Interviewee 5	Flexible jobs can mean financial instability, so changes in fertility intentions will depend on individual circumstances. Careers that are more financially stable and have more flexible schedules will have more positive results.
Interviewee 6	Flexible work arrangements may help employees better maintain their physical and mental health. Better physical and mental health may provide a more favorable physiological and psychological state for childbearing.
Interviewee 7	If flexible work also means uncertainty about income, it will have a negative impact on the individual's psychology. The resulting impact may reduce an individual's desire to have children.
Interviewee 8	Occupational flexibility may make companies more competitive, attracting more employees to consider having children in a more relaxed work environment. But flexible work may also mean unstable income. For male employees, most people are not willing to take such a risk.
Interviewee 9	Flexible hours, telecommuting, and other flexible work arrangements help employees better manage family and career, improve job satisfaction, and enhance company attractiveness and employee loyalty.

Table 4.6 Results of the In-depth Interview Question Number 6 (Starting from the personal professional field, in what ways does occupational flexibility moderate the impact of human capital on fertility intentions?) (Cont.)

Interviewee	Answer for the question
Interviewee 10	Flexibility may influence fertility decisions by changing family patterns. The distribution of family power is usually determined by the party with higher social status and more income. Generally speaking, the spouse with higher work flexibility may take on more housework, thereby affecting the distribution of family power relations.
Interviewee 11	Occupational flexibility can alleviate the conflict between career and family responsibilities and improve an individual's human capital. For the population of childbearing age, flexibility means it is easier to balance work and life, reducing the psychological and financial pressure of childbearing, thus promoting the desire to have children.
Interviewee 12	Occupational flexibility may have an impact on an individual's mental health. There has been much research on job stability in recent years. Individuals prefer stable jobs, which will have a positive psychological impact. If an individual's job is stable and flexible, he will have a higher desire to have children. If faced with an unstable career choice, there may be negative consequences.

Occupational flexibility plays a key role in moderating the impact of human capital on fertility intentions. Flexible occupation arrangements can encourage individuals to better balance family and work relationships, especially for women, helping to resolve conflicts between work and family responsibilities and improve economic status and power distribution. Companies that offer occupational flexibility are more attractive, and employees are more likely to consider having children in a relatively relaxed work environment. However, flexibility can also bring financial instability, with varying impacts on individual circumstances. Although flexible work arrangements can increase employee job satisfaction, unstable income may lead a negative impact on fertility intentions.

Table 4.7 Results of the in-depth Interview to Recommendations to Further Research

Interviewee	Answer for the question
Interviewee 1	Exploring the mediating role of social culture and values on subjective well-being and fertility intention. Gain a deeper understanding of how cultural factors influence an individual's expectations for family, career, and life, thereby influencing their reproductive decisions.
Interviewee 2	Compare the fertility policies of different countries or regions, and conduct an in-depth analysis of how policy changes guide individual fertility behaviors.
Interviewee 3	The first is to further study the impact of different education levels and career development stages on individual fertility intentions from the dynamic relationship between education and career development. The second is the relationship between skills and fertility in the digital era.
Interviewee 4	An in-depth look at the relationship between human capital levels and fertility in different regions, and how this relationship may be affected by place-specific economic, social and cultural factors. Fine geographical statistics provide a better understanding of the impact of human capital on fertility decisions in different regions.
Interviewee 5	Cross-national comparative research can be used to analyze the similarities and differences between human capital, subjective well-being and fertility intentions in different countries and regions. Uncover the impact of globalization, economic development and cultural change on demographic decisions by tracking long-term trends.
Interviewee 6	An in-depth study of the relationship between individual health status and fertility intentions. Particularly, how mental health conditions influence an individual's decision-making regarding fertility, and the potential impact of possible health factors on fertility intentions.
Interviewee 7	Investigating the mediating role of social support among human capital, subjective well-being, and fertility intentions. Understand how social support indirectly affects an individual's fertility intentions by affecting their well-being.
Interviewee 8	Further in-depth research can be conducted on the specific impact of family-friendly policies within enterprises on employee happiness and fertility decisions, so as to provide enterprises with more targeted human resource management suggestions.

Table 4.7 Results of the in-depth Interview to Recommendations to Further Research (Cont.)

Interviewee	Answer for the question
Interviewee 9	Employees with high human capital can provide more value to the company, and the company may further pay attention to employee well-being and increase career development opportunities for these employees to enhance employees' subjective well-being. Subjective well-being and career stability are also areas that can be studied.
Interviewee 10	The impact of gender-specific occupational diversity and family structure on human capital, subjective well-being, and fertility intentions can be studied in depth, providing a more in-depth theoretical explanation for the field of sociology.
Interviewee 11	In the future, research can be conducted from the perspective of the impact of overall economic stability on individual subjective well-being and fertility intentions. Because the economies of all countries around the world are recovering since the epidemic, economic stability considerations are very important.
Interviewee 12	Further in-depth research can be conducted on the impact of individual occupation and psychological state, stress and emotional factors on fertility decision-making, and more specific intervention suggestions can be provided in the field of psychology.

Through the dynamic relationship between education and career development and the relationship between skills and fertility in the digital age, we can gain a more comprehensive understanding of the impact of different education levels, career stages and skill levels on fertility intentions. In addition, cross-national comparative research and the use of geographical statistics can help reveal the long-term trends and influencing factors of globalization, economic development and cultural changes on population decision-making. Future research can also further examine the relationship between individual health status and fertility intention, as well as the role of social support among human capital, subjective well-being and fertility intention. The specific impact of family-friendly policies within companies on employee well-being and fertility decisions is a specific and important direction that provides practical guidance for providing more targeted human resource management recommendations. More in-depth research on gender occupational diversity, family structure, etc. can provide richer theoretical

explanations for the field of sociology. In addition, future research can also start from multiple dimensions such as overall economic stability, individual occupation and psychological state, stress and emotional factors, and comprehensively explore the impact of these factors on individual subjective well-being and fertility wishes, so as to formulate more effective policies and suggestions.

Overall, the concept of human capital is crucial to understanding fertility intention, and influencing factors involve social policies, working environment, family support and other levels. Subjective well-being is closely related to fertility intention, and policy satisfaction may be the key mediator. Policies and interventions can influence fertility intentions by enhancing human capital and improving subjective well-being. Occupational flexibility plays a key role in moderating the effect of human capital on fertility intentions, although this needs to be balanced against financial stability. Future research can focus on factors such as education and career development, digital age skills, and health status to more fully understand the dynamics of fertility intentions.

4.2 Data Preparation

The survey data for this paper collected the population aged 20-49 in four provinces in China (Guangdong, Shandong, Henan, and Sichuan). A total of 1,180 questionnaires were distributed.

4.3 Demographic Profile of the Respondents

Descriptive statistics were used to describe the frequencies and percentages of the demographic characteristics of the respondents, as shown in Table 4.8 below.

Table 4.8 Demographic Profile of the Respondents

Item	Frequency (n)	Percentage
Age		
20-24 years old	116	9.83
25-29 years old	299	25.34
30-34 years old	361	30.59
35-39 years old	298	25.25
40-44 years old	79	6.69
45-49 years old	27	2.30

Table 4.8 Demographic Profile of the Respondents (Cont.)

Item	Frequency (n)	Percentage
Gender		
Male	510	43.22
Female	670	56.78
Household registration		
City	772	65.42
Countryside	408	34.58
Marital status		
Single	304	25.76
Married	350	29.67
Common-law married	173	14.66
Separated	116	9.83
Widowed	62	5.25
Divorced	175	14.83
Salary (per month)		
< 3,000	185	15.68
3,000-5,000	414	35.08
5,000-10,000	344	29.15
10,000-20,000	136	11.53
> 20,000	101	8.56
Education		
elementary and below	54	4.58
Junior middle	108	9.15
Senior middle	183	15.51
College	239	20.25
Undergraduate	291	24.66
Master	255	21.61
Doctoral	50	4.24

As can be seen from the table above, in terms of age distribution, the majority of respondents, 81.19%, fall within the age range of 25-39, while only 8.98% are aged 40 and above. In a total of 1,180 survey samples, males account for 43.22%, while females constitute 56.78%. 43.22% reside in rural areas, whereas 56.78% live in urban areas.

Regarding marital status, almost one-third of the participants are in a single status, and there is a significant proportion of individuals in separated or divorced situations. Concerning monthly income, those with a monthly income below 3,000 yuan account for 15.68%, 35.08% of individuals earn between 3,000 and 5,000 yuan. 29.15%

of people have a monthly income of 5,000 to 10,000 yuan. 11.53% of people have a monthly income between 1,0000 and 20,000. Only 8.56% of people have a monthly income of more than 20,000 yuan. Regarding education, 4.58% of respondents have an education level of elementary or below, while 25.85% have a master's degree or above. 9.15% graduated from junior middle school. Senior middle school graduates make up 15.51%, and those with a college and bachelor's degree comprise 44.92%.

4.4 Descriptive Statistics for Latent and Observed Variables

1) Human capital

Human capital is a second-order construct, which consists of 7 lower order constructs, namely education, skill, insurance, social-economic status, fertility attitude, health, and social trust & support. Each variable consists of four items. Table 4.9 is the statistical analysis on the level of opinion, mean, coefficient of variation, standard deviation, and the meaning of each lower order construct of human capital. According to the average of each question, the meaning is classified as follows:

1.00-1.50 means least agree.

1.51-2.50 mean less agree.

2.51-3.50 means agree.

3.51-4.50 means more agree.

4.51-5.00 means most agree.

Table 4.9 Descriptive Statistics of Human Capital

Description of items	$\bar{X}$	CV	SD	Meaning
Education				
educ1: In terms of average education degree, I have a relatively good education level.	3.90	26.15%	1.020	more agree
educ2: The education I received allows me to adapt to different work tasks.	3.79	25.07%	.950	more agree
educ3: The education I received helped me manage and plan my life.	4.02	25.65%	1.031	more agree
educ4: My education level helps my career development.	3.66	28.63%	1.048	more agree

Table 4.9 Descriptive Statistics of Human Capital

Description of items	$\bar{X}$	CV	SD	Meaning
Skill				
skill1: I think acquiring specific career skills is helpful for being more productive at work.	3.63	29.97%	1.088	more agree
skill2: I often participate in various seminars or trainings to improve my personal skills.	3.65	29.15%	1.064	more agree
skill3: If given the opportunity, I am willing to take the initiative to learn new skills to adapt to the changing industry.	3.68	26.14%	.962	more agree
skill4: Compared with others, I have better professional skills.	3.71	27.12%	1.006	more agree
Insurance				
isr1: I have adequate basic medical insurance.	3.96	30.48%	1.207	more agree
isr2: I have adequate basic pension insurance.	3.78	24.10%	.911	more agree
isr3: I have adequate commercial medical and health insurance to cover the risk.	4.01	27.73%	1.112	more agree
isr4: I have adequate commercial pension insurance for retirement.	3.72	27.74%	1.032	more agree
Socioeconomic status				
ses1: I have authority in front of others.	3.38	34.76%	1.175	agree
ses2: I have self-determined and independent.	3.67	31.34%	1.150	more agree
ses3: I have respect in the eyes of others.	3.66	31.89%	1.167	more agree
ses4: My current financial situation meets my expectations of living standards.	3.57	32.83%	1.172	more agree
Fertility attitude				
fa1: Family is important to individuals.	3.70	29.49%	1.091	more agree
fa2: Having children will make me happier and more content.	3.74	27.35%	1.023	more agree
fa3: Fertility is important for personal growth and development.	3.73	31.53%	1.176	more agree
fa4: I support a multi-child family structure.	3.76	27.58%	1.037	more agree
Health				
hlth1: My physical health condition is good.	3.88	26.55%	1.030	more agree
hlth2: My emotional condition is good.	3.70	31.00%	1.147	more agree
hlth3: I have vitality during work and life.	3.74	31.36%	1.173	more agree
hlth4: I can handle the stress of life and work well.	3.68	33.21%	1.222	more agree
Social trust & support				
st&sp1: I trust my family and friends.	3.91	24.76%	.968	more agree
st&sp2: I often get help from others at work.	3.70	29.08%	1.076	more agree
st&sp3: When facing difficulties or stress in life, I can feel supported by my social network.	3.74	24.55%	.918	more agree
st&sp4: I keep in touch with people in social networks regularly.	3.74	27.44%	1.026	more agree

As can be seen from the above table, the item with the highest mean value is “edu3” ($\bar{X}$ =4.02). On the contrary, the item with the lowest mean value is “ses1” ($\bar{X}$ =3.38). All the questions mean are more agree except for the question “ses1” with agree. In addition, the CV value for education (25.07% - 28.63%) and social trust & support (24.55% - 29.08%) indicate a certain degree of consistency in respondents' evaluations of their educational levels and social trust and support. The CV value for skills (26.14% - 29.97%) suggests greater individual differences in skill acquisition and application among respondents. The relatively higher CV values for insurance-related metrics (24.10% - 30.48%), particularly in basic health insurance, indicate significant differences in insurance coverage and satisfaction among respondents. The CV values for socioeconomic status (31.34% - 34.76%) demonstrate considerable variability in respondents' perceptions of their socioeconomic status. The CV values for fertility attitude (27.35% - 31.53%) reflect some divergence in opinions, especially regarding the importance of fertility for personal growth. For health (26.55% - 33.21%), particularly in the "coping with life and work stress" aspect, where the CV value reaches a peak of 33.21%, this indicates significant differences in respondents' perceptions of their health status.

2) Subjective well-being

Subjective well-being consists of 22 items as a mediating variable. The author used the modified BBC subjective well-being scale (BBC-SWB) from Pontin et al. (2013). Table 4.10 shows analysis on the level of opinion, the average, coefficient of variation, standard deviation, and the meaning of subjective well-being observations.

Table 4.10 Descriptive Statistics of Subjective Well-being

Description of items	$\bar{X}$	CV	SD	Meaning
swb1: I'm happy with my ability to work.	3.88	21.86%	.848	more agree
swb2: I am happy with access to health services.	3.87	26.85%	1.039	more agree
swb3: I am happy with my ability to perform daily living activities.	3.75	25.68%	.963	more agree
swb4: I don't feel depressed or anxious.	3.79	26.49%	1.004	more agree
swb5: I feel able to enjoy life.	3.79	30.18%	1.144	more agree
swb6: I feel I have a purpose in life.	3.83	26.08%	.999	more agree
swb7: I feel optimistic about the future.	3.70	28.27%	1.046	more agree

Table 4.10 Descriptive Statistics of Subjective Well-being (Cont.)

Description of items	$\bar{X}$	CV	SD	Meaning
swb8: I feel in control of my life.	3.50	28.74%	1.006	agree
swb9: I feel happy with myself as a person.	3.56	28.29%	1.007	more agree
swb10: I am happy with my looks and appearance.	3.69	30.68%	1.132	more agree
swb11: I feel able to live my life the way I want.	3.56	33.37%	1.188	more agree
swb12: I am confident in my own opinions and beliefs.	3.89	31.00%	1.206	more agree
swb13: I feel able to do the things I choose to do.	3.68	29.35%	1.080	more agree
swb14: I feel able to grow and develop as a person.	3.54	32.99%	1.168	more agree
swb15: I am happy with myself and my achievements.	3.66	30.05%	1.100	more agree
swb16: I am happy with my personal and family life.	3.63	32.98%	1.197	more agree
swb17: I am happy with my friendships and personal relationships.	3.66	31.07%	1.137	more agree
swb18: I am comfortable about way I relate and connect with others.	3.63	28.57%	1.037	more agree
swb19: I am happy with my sex life.	3.72	27.23%	1.013	more agree
swb20: I am able to ask someone for help with a problem.	3.69	28.51%	1.052	more agree
swb21: I am happy that I have enough money to meet my needs.	3.79	29.60%	1.122	more agree
swb22: I am happy with my opportunity for exercise/ leisure.	3.68	32.93%	1.212	more agree

The variable with the highest average is "swb12" ($\bar{X}$ =3.89). The item with the lowest mean is socioeconomic status "swb8" ($\bar{X}$ =3.50), which means agree. All the rest of items mean value in subjective well-being are more agree. The CV values range from 21.86% to 33.37%, indicating varying levels of consistency and divergence in respondents' evaluations of subjective well-being indicators. Lower CV values suggest more consistent opinions on "satisfaction with work ability," while higher CV values indicate greater perceived differences in "control over lifestyle".

3) Fertility intention

Fertility intention is dependent variable, which consists of three items, respectively indicating whether you want to have children, the time and number of children you expect to have children. Table 4.11 is the statistical analysis of the level of opinion, the average of each question, coefficient of variation, standard deviation, and the meaning of fertility intention item.

Table 4.11 Descriptive Statistics of Fertility Intention

Description of items	$\bar{X}$	CV	SD	Meaning
fi1: I have strong will that want to have a (another) child.	3.70	29.41%	1.088	more agree
fi2: I wish to have child early if possible.	3.56	33.17%	1.181	more agree
fi3: I wish to have more children.	3.81	24.88%	.948	more agree

Table 4.11 shows the variable with the highest average is "fi3" ($\bar{X}$ =3.81, SD=.948) with a more agree mean value. The item with the lowest mean is "fi2" ($\bar{X}$ =3.56, SD=1.181) with a more agree meaning. For "fi1", the average is 3.70, which means more agree. The CV values range from 24.88% to 33.17%, reflecting diverse perspectives on fertility intentions among respondents. Lower CV values suggest that most respondents hold relatively consistent views on "desire to have more children," whereas higher CV values indicate greater divergence in the intention to "have children sooner."

4) Occupational flexibility

Occupational flexibility is one of moderating variables, consisting of five items. Occupational flexibility is based on the five questions evaluated by O*NET. Table 4.12 is the statistical analysis of the level of opinion, the average, coefficient of variation, standard deviation, and the meaning of the item.

Table 4.12 Descriptive Statistics of Occupational Flexibility

Description of items	$\bar{X}$	CV	SD	Meaning
of1: I get pressure during work time.	3.21	34.83%	1.118	agree
of2: My job needs to contact with others.	3.12	35.58%	1.110	agree
of3: My job needs to establish and maintain interpersonal relationships.	3.13	35.27%	1.104	agree
of4: I have structure job imposes on me.	3.26	35.86%	1.169	agree
of5: I don't have decision-making freedom.	3.31	36.22%	1.199	agree

For occupational flexibility, the results indicate that the mean value of the "of5" is 3.31, which means agree and has a standard deviation of 1.199. In "of2", it is also means agree, with a mean value of 3.12, accounting for the lowest-ranking level in the group with standard deviation of 1.110. The rest of the items in occupational flexibility mean value are also mean agree. The CV values range from 34.83% to 36.22%, indicating considerable variability among respondents regarding occupational flexibility indicators. Higher CV values reflect significant differences in respondents' perceptions of "work time pressure" and "decision-making freedom".

5) Leave policy satisfaction

Table 4.13 Descriptive Statistics of Leave Policy Satisfaction

Description of items	Yes ☐	No ☐
lps: Are you satisfied with the local leave policy?	51.19%	48.81%

Leave policy satisfaction is a binary moderating variable, and subjects indicate whether they are satisfied with the leave policy by answering yes or no. Among them, 604 (51.19%) people chose yes while 576 (48.81%) people chose no.

4.5 Measurement Model Evaluation

This section estimated indicator reliability, internal consistency, convergent validity, and discriminant validity for evaluating the measurement model (Hair et al., 2019). As the independent variable, human capital is the reflective-reflective higher order

construct made of all these seven dimensions, which are education, skill, insurance, socioeconomic status, fertility attitude, health, and social trust & support. To establish the reflective-reflective higher-order, repeated indicator approach was used in this part.



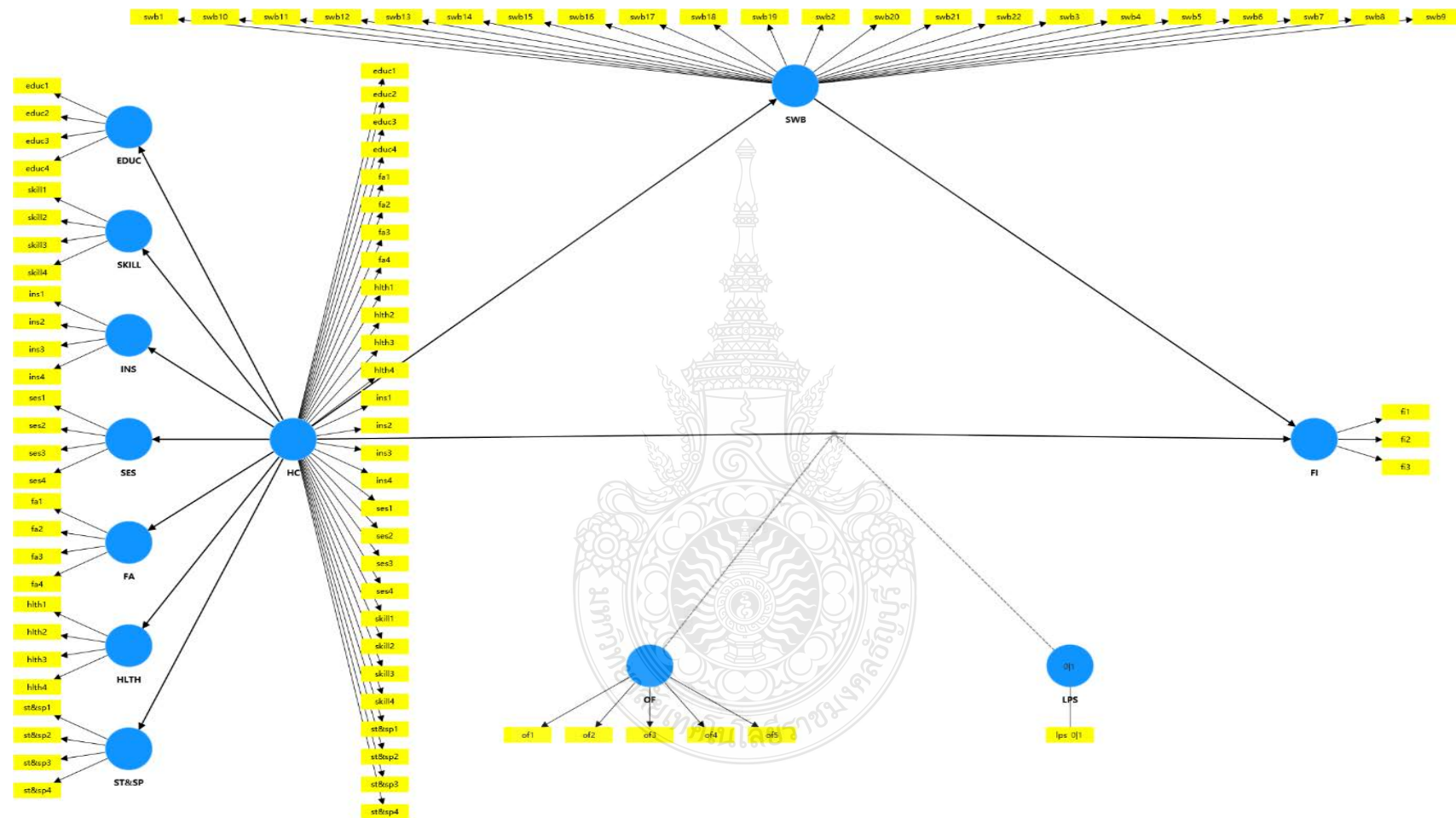


Figure 4.1 Reflective-Reflective Measurement Model

Quality of the constructs in this study is evaluated based on the evaluation of the measurement model. The assessment of the quality criteria starts with assessment of the factor loadings which is followed by establishing the construct reliability and validity.

4.5.1 Factor Loadings

Factor loading refers to the extent to which each of the items in the correlation matrix correlates with the given principal component. Factor loadings can range from 0 to 1, with higher absolute values indicating a higher correlation of the item with the underlying factor” (Pett, Lackey, & Sullivan, 2003). None of the items in the study had factor loading less than the recommended value of .70 (Hair et al., 2016).

Table 4.14 Factor Loadings

	EDUC	FA	FI	HLTH	INS	OF	SES	SKILL	ST&SP	SWB
educ1	.884									
educ2	.847									
educ3	.818									
educ4	.848									
fa1		.825								
fa2		.851								
fa3		.849								
fa4		.847								
fi1			.893							
fi2			.873							
fi3			.857							
hlth1				.825						
hlth2				.842						
hlth3				.852						
hlth4				.855						
ins1					.838					
ins2					.824					
ins3					.840					
ins4					.845					
of1						.876				
of2						.821				
of3						.814				
of4						.822				
of5						.818				
ses1							.838			
ses2							.837			
ses3							.853			
ses4							.830			

Table 4.14 Factor Loadings (Cont.)

	EDUC	FA	FI	HLTH	INS	OF	SES	SKILL	ST&SP	SWB
skill1								.821		
skill2								.837		
skill3								.816		
skill4								.854		
st&sp1									.827	
st&sp2									.840	
st&sp3									.818	
st&sp4									.830	
swb1										.772
swb10										.786
swb11										.794
swb12										.773
swb13										.782
swb14										.786
swb15										.757
swb16										.789
swb17										.768
swb18										.768
swb19										.770
swb2										.848
swb20										.790
swb21										.770
swb22										.794
swb3										.778
swb4										.769
swb5										.785
swb6										.770
swb7										.778
swb8										.777
swb9										.767

As can be seen from table 4.14, the factor loadings value from .757~.893. Hence, no items were further removed.

4.5.2 Variance Inflation Factor

Variance Inflation Factor (VIF) statistic is utilized to assess multicollinearity in the indicators (Fornell & Bookstein, 1982). If the model multicollinearity problem is not eliminated, it will easily lead to deviations in model interpretation. When verifying the model, collinearity must be eliminated first. When the VIF value is less than or equal to 5, it means that there is no collinearity problem between indicators (Hair, Ringle, & Sarstedt, 2011).

Table 4.15 Multicollinearity Statistics (VIF) for Indicators

Indicators	VIF
educ1	2.539
educ2	2.094
educ3	1.880
educ4	2.133
fa1	1.933
fa2	2.027
fa3	2.135
fa4	2.128
fi1	2.262
fi2	1.997
fi3	1.928
hlth1	1.925
hlth2	2.065
hlth3	2.089
hlth4	2.115
ins1	1.968
ins2	1.900
ins3	1.966
ins4	2.045
of1	2.606
of2	2.068
of3	1.978
of4	2.041
of5	2.110
ses1	1.967
ses2	1.970
ses3	2.083
ses4	1.980
skill1	1.848
skill2	1.973
skill3	1.824
skill4	2.078
st&sp1	1.891
st&sp2	2.001
st&sp3	1.831
st&sp4	1.906
swb1	2.327
swb10	2.456
swb11	2.550
swb12	2.315
swb13	2.410
swb14	2.479

Table 4.15 Multicollinearity Statistics (VIF) for Indicators (Cont.)

Indicators	VIF
swb15	2.227
swb16	2.473
swb17	2.343
swb18	2.292
swb19	2.332
swb2	3.274
swb20	2.484
swb21	2.299
swb22	2.564
swb3	2.368
swb4	2.277
swb5	2.443
swb6	2.293
swb7	2.398
swb8	2.399
swb9	2.266

As shown in Table 4.15, the Variance Inflation Factor (VIF) ranges from 1.824 to 3.274, while the tolerance values range from 0.305 to 0.548. These results indicate that the indicators do not exhibit a multicollinearity problem.

4.5.3 Reliability Analysis

According to Marks and Karkouti (1996), reliability is defined as the extent to which a measuring instrument is stable and consistent. The essence of reliability is repeatability. If an instrument is administered over and over again, will it yield the same results". The two most commonly used methods for establishing reliability include Cronbach Alpha and Composite Reliability (CR). It is generally believed that Cronbach's alpha coefficient is $> .70$, indicating that the internal homogeneity of the questionnaire measurement is good. Composite Reliability refers to the consistency of variables within a facet. If the CR value of a latent variable is higher, its measured variables are highly correlated, indicating that they are all measuring the same latent variable, and the latent variable can be measured better. Generally speaking, its value needs to be $> .70$ (Bagozzi & Yi, 1988). Both of the results are presented in table 4.16.

Table 4.16 Construct Reliability Analysis (Cronbach Alpha and Composite Reliability)

Higher Order Construct	Lower Order Construct	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
HC		.900	.901	.625
	EDUC	.871	.873	.722
	FA	.864	.866	.710
	HLTH	.865	.866	.712
	INS	.857	.858	.700
	SES	.861	.862	.705
	SKILL	.852	.852	.692
	ST&SP	.848	.848	.687
	SWB	.969	.970	.609
	FI	.846	.847	.764
	OF	.887	.890	.690

As can be seen from table 4.16, The Cronbach's alpha range value of this study is .846 to .969, with the highest variable “SWB” (.969) and lowest variable “FI” (.846). All variables are more than .70, indicating that the model of this study is reliable. The CR values of all the variables in this study are from the lowest value .847 (FI) to highest value .970 (SWB). The CR values of all the variables in this study are also > .80 indicating that the aspects of this study have good internal consistency.

4.5.4 Convergent Validity

Statistically using PLS-SEM, construct validity is established when there is convergent validity and discriminant validity.

Convergent validity is the degree to which multiple attempts to measure the same concept are in agreement, the idea is that two or more measures of the same thing should covary highly if they are valid measures of the concept (Bagozzi, Yi, & Phillips, 1991). For convergent validity, the AVE of each construct should be higher than .50 (Hair, Ringle, & Sarstedt, 2011).

As can be seen from table 4.16, all the constructs range from .609 to .764, which means all the AVE values exceed .50.

4.5.5 Discriminant Validity

“Discriminant validity is the degree to which measures of different concepts are distinct. The notion is that if two or more concepts are unique, then valid measures of each should not correlate too highly” (Bagozzi et al., 1991). There are three ways to assess discriminant validity. This paragraph uses these two methods to determine discriminant validity.

1) Fornell-Larcker criterion

The Fornell and Larcker criterion stipulates that the square root of the AVE of each construct should be greater than its correlation with other constructs (Hair et al., 2012; Vinzi et al., 2010).

Table 4.17 Discriminant Validity (Fornell-Larcker Criterion)

	EDUC	FA	FI	HLTH	INS	OF	SES	SKILL	ST&SP	SWB
EDUC	.850									
FA	.522	.843								
FI	.462	.501	.874							
HLTH	.489	.550	.508	.844						
INS	.542	.591	.528	.569	.837					
OF	.188	.250	.425	.271	.248	.830				
SES	.538	.585	.492	.571	.586	.270	.840			
SKILL	.519	.588	.507	.576	.584	.231	.580	.832		
ST&SP	.516	.600	.519	.544	.585	.253	.599	.567	.829	
SWB	.498	.555	.689	.526	.560	.380	.541	.535	.542	.781

Note: Bold represents the Square-root of AVE

It can be found that the measurement model satisfied the Fornell-Larcker criterion (see table 4.17). All the square root of the AVE of each construct are greater than its correlation with other constructs. Henseler, Ringle and Sarstedt (2015) pointed out the Fornell-Larcker criterion may not be sufficient to assess discriminant validity. Therefore, the cross-loading analysis should accompany the Fornell-Larcker criterion (Ali et al., 2018).

2) Cross Loading Analysis

Cross-loadings represent the contribution of an item to its latent variable. The condition for cross loading is that the load on the relevant construct should be greater than all its loads on other constructs.

Table 4.18 Discriminant Validity (Cross Loading)

	EDUC	FA	FI	HLTH	INS	LPS	OF	SES	SKILL	ST&SP	SWB
educ1	.884	.473	.403	.400	.474	.201	.194	.480	.459	.459	.448
educ2	.847	.452	.401	.413	.469	.190	.164	.469	.439	.451	.421
educ3	.818	.427	.382	.408	.460	.179	.123	.429	.463	.439	.396
educ4	.848	.422	.383	.444	.439	.152	.157	.449	.404	.403	.427
fa1	.414	.825	.390	.473	.479	.132	.210	.485	.501	.480	.453
fa2	.450	.851	.444	.463	.517	.166	.240	.499	.518	.559	.513
fa3	.464	.849	.430	.460	.493	.150	.194	.489	.486	.482	.454
fa4	.432	.847	.424	.460	.504	.174	.195	.498	.474	.498	.447
fi1	.400	.437	.893	.456	.477	.253	.390	.439	.455	.463	.606
fi2	.432	.466	.873	.469	.475	.276	.361	.461	.470	.471	.617
fi3	.377	.411	.857	.405	.431	.266	.362	.386	.403	.425	.582
hlth1	.401	.443	.410	.825	.475	.172	.208	.467	.485	.428	.421
hlth2	.404	.443	.423	.842	.484	.159	.213	.487	.482	.443	.420
hlth3	.399	.480	.430	.852	.467	.126	.235	.485	.474	.481	.473
hlth4	.446	.489	.450	.855	.496	.166	.255	.488	.504	.481	.458
ins1	.469	.500	.441	.485	.838	.164	.177	.510	.477	.484	.478
ins2	.463	.475	.426	.464	.824	.162	.202	.469	.493	.472	.448
ins3	.432	.514	.449	.456	.840	.155	.213	.477	.478	.501	.486
ins4	.451	.489	.452	.500	.845	.190	.238	.505	.509	.501	.461
lps	.213	.185	.303	.184	.200	1.000	.202	.186	.217	.193	.299
of1	.179	.221	.387	.241	.235	.184	.876	.239	.215	.247	.356
of2	.147	.203	.348	.217	.193	.192	.821	.200	.161	.174	.298
of3	.129	.229	.354	.216	.217	.167	.814	.249	.209	.225	.293
of4	.158	.204	.355	.221	.194	.136	.822	.219	.192	.215	.332
of5	.171	.176	.313	.229	.187	.159	.818	.212	.179	.184	.293
ses1	.454	.478	.419	.476	.506	.155	.247	.838	.510	.490	.457
ses2	.447	.473	.415	.500	.496	.162	.221	.837	.449	.505	.466
ses3	.476	.506	.429	.460	.507	.117	.220	.853	.487	.491	.438
ses4	.428	.508	.387	.485	.456	.197	.220	.830	.503	.529	.457
skill1	.427	.499	.423	.510	.504	.163	.188	.494	.821	.457	.437
skill2	.446	.491	.403	.465	.468	.192	.225	.496	.837	.499	.453
skill3	.424	.458	.420	.468	.471	.188	.176	.453	.816	.450	.429
skill4	.431	.507	.442	.476	.501	.179	.180	.486	.854	.479	.463
st&sp1	.451	.495	.412	.444	.481	.173	.210	.492	.461	.827	.455
st&sp2	.432	.507	.428	.452	.494	.164	.221	.501	.458	.840	.451
st&sp3	.390	.490	.440	.424	.477	.113	.175	.491	.448	.818	.435
st&sp4	.437	.497	.440	.482	.488	.187	.233	.503	.511	.830	.456
swb1	.389	.433	.554	.395	.434	.252	.294	.417	.457	.423	.772
swb10	.379	.410	.556	.382	.430	.245	.305	.404	.382	.425	.786
swb11	.393	.436	.523	.399	.436	.204	.317	.418	.412	.433	.794

Table 4.18 Discriminant Validity (Cross Loading) (Cont.)

	EDUC	FA	FI	HLTH	INS	LPS	OF	SES	SKILL	ST&SP	SWB
swb12	.380	.395	.533	.341	.407	.211	.300	.392	.378	.371	.773
swb13	.424	.480	.523	.435	.451	.209	.298	.471	.435	.447	.782
swb14	.385	.438	.536	.422	.424	.272	.285	.412	.392	.426	.786
swb15	.359	.373	.509	.387	.378	.238	.310	.405	.378	.394	.757
swb16	.414	.439	.527	.446	.410	.220	.295	.417	.422	.426	.789
swb17	.360	.399	.512	.413	.430	.228	.309	.420	.425	.389	.768
swb18	.372	.413	.508	.401	.439	.224	.257	.394	.382	.408	.768
swb19	.380	.462	.551	.399	.447	.240	.328	.444	.414	.440	.770
swb2	.426	.464	.597	.473	.467	.274	.347	.461	.447	.464	.848
swb20	.406	.453	.569	.403	.442	.214	.289	.408	.442	.421	.790
swb21	.356	.442	.510	.404	.443	.197	.275	.390	.418	.376	.770
swb22	.398	.451	.533	.419	.454	.274	.298	.429	.428	.427	.794
swb3	.382	.442	.543	.435	.462	.234	.292	.443	.449	.432	.778
swb4	.388	.442	.547	.423	.455	.251	.288	.432	.407	.480	.769
swb5	.382	.447	.543	.390	.460	.231	.296	.417	.422	.416	.785
swb6	.379	.396	.520	.395	.429	.248	.300	.414	.431	.406	.770
swb7	.399	.435	.536	.426	.423	.235	.254	.452	.427	.440	.778
swb8	.382	.408	.533	.393	.424	.231	.278	.409	.408	.399	.777
swb9	.415	.458	.553	.443	.459	.205	.305	.433	.431	.447	.767

Note: Bold represents the indicator's cross loading

Table 4.18 shows cross loading values. As for independent variable, all the factor loading values are satisfied the criterion.

As for dependent variable, the loading factors of FI range from .856 to .893, which are all larger than the cross-loadings with other variables.

As for mediating variable, the loading factors of SWB range from .757 to .794, which are all larger than the cross-loadings with other variables.

As for moderating variables, the loading factors of moderator OF range from .814 to .876, which are larger than the cross-loadings with other variables.

3) Heterotrait - Monotrait Ratio (HTMT)

HTMT is based on the estimation of the correlation between the constructs. Discriminate validity is based on the HTMT ratio. However, the threshold for HTMT has been debated in existing literature. Kline (2011) suggested a threshold of .85 or less, while Teo, Tsai and Yang (2013) recommend a liberal threshold of .90 or less.

Table 4.19 Discriminant Validity in Constructs (HTMT)

	HC	SWB	FI	LPS	OF
HC					
SWB	0.726				
FI	0.727	0.760			
LPS	0.263	0.304	0.330		
OF	0.338	0.411	0.483	0.212	

As can be seen from table 4.19, all the HTMT values are lower than .90, which means the results meet the HTMT criterion. Thus, the results for reliability and validity show that both reliability and validity were established.

4.6 Hypothesis Testing

In this study, SPSS PROCESS is used to examine path coefficients, as for process macro is more suitable for estimating the model as it provides conditional direct effect and conditional indirect effects. The procedure is as follows: (1) Convert all multiple indicator variables to single construct score by Smart pls. (2) Use PROCESS to run the research framework with a customized model that matches the structure. The result is as follows:

Table 4.20 Mediating Effect of Subjective Well-being between Human Capital and Fertility Intention

	Effect	Boot SE	P Values	Bootstrap 95% CI	
				LLCI	ULCI
Subjective well-being	.277***	.021	.000	.238	.318

As can be seen from table 4.20, the mediating effect between human capital and fertility intention is significant ($\beta=.277$, $p=.000$; 95% CI= [.238, .318]). This confirms that subjective well-being partially mediates the effect of human capital on fertility intention, which supported Hypothesis 2.

After analyzing according to the research framework in SPSS ROCESS, the following results were obtained:

Table 4.21 Regression Analysis of Human Capital, Subjective Well-being, Occupational Flexibility and Leave Policy Satisfaction on Fertility Intention

Outcome variable	Predictor variable	β	SE	t- values	p- values	Bootstrap 95% CI	
						LLCI	ULCI
Fertility intention	Constant	-.127***	.028	-4.534	.000	-.182	-.072
	Human capital	.273***	.034	8.136	.000	.207	.339
	Subjective well-being	.408***	.027	15.117	.000	.355	.461
	Occupational flexibility	.1630***	.021	7.914	.000	.123	.203
	Int_1	.151***	.020	7.541	.000	.112	.190
	Leave policy satisfaction	.151***	.040	3.776	.000	.073	.229
	Int_2	.062	.040	1.544	.123	-.017	.141
Model Fit	N			1180			
	R2			.580			
	F			270.078			

From the results in Table 4.21, human capital has a significant positive effect on fertility intention ($\beta = .273$, $p = .000$; 95% CI = [.207, .339]). This suggests that better human capital contributes to higher fertility intention and supports Hypothesis 1. Occupational flexibility has a positive effect between human capital and fertility intention ($\beta = .151$, $p = .000$; 95% CI = [.112, .190]). While leave policy satisfaction has no moderating effect between human capital and fertility intention ($\beta = .062$, $p = .123$; 95% CI = [-.017, .141]). Thus, Hypothesis 3 is supported, while Hypothesis 4 is not supported.

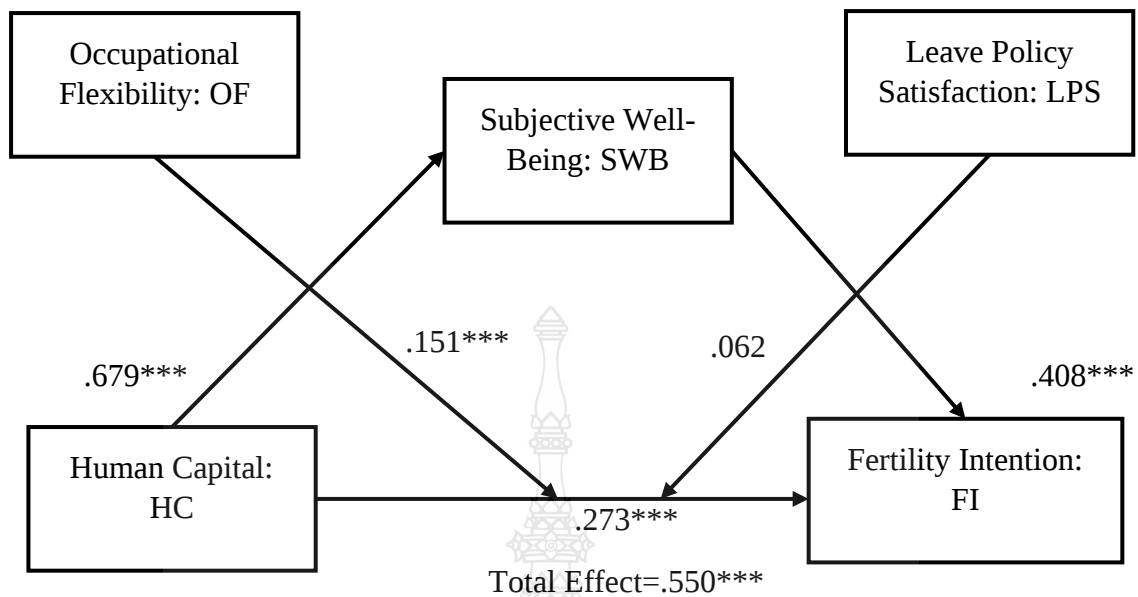


Figure 4.2 Estimated Research Model

According to Fig. 4.2 of the estimated research model, the direct effect of human capital on fertility intention is .550 (total effect, TE) when no other variables are considered. However, after accounting for one mediator and two moderators, the effects (direct effect, DE) decreased to .273, indicating that the total effect may have overstated the role of human capital. After incorporating both mediation and moderation variables, the influence of human capital is weakened, so, a mediator, subjective well-being significantly enhances the indirect effect of human capital on fertility intention, or subjective well-being underscoring the central role of subjective well-being in individual fertility decisions. However, the direct effect of .273 is high (higher than the threshold of .20) and statistically significant, indicating that human capital remains important within the China context, and there exist some more hidden variables that may help transmit effects of human capital to fertility intention. Additionally, the moderating role of occupational flexibility suggests that flexibility in the work environment and career choices can significantly alter the impact of human capital on fertility intention, supporting the importance of occupational flexibility in fertility decision-making. In contrast, the moderating effect of leave policy satisfaction is not statistically significant.

To further study the moderating effect of leave policy satisfaction and occupational flexibility on fertility intention, the spotlight analysis of this moderation analysis uses the selection point method to generate output. The interaction analysis uses the output of PROCESS. Leave policy satisfaction is a binary variable with values of 0 and 1. Occupational flexibility values are the mean and plus or minus one standard deviation. Therefore, there are 6 combinations of LPS and OF levels, as shown in Table 4.22.

Table 4.22 Conditional Indirect Effects of HC on FI for different levels of Moderators LPS and OF

Moderator Variable		HC→FI	SE	t	p	Bootstrap 95% CI	
LPS	OF	Effect		Value	Value	LLCI	ULCI
.000(low)	-1.046(low)	.115***	.036	3.220	.001	.045	.186
.000(low)	.028(average)	.278***	.034	8.234	.000	.211	.344
.000(low)	1.065(high)	.434***	.043	10.041	.000	.349	.519
1.000(high)	-1.046(low)	.178***	.040	4.450	.000	.099	.256
1.000(high)	.028(average)	.340***	.032	10.583	.000	.277	.403
1.000(high)	1.065(high)	.496***	.037	13.444	.000	.424	.569

By examining the conditional effects at different levels of LPS and OF, this study provides a deeper understanding of how these moderating variables influence the impact of HC performance on FI. Further analysis reveals that the direct effect of HC on FI differs significantly across various levels of LPS and OF. The detailed conditional effects are as follows:

(1) Low LPS and Low OF

At the levels of low LPS and low OF, the direct effect value was .278 ($t=8.234$, $p=.000$; 95% CI= [.211, .344]). HC has a significant positive effect on FI, indicating that when both LPS and OF are low, HC increases FI.

(2) Low LPS and Average OF

At the levels of low LPS and average OF, the direct effect value was .278 ($t=8.234$, $p=.000$; 95% CI= [.211, .344]). HC has a significant positive effect on FI,

indicating that when LPS is low and OF is average, HC increases FI.

(3) Low LPS and High OF

At the levels of low LPS and high OF, the direct effect value was .434 ($t=10.041$, $p=.000$; 95% CI= [.349, .519]). HC has a significant positive effect on FI, showing that high OF can offset the low LPS and enhance FI through HC.

(4) High LPS and Low OF

At the levels of high LPS and low OF, the direct effect value was .178 ($t=4.450$, $p=.000$; 95% CI= [.100, .256]). HC has a significant positive effect on FI, indicating that when LPS is high and OF is low, HC increases FI.

(5) High LPS and Average OF

At the levels of high LPS and average OF, the direct effect value was .340 ($t=10.583$, $p=.000$; 95% CI= [.277, .403]). HC has a significant positive effect on FI, indicating that when LPS is high and OF is average, HC increases FI.

(6) High LPS and High OF

At the levels of high LPS and high OF, the direct effect value was .496 ($t=13.444$, $p=.000$; 95% CI= [.424, .569]). HC has a significant positive effect on FI, demonstrating that high levels of both LPS and OF significantly improve FI through HC.

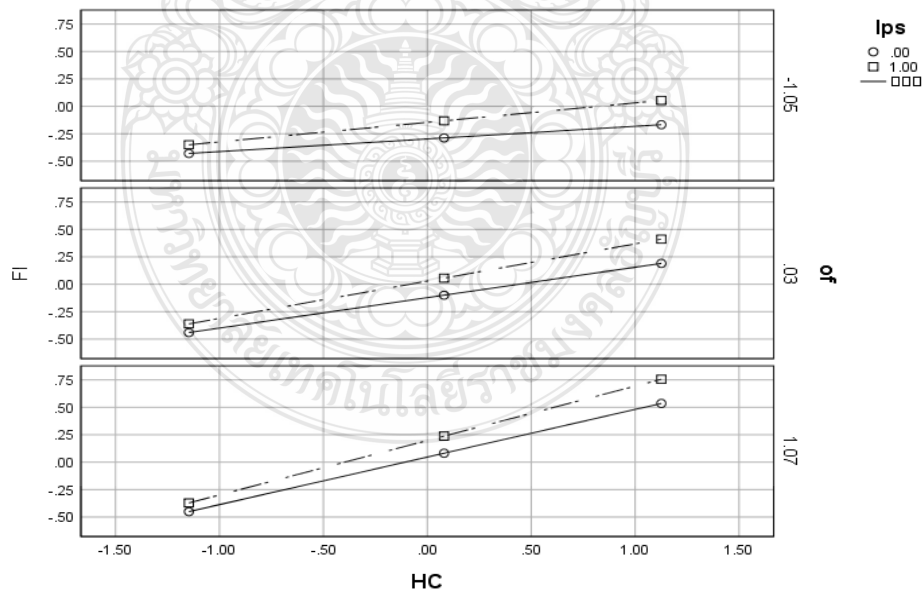


Figure 4.3 Visualizing the Effect of HC on FI Under Different LPS and OF Levels

Among the 6 combinations of leave policy satisfaction and occupational flexibility, the research observed that the effects increase monotonically with higher values of occupational flexibility, regardless of leave policy satisfaction levels. The conditional indirect effects are stronger when leave policy satisfaction is high (i.e., LPS = 1) and occupational flexibility is higher. However, in practice, high occupational flexibility may not be feasible, while low occupational flexibility is more achievable. Therefore, for better practical application of the research results, the research recommended implementing average (medium) occupational flexibility and high leave policy satisfaction.

4.7 Summary

The study shows that human capital has a positive impact on fertility intention. Subjective well-being positively mediates the impact of human capital on fertility intention. Occupational flexibility has a positive impact on human capital moderating fertility intention. However, leave policy satisfaction has no moderating effect on the impact of human capital on fertility intention. While after using the selection point method to generate output, under the joint effect of different levels of leave policy satisfaction and occupational flexibility, the higher the occupational flexibility and leave policy satisfaction, the greater the moderating effect of human capital on the impact of fertility intention.

Table 4.23 Results of Hypothesis

	Hypothesis	Significant	No Significant
H1	Human capital has a positive effect on fertility intention.	+	
H2	Subjective well-being has a partially mediating effect on human capital and fertility intention.	+	
H3	Occupational flexibility has a positive moderating effect on the impact of human capital on fertility intention.	+	
H4	Leave policy satisfaction has no moderating effect on the impact of human capital on fertility intention.		√

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The study shows a correlation between human capital, subjective well-being, and fertility intention. This chapter presents the results of empirical data analysis and discusses the similarities and contradictions between related research and the existing literature. The next section is the discussion part of the paper and then presents the theoretical, practical, and policy contribution of this paper. The limitations of the study are presented in the third section. The final section contains recommendations for future research.

5.1 Conclusions

This paper examines the determinants of human capital and subjective well-being on fertility intention from a micro-perspective. As a hierarchical component model (HCM), human capital is a second-order reflexive construct, that includes education, skills, insurance, socioeconomic status, fertility attitudes, health, and social trust & support. Subjective well-being is the mediator. In addition, this study also examines the moderating effects of occupational flexibility and leave policy satisfaction. The objectives are as follows:

- 1) The impact of human capital on fertility intention.
- 2) The mediating effect of subjective well-being on human capital and fertility intention.
- 3) The moderating effect of occupational flexibility on the impact of human capital on fertility intention.
- 4) The moderating effect of leave policy satisfaction on the impact of human capital on fertility intention.

This study used a combined approach of qualitative and quantitative analysis to achieve the research objectives.

In the qualitative analysis, the author conducted in-depth interviews using a semi-structured approach with 12 experts and scholars in the relevant field. Their views on the research question were collected and summarized. The qualitative results show that the concept of human capital is crucial for understanding fertility intention. The

influencing factors include social policy, work environment, family support, and other levels. Subjective well-being is closely related to fertility intention, and policy satisfaction may be the most important mediator. Policies and interventions can influence fertility intentions by improving human capital and improving subjective well-being. Occupational flexibility plays a key role in mitigating the impact of human capital on fertility intentions, although this needs to be balanced against financial stability. Future research can focus on factors such as education and career development, digital age skills, and health status to better understand the dynamics of fertility subjective well-being on fertility intentions. Subjective well-being can act as a mediator between human capital and fertility intentions. According to some experts, factors such as occupational flexibility and satisfaction leave policies could have moderating effects.

For the quantitative analysis, the structural equation model and SPSS PROCESS were used for the study. This analysis enables the estimation of relationships between several correlated variables. This study's empirical results show similarities and contradictions with relevant studies in existing literature. The results emphasize the importance of subjective factors and subjective agency. The high significance level of this study lends a high degree of credibility to the empirical findings obtained.

Below are the hypotheses and results of the study. Table 5.1 shows the results of the four hypothesis tests. The results show that human capital has a positive influence on fertility intention. Subjective well-being has a partial mediating effect on human capital and fertility intention. Occupational flexibility positively moderates the influence of human capital on fertility intention. Leave policy satisfaction had no moderating effect on human capital and fertility intention.

Table 5.1 Summary of Hypothesis Testing

Hypothesis		Significant	No Significant
H1	Human capital has a positive effect on fertility intention.	+	
H2	Subjective well-being has a partially mediating effect on human capital and fertility intention.	+	
H3	Occupational flexibility has a positive moderating effect on the impact of human capital on fertility intention.	+	
H4	Leave policy satisfaction has no moderating effect on the impact of human capital on fertility intention.		n

5.2 Discussion

This section deals with the theoretical background and the results of the study to better understand and answer the research questions raised in this study. There are 4 hypotheses in this study. The research findings show that human capital has a positive impact on fertility intention. The effect of human capital on fertility intention has a mediating effect through subjective well-being. The influence of human capital on fertility intention is moderated by occupational flexibility. However, there is no moderating effect between human capital and fertility intention. The specific discussion is as follows:

Discussion of Hypothesis 1: Human Capital has an Effect on Fertility Intention

In this study, human capital is a second-order construct. According to human capital theory, human capital is divided into 7 dimensions: Education, skills, insurance, socioeconomic status, fertility attitudes, health, and social trust and support. Research shows that human capital has a positive influence on fertility intention. Many theories have confirmed this result. According to the rational choice theory for marginal children and the quantitative and qualitative alternative theory for children, higher human capital means that more costs of raising children can be borne and the desire to have children is stronger. According to household bargaining theory, higher human capital means a

greater distribution of power in the family and that more initiative can be taken in fertility intention. Previous research has also discussed this from different angles, as follows:

1) Education

In this study, education has a positive influence on fertility intention. This finding is supported by respondents' answers in the qualitative results, which claim that people with a higher level of education have higher fertility intentions. Previous research has differing opinions on the influence of education on fertility intentions. Some researchers found that highly educated people have a stronger desire to have children. Testa (2014) found a positive correlation between a woman's level of education and her lifetime fertility intentions. In an institutional context that allows highly educated women to have large families, women of childbearing age are more likely to invest in human capital and family size, as these choices are not seen as incompatible. Additionally, those with higher education are more likely to prefer three or more children and less likely to prefer no children or only one child (Bernardi, Mynarska, & Rossier, 2014; Heiland, Prskawetz, & Sanderson, 2005). They explained that highly educated people have a relatively high income and the burden of raising children does not seem to be as heavy for them. In addition, people with higher levels of education desire larger families.

On the contrary, some previous studies found that education has a negative impact on fertility intention which implies that education delays people's age at marriage and childbearing (Liu, 2016; Yang & Zhang, 2018b). Monstad, Propper and Salvanes (2008) pointed out that although education will delay the age at which people enter marriage and have children, the overall number of children in the life cycle will not decrease. According to the quantity-quality theory of children, the improvement in education level makes people pursue the quality rather than the quantity of children (Becker, Cinnirella, & Woessmann, 2013). However, Feng (2010) believes that there is no correlation between education and fertility intention.

2) Skill

This study found that people with higher occupational skills have a stronger intention to bear a child. In the qualitative research, the experts also supported this view. Qualifications are considered another variable that is often used to represent human capital alongside education. It could be that highly qualified people have more income

advantages and are better able to cope with changes in family structure. This finding is consistent with Shreffler et al. (2016), who found that women in higher-skilled occupations do not want fewer children but report a higher intention to have children. Another study shows that men and women in management positions want more children than those in lower-skilled occupations (Kreyenfeld et al., 2022).

However, some research takes the opposite view. Cheng and Hsu (2020) found that career prospects and emotional satisfaction strongly increase the opportunity cost of having a child. Zhou, Zhao and Dong (2021) also insist on the view that professional qualification has an opposite effect on fertility intention due to opportunity costs.

3) Insurance

In this study, insurance has a positive effect on fertility intention. The qualitative analysis showed that the higher the insurance coverage, the higher the fertility intention, which confirms the quantitative results. In other words, people with higher insurance coverage are more likely to have children. This is consistent with the findings of LeGrand et al. (2003), who found that although insurance coverage may have a substitution effect, it is still positively related to fertility intention, as people still need support, companionship, and offspring in old age. In addition, Zhang and Cao (2023) found that insurance coverage is directly related to family economic status and well-being, which in turn affects individuals' decision to have children. The research in this study confirms the above view.

4) Socio-economic Status

In this study, socioeconomic status has a positive influence on fertility intentions. The results of qualitative studies show that people with higher socioeconomic status have a stronger fertility intention. In Nordic countries, there is a positive correlation between social status and the fertility relationship, particularly among men (Jalovaara et al., 2019). Research by Myrskylä and Margolis (2014) suggests that higher socioeconomic status is associated with better health outcomes and lower stress levels, which can have a positive impact on fertility intentions. Good socioeconomic status means that more support is available. This study supports this view and finds that an improvement in socioeconomic status has a positive impact on fertility intentions.

5) Fertility Attitudes

The results of this study show that attitudes towards fertility have a positive influence on fertility intentions. This result is supported by the respondents' answers in the qualitative results. They claim that people with a positive attitude towards fertility are willing to have more children. From a fertility attitude perspective, a positive fertility attitude leads to a stronger desire to have children (Holland & Keizer, 2015). In addition, studies have shown that attitudes towards the desire to have children, partner's expectations regarding fertility, and belief in population fertility policies are significant predictors of fertility intention (Matera et al., 2023). Öner and Sis Çelik (2023) find that there is a negative relationship between attitudes towards fertility and intention to use contraceptive methods, suggesting a positive attitude towards fertility intention.

6) Health

In this study, health has a positive influence on fertility intention. This opinion is supported by the respondents who stated in an in-depth interview that people with better physical and mental health are more likely to express their fertility intentions. In terms of health, relatively healthy individuals may feel more confident to face the challenges of parenthood without worrying about the negative impact of health problems on family life (Alderotti & Trappolini, 2022). From a common-sense point of view, a healthy body and mind make people more confident in coping with changes in the family scale. There is also evidence that people with health problems have a lower desire to have children compared to healthy people (Cvancarova et al., 2009). Tocchioni (2018) showed that health problems can reduce the chances of a stable marriage while remaining single is one of the main causes of childlessness in industrialized countries. This study also confirms that health has a positive influence on fertility intentions.

7) Social Trust & Support

Social trust & support have a positive impact on fertility intention in this paper. In in-depth interview, the conclusion suggested that individuals who receive greater social trust & support harbor stronger desires to become parents compared to those receiving less support. In terms of social trust and support, research shows that the intention to have a child is supported by family and friends, the more likely they are to want a child now (Dommermuth, Klobas, & Lappegård, 2011; Esping-Andersen & Billari, 2015;

Tanskanen & Rotkirch, 2014; Yoon, 2017). Kulkova and Sharin (2020), who focused on examining the impact of factors such as subsidies for young families, benefits for each child, and the assistance of older parents in raising children's fertility intentions. The research findings indicate that the more family subsidies and support received, the stronger the fertility intentions. This hypothesis has also been confirmed.

Discussion of Hypothesis 2: Subjective Well-being has a Mediating Effect on Fertility Intention

As can be seen from the results, subjective well-being mediates the effect of human capital on fertility intention. In the rational choice theory for marginal children, it is assumed that from a utility perspective, people believe that raising children can bring them pleasure, which increases life satisfaction and subjective well-being, thus increasing their willingness to have children. The theory of intergenerational wealth flows states that individuals who can receive more family support have higher subjective well-being and a stronger intention to have children, which is consistent with the findings of this study. In-depth interviews have shown that human capital has a positive effect on subjective well-being, and that subjective well-being in turn has a positive effect on fertility intentions. Some studies have shown that subjective well-being plays a mediating role in fertility intentions. Vignoli, Mencarini and Alderotti (2020) have confirmed that the influence of job uncertainty on fertility intentions is mediated by subjective well-being, and that job uncertainty is closely related to individual human capital levels. In addition, Pertold-Gebicka (2022) found that parents' subjective well-being reflects the subjectively perceived costs and benefits of having children, and is seen by many as a proxy for the benefits. The financial and time costs of raising children contribute to a reduction in happiness for many parents and indirectly influence the desire to have children. That is, parents with higher socioeconomic status and those living in countries with generous family support generally have a positive fertility intention. In addition, Xiao, Chang and Lian (2023) found that happiness plays an important mediating role between residential mobility and fertility intention. Higher residential mobility means lower human capital, which leads to lower subjective well-being and lower fertility intentions.

The influence of human capital on subjective well-being may suggest that individual psychological state and subjective feelings play a key role in influencing human capital in fertility decisions. The influence of subjective well-being on fertility intentions explains how happiness shapes individuals' expectations of their future life, work, and family, and thus influences their willingness to take on the responsibilities associated with childbearing. On this basis, this paper proposes that subjective well-being has a mediating effect on human capital and fertility intention. This hypothesis is also supported by the fact that subjective well-being plays a partial mediating role in the influence of human capital on fertility intention.

Therefore, policymakers may need to focus on how to improve individuals' subjective well-being to promote fertility. This may include policy initiatives to improve working conditions, provide better benefits, promote work-life balance, etc. The existence of the mediating effect shows that fertility intention is not only directly affected by human capital but also mediated by individual subjective feelings. The results highlight the multi-layered nature of fertility intention, which requires a comprehensive consideration of individual and well-being factors.

Discussion of Hypothesis 3: Occupational Flexibility has a Moderating Effect on the Impact of Human Capital on Fertility Intention

Occupational flexibility has a positive effect on the influence of human capital on fertility intention. According to the theory of rational choice for marginal children, raising children takes a lot of time, and occupational flexibility can reduce the time costs. However, flexible employment can also mean an insecure income and thus increase economic costs. As mentioned in the qualitative interviews, many experts believe that job flexibility plays a positive moderating role in the impact of human capital on fertility intentions. From a cost perspective, the main reasons why people do not want to have children are material costs and time costs. In terms of time costs, career flexibility is crucial for people who want to have children, especially for women. An important reason why women today do not want to have children is that having a child would limit their time for work and self-fulfillment. A flexible workplace allows women to devote more energy to their families. For example, Shreffler et al. (2016) point out that women who work in more professional occupations (e.g. occupations with higher prestige, autonomy,

complexity, and supervisory roles) are more willing to postpone having children than women employed in occupations with lower values for professional characteristics. Women employed in the formal sector have fewer children, despite studies linking unemployment to declining fertility rates (Babalola & Akor, 2013). In addition, Auer and Danzer (2016) examined the impact of a fixed-term or permanent contract on fertility based on data from the German Social and Economic Council and found that the more stable the career, the stronger the negative impact on female fertility. These studies have confirmed hypothesis 3.

From a man's perspective, career flexibility makes it easier to reconcile work and family life and thus has an impact on his fertility intentions (Xue, 2022). The more flexible a man's job is, the more housework he can do for his family and the more time he can spend with his family, which is necessary from the family's perspective. It should be noted that job flexibility in this study refers to job flexibility (whether time is flexible, whether there is independent decision-making authority, etc.) and not job instability. Fiori et al. (2013); Kreyenfeld and Andersson (2014) have shown that unemployment or a temporary (or low-paid) job reduces the willingness to have a first or second child. This study only looks at job flexibility. The effect of job instability on fertility intentions will be investigated in more detail in future work. Occupational flexibility therefore has a positive regulating effect on human capital and fertility intentions, which supports the views of the above researchers.

Discussion of Hypothesis 4: Leave Policy Satisfaction has a Moderating Effect on the Impact of Human Capital on Fertility Intention

The result shows that satisfaction with vacation policy has no moderating effect on the impact of human capital on fertility intention. According to marginal child rational choice theory, the time cost of child-rearing reduces people's willingness to have children, but the implementation of leave policies means that the time cost individuals have to spend on child-rearing can be mitigated to some extent. In the qualitative research, respondents agree on the point that satisfaction with leave policies moderates human capital with fertility intentions. However, in the quantitative research, the study received different answers. In this model, satisfaction with vacation policy has no moderating effect on the impact of human capital on fertility intentions. This could mean that without

different levels of satisfaction with the leave policy, the effect of satisfaction with the leave policy on the impact of human capital on fertility intention is small or not obvious. Some studies support this view. Whether taking time off increases fertility remains controversial (Balbo, Billari, & Mills, 2013; Hoem, 2008; Olivetti & Petrongolo, 2017). Similarly, Bergsvik, Fauske and Hart (2020), in their review of the effects of family policies on fertility, conclude that the effects of leave on fertility are ambiguous. However, when satisfaction with the leave policy reaches the lowest or highest value (e.g. very high or very low satisfaction), it shows a significant moderating effect on the impact of human capital on fertility intention. When job flexibility reaches the highest value, satisfaction with leave policy and job flexibility have the greatest impact on human capital fertility intention. This suggests that there may be an interaction between job flexibility and satisfaction with leave policy that jointly affects the impact of human capital on fertility intention. A reasonable explanation is that job flexibility is very important for families with fertility intentions, especially for women. A study in the Australian population has shown that a moderate paid parental leave program can improve the fertility of working women, especially those with high human capital, and thus mitigate fertility decline (Bassford & Fisher, 2020). As gender equality theory suggests, leave policies may also increase fertility, in part by equalizing family gender roles (Thomas et al., 2022). However, China's 2021 vacation policy has not been implemented in many regions and is not very generous. For women in particular, the “fertility disadvantage” they suffer from having a child cannot be compensated by longer leave periods (Evertsson & Duvander, 2011). Indeed, the opportunity costs of childbearing for women ---- in terms of time and energy and the inability to effectively guarantee employment ---- are too high (Raute, 2019). Therefore, when implementing a satisfactory leave policy, career flexibility must be fully considered, which is very important for high fertility intentions.

5.3 Contributions of the Study

The study on the "Influence of Human Capital on Fertility Intentions in China" offers significant benefits across various domains:

Policy Formulation: Understanding how human capital influences fertility intentions can guide policymakers in creating targeted interventions to address China's

demographic challenges, such as aging populations and declining birth rates. This can help in crafting policies that support family planning, work-life balance, and economic development.

Economic Implications: By exploring the links between human capital, fertility intentions, and other moderating factors, this research can provide insights into how fertility trends may impact China's long-term economic growth, labor force sustainability, and productivity.

Social Well-being: The study addresses important aspects of subjective well-being, occupational flexibility, and leave policy satisfaction, contributing to a broader understanding of how these factors impact individual choices and family planning. This can help improve societal well-being and enhance the quality of life for individuals and families.

Academic Contribution: This research contributes to the academic discourse by filling gaps in the literature on the intersection of human capital and fertility intentions, particularly within the context of China, which has unique socio-economic and cultural dynamics.

5.3.1 Theoretical Implications and Contribution

Human Capital Theory: This research extends human capital theory by examining how human capital not only influences economic outcomes but also affects personal decisions such as fertility intentions. By integrating concepts of subjective well-being, occupational flexibility, and leave policy satisfaction, the study provides a more comprehensive understanding of the multifaceted impact of human capital.

Mediation and Moderation Models: The study offers theoretical advancements by exploring the mediating role of subjective well-being and the moderating effects of occupational flexibility and leave policy satisfaction. This contributes to the development of more nuanced models that capture the complexity of decision-making processes related to fertility.

Contextualization in China: The research provides context-specific insights by focusing on China, where unique socio-cultural, economic, and policy factors influence fertility decisions. This contributes to the global literature by offering comparative perspectives and enhancing the understanding of how human capital operates in different cultural contexts.

Implications for Work-Life Balance and Family Policies: By highlighting the importance of occupational flexibility and leaving policy satisfaction, this study provides theoretical contributions to the fields of work-life balance and family policies. It suggests that these factors are critical in shaping fertility intentions, thus offering a basis for further research and policy development in this area.

5.3.2 Practical Contribution

Guidance for Employers: The findings can inform employers about the importance of occupational flexibility and leave policy satisfaction in influencing employees' fertility decisions. This could lead to the development of more family-friendly workplace policies that support employees' personal and professional lives.

Recommendations for Policy Makers: The research can offer valuable recommendations for policymakers in designing policies that enhance human capital while also supporting fertility intentions. This could include policies that promote education, training, and employment opportunities, alongside family support measures.

Social Planning: The study's outcomes can assist in social planning by providing insights into how human capital development strategies can be aligned with demographic goals, ensuring sustainable population growth and social stability.

This research has the potential to make significant contributions to both academic literature and practical applications in policy and organizational contexts.

5.4 Research Limitations and Suggestions for Future Research

5.4.1 Restriction

Although the researchers have endeavored to ensure the validity and reliability of the results, this study has several limitations that should be taken with a grain of salt by other researchers wishing to explore similar topics or use similar thematic frameworks.

Selection of variables. Fertility intentions are influenced by a complex interplay of social, economic, and cultural factors. Therefore, it is a challenge to fully and accurately quantify all relevant aspects. Further research is needed to select the appropriate and most important variables from the complex influences.

The sample is limited by geographical and numerical constraints. This study focused on the Chinese population and conducted a two-stage sample survey in five

provinces in China. If research is needed in other countries, the results may need to be generalized to other countries with caution.

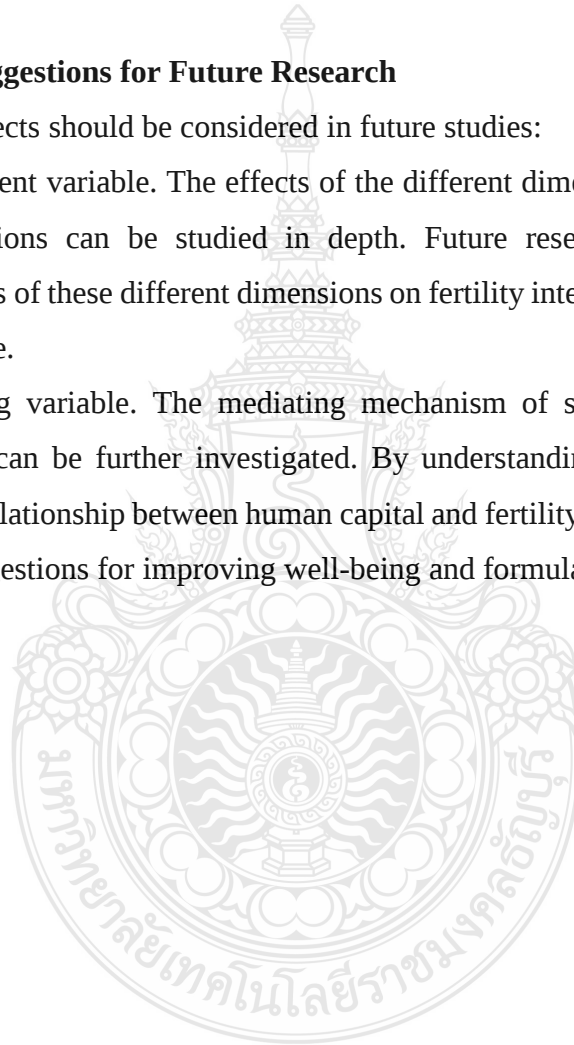
Sample age limits. In this study, a questionnaire survey was conducted to investigate fertility intentions. The respondents were the childbearing population aged 20-49 years. The restriction to people aged 20-49 may not fully reflect the overall situation of fertility intentions and ignores different factors that may exist in other age groups.

5.4.2 Suggestions for Future Research

Four aspects should be considered in future studies:

Independent variable. The effects of the different dimensions of human capital on fertility intentions can be studied in depth. Future research could analyze the independent effects of these different dimensions on fertility intentions and compare their relative importance.

Mediating variable. The mediating mechanism of subjective well-being on fertility intention can be further investigated. By understanding how subjective well-being affects the relationship between human capital and fertility intentions, we can make more specific suggestions for improving well-being and formulating fertility strategies.



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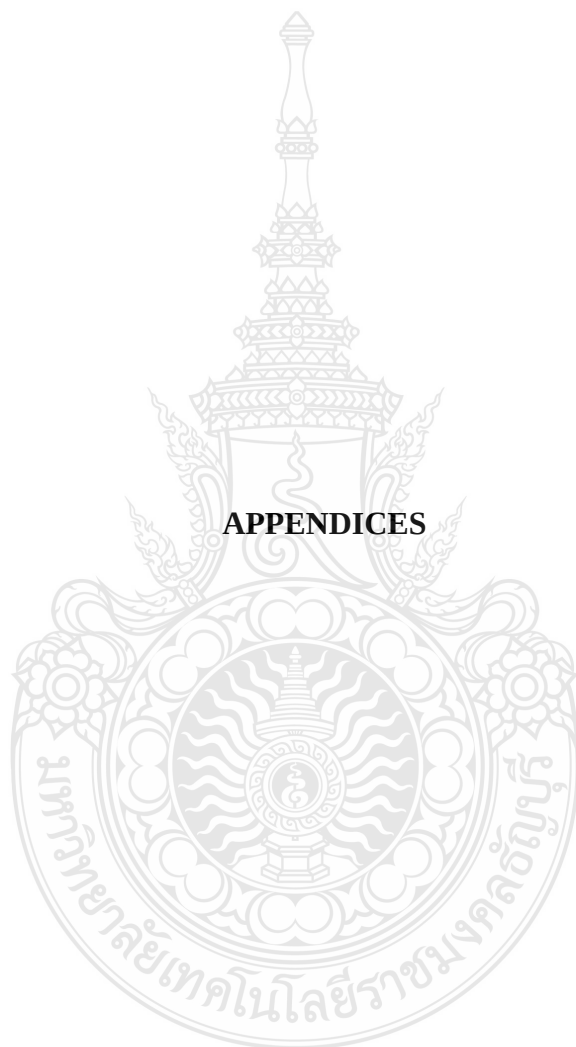
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APPENDIX A
Questionnaire Survey on the Impact of Human Capital on Fertility Intentions
in China

Part 1: Demographic information

Your age is around: _____.

- ☐ 20-24 years old
- ☐ 25-29 years old
- ☐ 30-34 years old
- ☐ 35-39 years old
- ☐ 40-44 years old
- ☐ 45-49 years old

Your gender:

- ☐ Male
- ☐ Female

Your nature of household registration:

- ☐ City
- ☐ Countryside

Your marital status:

- ☐ Single
- ☐ Married
- ☐ Common-law married
- ☐ Separated
- ☐ Widowed
- ☐ Divorced

Your salary (per month) is around:

- ☐ < 3,000
- ☐ 3,000-5,000
- ☐ 5,000-10,000
- ☐ 10,000-20,000
- ☐ > 20,000

Your education level is:

- ☐ elementary and below
- ☐ junior middle
- ☐ senior middle
- ☐ college
- ☐ undergraduate
- ☐ master
- ☐ doctoral

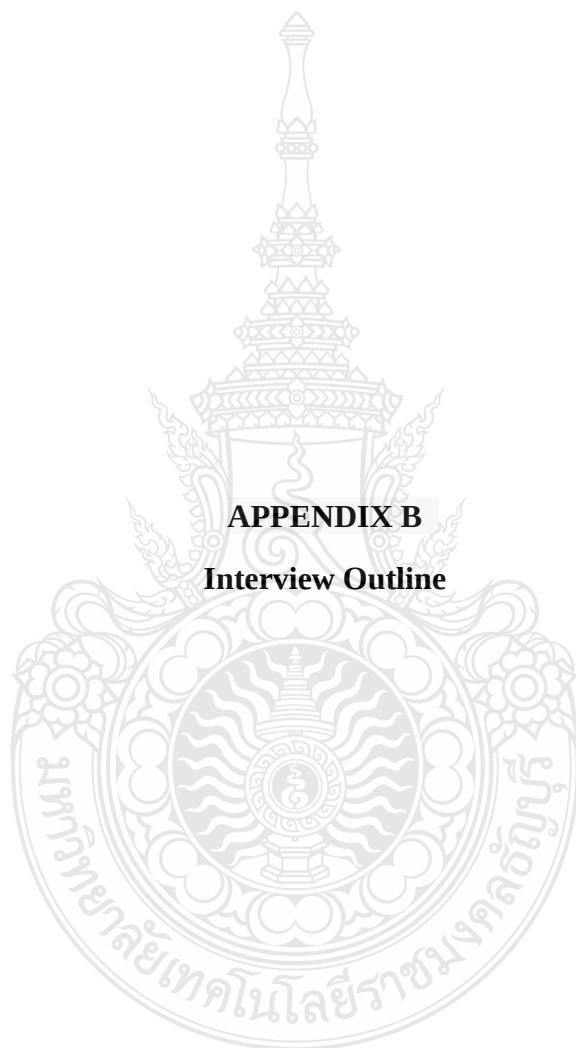
Part 2: Main questions

Please indicate the degree of your agreement or disagreement with each statement by filling in the circle on your answer sheet that best represents your point of view. Please choose from your following answers.

Questions		Not at all	A little	Moderately	Very much	Extremely
		1	2	3	4	5
Education	1) In terms of average education degree, I have a relatively good education level.					
	2) The education I received allows me to adapt to different work tasks.					
	3) The education I received helped me manage and plan my life.					
	4) My education level helps my career development.					
Skill	5) I think acquiring specific career skills is helpful for being more productive at work.					
	6) I often participate in various seminars or trainings to improve my personal skills.					
	7) If given the opportunity, I am willing to take the initiative to learn new skills to adapt to the changing industry.					
	8) Compared with others, I have better professional skills.					
Insurance	9) I have adequate basic medical insurance.					
	10) I have adequate basic pension insurance.					
	11) I have adequate commercial medical and health insurance to cover the risk.					
	12) I have adequate commercial pension insurance for retirement.					
Socioeconomic status	13) I have authority in front of others.					
	14) I have self-determined and independent.					
	15) I have respect in the eyes of others.					
	16) My current financial situation meets my expectations of living standards.					

Questions		Not at all	A little	Moderately	Very much	Extremely
		1	2	3	4	5
Fertility attitudes	17) Family is important to individuals.					
	18) Having children will make me happier and more content.					
	19) Fertility is important for personal growth and development.					
	20) I support a multi-child family structure.					
Health	21) My physical health condition is good.					
	22) My emotional condition is good.					
	23) I have vitality during work and life.					
	24) I can handle the stress of life and work well.					
Social trust & support	25) I trust my family and friends.					
	26) I often get help from others at work.					
	27) When facing difficulties or stress in life, I can feel supported by my social network.					
	28) I keep in touch with people in social networks regularly.					
Subjective well-being	29) I'm happy with my ability to work.					
	30) I am happy with access to health services.					
	31) I am happy with my ability to perform daily living activities.					
	32) I don't feel depressed or anxious.					
	33) I feel able to enjoy life.					
	34) I feel I have a purpose in life.					
	35) I feel optimistic about the future.					
	36) I feel in control of my life.					
	37) I feel happy with myself as a person.					

Questions		Not at all	A little	Moderately	Very much	Extremely
		1	2	3	4	5
	38) I am happy with my looks and appearance.					
	39) I feel able to live my life the way I want.					
	40) I am confident in my own opinions and beliefs.					
	41) I feel able to do the things I choose to do.					
	42) I feel able to grow and develop as a person.					
	43) I am happy with myself and my achievements.					
	44) I am happy with my personal and family life.					
	45) I am happy with my friendships and personal relationships.					
	46) I am comfortable about way I relate and connect with others.					
	47) I am happy with my sex life.					
	48) I am able to ask someone for help with a problem.					
	49) I am happy that I have enough money to meet my needs.					
	50) I am happy with my opportunity for exercise/leisure.					
Fertility intentions	51) I have strong will that want to have a (another) child.					
	52) I wish to have child early if possible.					
	53) I wish to have more children.					
Occupational flexibility	54) I get pressure during work time.					
	55) My job needs to contact with others.					
	56) My job needs to establish and maintain interpersonal relationships.					
	57) I have structure job imposes on me.					
	58) I don't have decision-making freedom.					
Leave policy satisfactory	59) Are you satisfied with the local leave policy?	Yes ☐		No ☐		



APPENDIX B

Interview Outline

Introduction to the Purpose of the Interview

Dear Madam/Sir:

Hello! Thank you very much for taking time out of your busy schedule to participate in the academic research for this paper. The purpose of this study is to explore the impact of human capital on fertility intention in China and the mediating role of subjective well-being on human capital and fertility intention, hoping to provide theoretical guidance for related research in the fields of demography and fertility. After the research is completed, the conclusions and recommendations of the research can be shared with you.

This interview should take approximately one hour. Your conversation will only be used for academic analysis by researchers and will not be used for any commercial purposes, nor will it be made public to any non-researchers. You do not need to have any concerns during the conversation. In addition, please express your opinions truly, because your opinions are very important to me and are related to the success or failure of this research. For the smooth development of the research, we will record the content of the interview.

Interview Questions

Part 1: Inquiries about the respondents' demographic information, which includes age, gender, household registration, marital status, salary (per month), and education level.

Part 2: Main questions regarding the influence of human capital and subjective well-being on fertility intentions are as follows:

- 1) How important do you think the concept of human capital is to understanding fertility intention?
- 2) Do you think human capital has influence on subjective well-being? Why?
- 3) In your research or professional experience, is there a relationship between subjective well-being and fertility intentions?
- 4) What factors do you think may moderate the impact of human capital on fertility intention? Why?
- 5) Do you think policy satisfaction may be a key variable moderating the relationship between human capital and fertility intention?
- 6) Starting from the personal professional field, in what ways does occupational flexibility moderate the impact of human capital on fertility intentions?



ที่ อว 0649.06/ 8715



คณะบริหารธุรกิจ
มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี
ตำบลคลองหก อำเภอคลองหลวง
จังหวัดปทุมธานี 12110

๑๐ ธันวาคม 2566

เรื่อง ขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหาของแบบสอบถาม

เรียน ดร.อาทิตย์ บุญญะภิภัตต์

สิ่งที่ส่งมาด้วย แบบสอบถามคุณูปการ

ด้วยคณะบริหารธุรกิจ มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี ได้เปิดสอนระดับปริญญาเอก
หลักสูตรปรัชญาดุษฎีบัณฑิต สาขาบริหารธุรกิจ ตั้งแต่ปีการศึกษา 2551 แล้วนั้น

เพื่อเป็นประโยชน์สำหรับนักศึกษา จึงขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหา
ของแบบสอบถาม สำหรับนักศึกษา ราย Miss Wenna Zou รหัสนักศึกษา 126490501024-6 เป็นนักศึกษา
หลักสูตรปรัชญาดุษฎีบัณฑิต สาขาวิชานบริหารธุรกิจ วิชาเอกการจัดการ เป็นผู้จัดทำคุณูปการเรื่อง Influence
of Human Capital on Fertility Intentions in China โดยมี ดร.กานต์พิชชา กองคนขวา บรรพชอลต์ เป็นที่
ปรึกษาคุณูปการ

จึงเรียนมาเพื่อขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหาของแบบสอบถาม จักเป็น
พระคุณยิ่ง

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.กัญญา พิชชา)

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คณะบริหารธุรกิจ
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ตำบลคลองหก อำเภอคลองหลวง
จังหวัดปทุมธานี 12110

18 ธันวาคม 2566

เรื่อง ขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหาของแบบสอบถาม

เรียน ผู้ช่วยศาสตราจารย์ ดร.วิฑูรย์ ศรีศิริโชติ

สิ่งที่ส่งมาด้วย แบบสอบถามคุณภูมินทร์

ด้วยคณะบริหารธุรกิจ มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี ได้เปิดสอนระดับปริญญาเอก หลักสูตรปรัชญาดุษฎีบัณฑิต สาขาบริหารธุรกิจ ตั้งแต่ปีการศึกษา 2551 แล้วนั้น

เพื่อเป็นประโยชน์สำหรับนักศึกษา จึงได้ขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหา ของแบบสอบถาม สำหรับนักศึกษา ราย Miss Wenwa Zou รหัสนักศึกษา 126490501024-6 เป็นนักศึกษา หลักสูตรปรัชญาดุษฎีบัณฑิต สาขาบริหารธุรกิจ วิชาเอกการจัดการ เป็นผู้จัดทำคุณภูมินทร์เรื่อง Influence of Human Capital on Fertility Intentions in China โดยมี ดร.กานต์พิชชา กองคนขวา แบริทอลล์ เป็นที่ปรึกษาคุณภูมินทร์

จึงเรียนมาเพื่อขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหาของแบบสอบถาม จักเป็นพระคุณยิ่ง

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เรื่อง ขอความอนุเคราะห์ตรวจสอบความถูกต้องเชิงเนื้อหาของแบบสอบถาม

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ด้วยคณะบริหารธุรกิจ มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี ได้เปิดสอนระดับปริญญาเอก
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of Human Capital on Fertility Intentions in China โดยมี ดร.กานต์พิชชา กองคนขวา บรรพชอลส์ เป็นที่
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