

Exchanging 'Life' For Money?

Overtime work culture and professional women's
fertility intentions in China

Jinxuan Lu

Acknowledgement

To my parents, whose presence guides my steps and fills my heart with everlasting love. Though you reside among the stars, your spirits transcend time and space.

Abstract

In the context of China's concerning decline in fertility rates and the widespread normalization of the '996' overtime culture, the connection between overtime work and fertility assumes considerable importance. This research is firmly grounded in the theoretical framework of the Theory of Planned Behavior (Ajzen, 1991), which investigates the complex relationship between overtime work and fertility intentions among working women of reproductive age in urban China. Employing a quantitative approach, this study adopts a between-group vignette experimental design involving three hundred participants from five bustling Chinese cities. The study manipulates three distinct levels of overtime intensity (toxic vs. moderate vs. no overtime) within the vignettes, followed by participants completing a questionnaire measuring fertility intentions and associated variables. Through the application of Partial Least Squares Structural Equation Modeling (PLS-SEM), the study yields robust results that highlight a significant negative effect of overtime on fertility intentions. The analysis also reveals that this relationship is partially mediated by three psychological factors – namely, attitudes, subjective norms, and perceived behavioral control – as suggested by the TPB theory. These findings enhance the understanding of how modern work practices intersect with family planning decisions, and further contribute to the broader discourse surrounding the influence of work-related stressors on the choices individuals make about reproduction.

Key words: Fertility intention, Overtime work, PLS-SEM, Vignette experiment, Theory of Planned Behavior

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1 Introduction

China has experienced a significant population decline since the 1970s heavily due to two factors: the government-led birth control policy, commonly referred to as the One-Child Policy (Greenhalgh, 2003), and the deep-rooted and widespread patriarchal belief of ‘son preference,’ which have resulted in sex-selective abortion and even infanticide toward female infants (Hesketh et al., 2011c). The country’s total fertility rate (TFR) dropped to 1.28 births per woman in 2020 (Zhao et al., 2021) and a record low of 1.15 in 2021 (Liang, 2022), which is considerably lower than the world average of 2.30. The decline in fertility rates has raised alarms regarding the present and future implications for societal challenges, such as a diminishing workforce and an aging population.

To address the problem, the authorities in China issued pro-natalist policies in 2005, for the first time after around 30 years, to encourage couples to give birth to a second child. However, this initiative did not bring the expected baby boom, and the TFR stayed low after that (Wang et al., 2016). Building on this, even though the Chinese government further relaxed its child policy in 2021, it is questionable whether the new three-child policy would work, considering that an increasing number of women, especially among groups with higher education qualifications, either choose to postpone childbirth or just have a low fertility intention these days (Jing et al., 2022). Therefore, studying the motivation behind women’s choices of not having children, especially among young generations in the so-called ‘childbearing age,’ is significant for better understanding their current predicaments and future policymaking on fertility-related issues.

While demographic status, feminist consciousness, cultural practices, social norms, policies and regulations, and various other factors may be involved in shaping women’s reproductive choices (Yu & Liang, 2022), not much-existing research has examined how the labor market, specifically, the toxic overtime-work culture affects female individuals’ attitudes on fertility in an East Asian context, even though there is accumulating evidence indicating a strong correlation between the two. As Goode (1960, p. 485) suggests in the role strain theory, an individual has a limited and fixed sum of resources (e.g., time, energy...) to meet all of the expectations in various social roles, the role strain thus arises following the role overload and role conflict between work and family.

As the overtime work system has long been the norm in Chinese companies, they have made unreasonable demands on employees’ free time and efforts, which pose a severe work-life balance dilemma and role strains for professional women in China, not to mention other negative consequences like health problems caused by long working hours. All these could transform women’s attitudes and influence their decisions to have children, further affecting the overall population composition and gender structure in China.

In the following thesis, I study the impacts of working overtime on female individuals' childbearing decisions by conducting a questionnaire-based vignette experiment, which manipulates the perceived overtime intensity and asks participants to answer subsequent questions. The data was collected online for two months and filtered by participants' gender, location, and employment status. The final data were analyzed mainly through the Partial Least Squares Structural Equation Modeling (PLS-SEM). Moreover, by adopting the famous Theory of Planned Behavior (TPB), this thesis further provides insights into the latent logic behind working women's reproductive decisions.

1.1 Problem formulation

1.1.1 China's current overtime culture

In China, working time is mainly regulated by the national 'Labor Law' and its implementing regulations, which specify that employees must not exceed 8 hours of work per day or 44 hours per week and that any hour exceeds this should be imposed after consultation with worker representatives (Feng, 2019). However, in most cases, overtime has become an implied routine among Chinese private businesses, particularly in the tech industry. A 2018 survey conducted by a job recruitment website has shown that nearly 85 percent of white-collar employees in China were required to work beyond regular working hours, with over 45 percent working overtime for more than ten hours per week (China Labor Bulletin, 2021).

Workers in China usually cite '996' to describe the extreme overtime working schedule, which means working from 9 am to 9 pm each day, six days a week. While the Ministry of Human Resources and Social Security of China has noticed the phenomenon for a long time and released a set of 'guiding opinions' in 2021, the situation did not evolve much. The overtime problem has once again ignited a wide discussion and criticism when several workers were reported dead linked to overwork in 2022, which has declared a failure of authorities' attempts to regulate the overtime phenomenon and companies' promise to change (China Labor Bulletin, 2022).

Moreover, the death of the worker is usually followed by a tragic battle between the agonized family members and the company, which tries to shift the blame onto the employee's personal reasons instead of the inhuman overtime work system (Daily Economic News, 2022), which revealed a severe legal loophole in the working system that overtime culture in most companies in China is rather implicit than explicit. Specifically, companies usually would not state in their policies or directly tell employees that they must work overtime, but the norms and consensus have been fostered and forged among employees that they might lose their jobs if they do not conform to the implied overtime regime.

1.1.2 A double bind for female workers

Working conditions and job requirements significantly influence women's decisions in the labor market, impacting their work choices and even broader life decisions. Specifically, working mothers usually experience a greater conflict between their work and personal lives than their male and childless counterparts (Weeden et al., 2016, p. 73). While the overwork problem is commonly faced by working mothers all over the world, the conflict is more pronounced in China, where the traditional gender role is reinforced and where women are supposed to be an ideal mother who must be available for their family at any time and prioritize their family life over career. Clearly, under the current toxic overtime regime in China, this ideal mother persona is fundamentally incompatible with that of an ideal employee who is expected to be available at all times at work (Jacobs & Gerson, 2004, p. 42), which further disadvantages female employees with young children in the labor market.

The intense work culture and extremely long work hours leave female workers no choice but to sacrifice one side to fulfill another. This has raised the question of whether the current low fertility rate and low willingness to have children in China is partly the result of the trade-offs between the two imposed roles – an ideal employee and an ideal mother. A study on women's choice of abortion in Japan asserted that those facing challenges in managing both work and childcare responsibilities often opt to sacrifice the latter (The Economist, 2015). However, whether female workers choose to delay fertility or not have children to give way to intense work needs further study in a Chinese context.

Moreover, the dilemma that female workers facing now is exacerbated by China's special population politics. From the original one-child policy to the latest three-child policy, China has a substantial track record of implementing policy measures to control population dynamics and restrict women's reproductive choices. According to the HRW report (Wang, 2023, p. 14), the labor market has witnessed a rise in gender and pregnancy-related bias following the initiation of the two-child policy. While authorities' propaganda kept trying to encourage women to return home and have children, companies and employers are pulling different levers to deter female employees from getting pregnant, such as dismissal, demotion, and signed agreements to promise no pregnancy, as they do not like the inconvenience and cost caused by the months-long maternity (Wang, 2023, pp. 15 & 18). Women are thus caught in a double bind and always muted in the decision-making process from either side. Since the voice of Chinese female workers is less listened to and studied, this thesis will try to fulfill the gap.

1.2 Purpose and research questions

This thesis aims to quantitatively investigate the relationship between working overtime and female workers' fertility intentions. The idea, on a macro level, is inspired by the urgent call for current low TFR and exacerbating demographic

transition in Chinese society. And on a micro level, studying the correlation allows me to shed light on the implications of how labor market conditions influence female individuals' reproductive choices so that they can be used to inform policies to improve work-life balance and support women in making their future fertility decisions. Thus, the first research question is as follows:

RQ1: To what extent does working overtime affect working women's decisions toward fertility in urban China?

Another major objective of this thesis is to test the theoretical model of sequential decision-making on having children proposed by the Theory of Planned Behavior (TPB; Ajzen, 1991), using empirical data in a Chinese context. As outlined by the TPB, behavioral intentions are influenced by three categories of factors: attitudes, subjective norms, and the perception of one's control over the behavior. Therefore, the second research question is:

RQ2: How is the correlation between overtime work and working women's fertility intentions mediated by attitudes, subjective norms, and perceived behavioral control over having children in urban China?

1.3 Chapter overview

The subsequent sections of this thesis are organized as follows: Chapter two provides an examination of existing literature concerning factors from diverse disciplines that impact individuals' attitudes toward fertility. Additionally, the chapter reviews prior research regarding the correlation between women's employment and fertility patterns. In chapter three, I introduce the theoretical framework of planned behavior and compare it with an alternative theory (the T-D-I-B). I then present the proposed hypotheses based on the theory in the same chapter. Chapter four presents the research methodology used in this study. This chapter outlines the research design, operationalization, data collection methods with a discussion of the ethical considerations, and data analysis techniques. Then, the statistical results are presented in chapter five by computing PLS-SEM and other statistical models, along with the hypotheses testing. In chapter six, I mainly discuss the findings based on theory and hypotheses, methodological implications, and the limitations and direction of future research. Finally, the last chapter is a general summary of the thesis.

2 Literature review

This chapter starts with a subsection addressing studies from different disciplines on factors shaping and influencing individuals' attitudes toward fertility planning. In the following subsection, literature with respect to the relationship between employment and fertility is highlighted, and the literature gap is also mentioned in this chapter.

2.1 Factors that impact fertility decisions

As a complex mechanism, fertility-related decisions are usually shaped by or associated with many factors that operate in a range of disciplines, including theories in psychology, socioeconomics, economics, and gender studies. Given the limited existing research on the direct connection between overtime work and women's intentions related to childbearing, this review will commence by analyzing empirical findings from prior research across various fields of study.

From a psychological perspective, individuals' attitudes toward parenthood and children, and their perceptions of childrearing as a rewarding experience can influence fertility intentions (Berrington & Pattaro, 2014, p. 23). However, the attitude toward children is usually shaped by individuals' childhood experiences. Those who have experienced more childhood misery were also found with higher fertility intentions and are more likely to have early reproduction but with less interest and care in children (Clutterbuck et al., 2014, p. 7). Similarly, the attachment style that an individual experienced in childhood also affects the person's parenthood intentions when grown up (Rholes et al., 1995, p. 47). These factors addressed in psychological literature usually overemphasized intrinsic elements formed in a person's inchoate stage but neglected how the social dispositions might interfere with or reshape fertility attitudes. Moreover, the method used to examine psychological factors is exclusively experiment with the drawback of low external validity, mainly due to their non-representativeness on population choosing and oversimplified settings. For example, experiments usually target university students (mainly in China) or a small group of the public from high-income Western countries (McAllister et al., 2016, pp. 2&4).

In addition to childhood experience, personality traits and values may also influence fertility intentions. A study found that women who valued their career and personal goals generally had lower fertility intentions than those who prioritized family and relationships (Lampic et al., 2006, p. 563). This, in a subtle way, can explain how women who prioritize their career over personal life are more

likely to be taken advantage of by the overtime system and further influence their fertility attitudes.

Other than psychology, socioeconomic factors relating to social structural barriers are more widely studied by scholars and are deemed predominantly influencing fertility decisions. Specifically, an individual's income and the cost of rearing children in a society, in general, are considered to have a significant influence on childbearing decisions (Sobotka et al., 2011, p. 280). Based on the neo-Malthusian theory (Malthus, 1798), it is easy to assume a positive relationship between access to economic resources and fertility intentions because an individual or a family with better economic conditions is more likely able to afford to raise a child and get access to essential resources to facilitate childrearing (Abernethy, 1993, p. 240).

However, from a microeconomics perspective, the decision to have children includes more than just financial considerations. It also extends to factors such as time and energy, as raising children demands a significant investment of time, especially for females who usually assume a greater share of housework and childcare responsibilities compared to their male counterparts (Willis, 1973, p. S16). Thus, based on the previously mentioned role strain theory (Goode, 1960, p. 485) and considering the opportunity cost (Budig & England, 2001, p. 207), the more time and energy a woman has invested in her career development and followed by a decent income, the less likely she would sacrifice current socioeconomic status that tied to her career to have children, which explains the low fertility intentions of women who have higher labor force participation (Shreffler & Johnson, 2013).

Similarly, education is considered negatively related to women's fertility decisions. Research indicates that women possessing higher levels of education generally tend to have a lower number of children compared to those with less educational attainment in Europe (Impicciatore & Tomatis, 2020, p. 15). In the context of China's current fertility policy, higher educational level was found to be one of the leading reasons for not giving subsequent births in a family (Ning et al., 2022, p. 10). This also indicates one of the gaps in the recent literature studying fertility intentions in China: most of them solely focus on the decision to have a second or third child (probably to respond to the corresponding policies of the government), and less research has studied motivations and obstacles of the first birth decisions or fertility intention in general.

Another commonly accepted theory regarding rational choice in fertility is the 'quantity versus quality' assumption built by economists (Becker, 1960; Becker & Barro, 1988). According to Gary Becker's fertility choice theory (Becker & Barro, 1988, p. 3), the expected quality price of raising a child affects the prospective number of children an individual desires. Women who have received higher education and attach great importance to their careers tend to also highly value parenthood and childrearing quality, which means more investment in quality than quantity of children. This, to some degree, reflects China's fertility differential between rural and urban areas. Women in urban areas are averagely more educated and have more opportunities to develop their careers than women in rural areas, but at the same time, they also face more expensive childcaring costs considering their high demand for child quality. For example, the fee for a child's education, the fee

for extracurricular activities, and school-district housing investment in big cities (a particular way for children to go to a good school without exams but depending on the residence area in China) are all quite costly if parents value the quality of childrearing. This partly explains the lower fertility intention and lower number of children in cities than in rural China in general.

Lastly, research in gender studies is somewhat contradictory when studying fertility intentions, as applying different measures of gender ideology could produce different conclusions. Gendered expectations regarding motherhood somewhat shape women's reproductive choices, especially in a Chinese context where the dominant philosophy of Confucianism had constructed societal norms for a long time that impose certain roles and behaviors for women, such as taking more responsibilities for taking care of children and getting married and having children before a certain age (Le et al., 2020, p. 4). This is similar to the 'biological clock' concept in Western societies that requires women to do the 'appropriate' things at an 'ideal' age (Mills et al., 2011).

However, along with the raising of feminist consciousness and gender equality in society, gender role attitudes are shifting. Scholars have yet to reach a consensus regarding the consequences of this transformation on fertility, as studies employing identical datasets might yield divergent outcomes. For instance, Kaufman (2000) discovered that women embracing egalitarian viewpoints tend to have a reduced likelihood of childbirth, implying that gender role attitudes indeed play a role in shaping women's fertility decisions. Conversely, Torr and Short (2004), utilizing the same dataset, asserted that no substantial association exists between enhanced gender equality ideology and the probability of future births. The lack of a uniform conclusion might be due to the ambiguity of defining the specific scope of the study, as the relationship may vary when focused on different cultures (Asia vs. Europe), sex (men vs. women), and social context (domestic vs. public sphere).

2.2 Women's employment & fertility attitudes

As discussed above, the negative relationship between women's labor force participation and fertility has long been studied and proved in many parts of the world (Behrman & Gonalons-Pons, 2020; Zheng et al., 2022), even though most of them were conducted in European countries, which is reasonable, as China's fertility has remained higher until recent years. On an individual level, much research tends to focus on work-family preferences and conflicts. By examining the perceived challenges women face in balancing work and family, women's work hours, and their attitudes toward maternal employment, Liu and Hynes (2012) have found that perceived higher value on family over work was linked to an increased probability of both birth giving and job quitting, and vice versa.

This has also been explained by Hakim's preference theory, which proposed the concepts of 'home-centered' and 'work-centered' women, referring to women who put more value on one side than another (Hakim, 2003). Hakim's theory highlights a unique group known as the 'adaptive group,' which includes women who strive

to balance their work and family duties. The theory implies that a substantial number of women working part-time jobs belong to this category. This notion parallels the argument concerning employment type, wherein part-time job opportunities seem to positively influence individuals' choices to participate in the workforce and to become parents (Del Boca, 2002). On the other hand, research investigating the influence of working hours reveal that women who frequently work non-standard schedules, such as evenings or weekends, are more likely to have fewer children (Čipin & Međimurec, 2013). The same scholars also explored the impact of overtime on fertility but failed to find a significant result. This could be due to data constraints and their approach to measuring overtime. They assessed overtime frequency rather than considering the intensity, which I believe is a more accurate indicator of overtime's effects.

While these studies mentioned the relationship between work status and fertility, most focus on part- or full-time status or atypical working schedules, and the impact of overtime has been less or specifically studied. Especially in China, since the toxic overtime culture has been a special phenomenon in recent years, its specific impact on female workers' beliefs or attitudes towards fertility remains seriously understudied. Furthermore, most of the studies relied on pre-existing data sources like national surveys or census data, which were not originally designed to examine fertility intentions. This makes it challenging to definitively determine how these factors interact. For example, it is unclear if extended or irregular work hours directly diminish fertility intentions, or if women with strong fertility intentions tend to seek out jobs with more predictable schedules.

In addition, a common gap in the literature on fertility attitudes is that many studies presume people's decisions regarding behaviors are solely rational assessments driven by personal preferences or weighing pros and cons. However, reality is often more complicated, as societal and cultural contexts, as well as self-efficacy can also merge to impact and shape an individual's fertility intentions. Therefore, this study will try to bridge this gap by employing the Theory of Planned Behavior, which includes a range of factors that might collectively influence intentions.

3 Theoretical framework

This chapter explains the theoretical framework this thesis relies on and hypotheses building on the specific theory. The first part compares the two similar theoretical models usually used in the field of fertility research and the reasons why the TPB is more appropriate in this case. The second part focuses solely on the TPB and illustrates how it links overtime and fertility intentions in a Chinese context. It is followed by the hypotheses constructed based on the theoretical discussions and auxiliary hypotheses relevant to the theory.

3.1 The TPB & the T-D-I-B models

To explore the extent to which overtime affects fertility intentions, this research primarily relies on the framework of the Theory of Planned Behavior (TPB; Ajzen & Klobas, 2013), but I will also provide a discussion on a similar theoretical framework, the Traits-Desires-Intentions-Behaviors framework (TDIB; Miller, 2011, 1994). Both theoretical models suggest that a decision-making process leads to human reproductive behavior with a sequence of steps. However, the difference between the two is that the TDIB framework has made a clear distinction between ‘desires’ and ‘intentions’ that have been interchangeably used in the TPB and many behavior studies (check Figure 3.1 & Figure 3.2).

3.1.1 The Theory of Planned Behavior

The original purpose of the TPB was to predict human actions within specific contexts, but the theory is widely used among demographers today to study reproductive-related decision-making (Ajzen, 1988; 2013). In this framework, ‘intention’ refers to an individual’s subjectively planned course of action or the probability of engaging in a specific behavior within a particular situation, context, and time frame (Ajzen, 1991, p. 181). Despite beyond the scope of this study, the subsequent realization of these intentions is dependent on individuals’ practical capacity to attain their goals, particularly concerning their control over the process of family planning. To examine this relationship, the concept of “actual behavioral control” is introduced as a moderating factor influencing the impact of intention on later behavioral achievement, as shown in Figure 3.1. (Ajzen & Klobas, 2013, p. 207).

However, measuring actual behavioral control directly proves challenging, and the lack of appropriate data (typically requiring longitudinal studies to track the

complete trajectory of fertility behavior) has led past studies to frequently employ fertility intentions as a substitute for actual reproductive actions. This approach is well-grounded, supported by previous studies affirming the predictive accuracy of fertility intentions as a key research focus. (Dommermuth et al., 2015; Billari et al., 2009; Berrington & Pattaro, 2013). Ajzen (1991, p. 185), in the TPB, has also claimed that intention can serve as a reliable indicator of actual behavior as long as the measures of different stages follow the principle of compatibility, meaning that intentions must be measured consistently with specific behavioral goals in the same context. While this will be achieved during the data collection process and explained further in the method chapter in terms of creating survey questions based on the principle, this section aims to justify using fertility intentions as the focal construct in this study instead of fertility behavior.

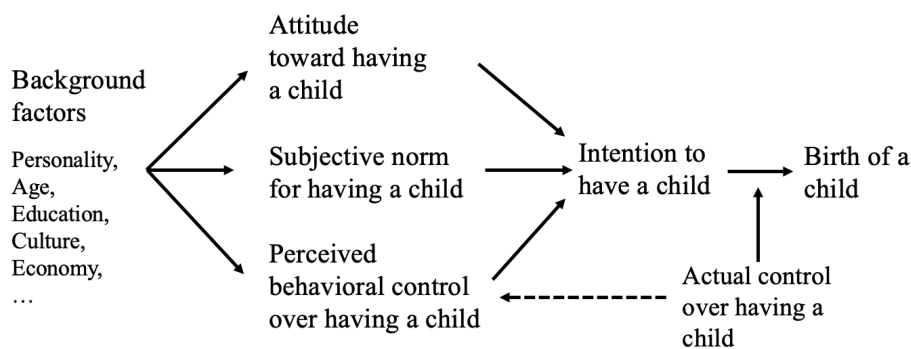


Figure 3.1. The analytical framework of TPB adapted from Ajzen and Klobas (2013:206)

Another crucial argument presented by the TPB model is that the formation of individuals' behavioral intentions is determined by three conceptually interrelated considerations, the attitude towards the behavior, the subjective norms, and the perceived control over the behavior (Dommermuth et al., 2011, p. 43). The empirical evidence has shown that the three determinants can jointly predict intentions in regard to having a child. When attitudes and subjective norms are more favorable, coupled with a heightened sense of perceived control over the behavior, there tends to be a stronger intention towards having a child.

While fertility behavior is the final stage of an individual's decision-making process, the sequential process begins with background factors, which can impact intentions by shaping the underlying beliefs of the three immediate antecedents of the intentions (Ajzen & Klobas, 2013, p. 212). In other words, fertility intentions should be influenced by those contextual factors indirectly via the three considerations mentioned above. The theory per se is quite flexible regarding the scope of the factors, and there is no restriction on what kinds of factors should be included or not in the theory. Nevertheless, these contextual factors that have been widely studied in the empirical research generally fall into several levels, such as personality traits and values at an individual level, age, gender, and income as demographic level factors, and culture and political context from a societal level (Ajzen & Klobas, 2013, p. 206; Liefbroer et al., 2015, p. 8). Many of these factors also have been tested by scholars beyond the theory, as I have mentioned in the literature review chapter.

Among these background factors, the toxic overtime culture has received insufficient attention from scholars, possibly due to its status as a relatively new and Asia-specific phenomenon. Nevertheless, this thesis contends that the inclusion of overtime work in the analysis is vital due to its potential relevance to individual emotions and values and broader societal factors like culture, economy, and social norms that could impact women’s fertility decisions across different levels.

3.1.2 The Traits-Desires-Intentions-Behaviors Theory

As shown in Figure 3.2, a similar stage can also be found in the TDIB theory, which is termed as motivational traits referring to “non-conscious motivational dispositions” that lead to conscious desires, and then conscious intentions, and finally behaviors toward having (or not having) children (Miller, 2011a, p. 76). These motivational traits in the TDIB sequence, however, are defined differently from the contextual factors in the TPB framework. The motivational traits from the TDIB combine the first step (background factors) and part of the second step (the considerations of attitudes and social norms but ignoring the perceived behavior control or self-efficacy) from the TPB sequence.

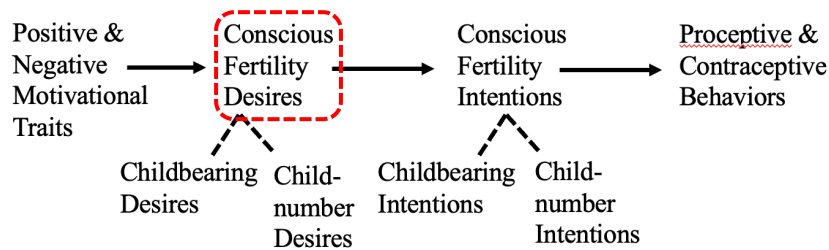


Figure 3.2. The analytical framework of TDIB adapted from Miller (2011a:77)

Specifically, the motivational traits in the TDIB theory are understood in terms of bonding schemas that emphasize social relationships, especially the “nurturant schema” in the context of childbearing, characterized by feelings of affection and fear toward the behavior of having offspring (Miller, 2003, p. 45). Miller (2011b, p. 25) argues that affection drives the positive motivation to care for and protect immediate offspring, whereas fear leads to more avoidance inclinations. These emotional motivations and feelings in social relationships form the underlying motivations for the desire and commitment to have and raise children.

From the theory, we can tell that although both frameworks consider individuals as of relevance to other people in the social environment, the TDIB theory lays more emphasis on the biological basis, such as the nurturant schema concerning species survival, underlying the psychological and behavioral attributes of the motivational traits that drive fertility decisions (Miller, 2011a, p. 77). Also, different from the TPB applied to the fertility domain later, the TDIB framework was specifically designed to study fertility decisions from the beginning. Thus, as Figure 3.2. shows, the desires and corresponding intentions steps in the sequence of the TDIB model are not only concerning childbearing per se but also relevant to

child-number and child-timing desires and intentions by nature (Miller, 2011a, p. 76).

3.1.3 Fertility desires and fertility intentions

While the TPB has developed a mature theoretical model to help understand how fertility intentions work (Ajzen, 1991), the TDIB claims another construct antecedent to intention: fertility desire (Miller, 2011a). The distinction between the desire and the intention and the necessity of including the construct of ‘desire’ has also been broadly debated in fertility literature (such as in Dommermuth et al., 2011). Specifically, Miller (2011a, p. 90) argues that in contrast to intentions, fertility desires serve as a more immediate reflection of the genetically-driven motivations underlying reproduction. The empirical evidence also shows that fertility desires perform better in predicting post-conception pregnancy, as well as in shaping various parental motivations that likely positively contribute to child development (Miller, 2011a, p. 91).

However, it is worth noting that this assertion lacks a comprehensive consideration of cultural and linguistic variations but relies solely on the logic of the English context. First, the words ‘desire’ and ‘intention’ in Chinese are usually used interchangeably, and no significant difference has been noticed. Furthermore, in his research, Miller measured individuals’ childbearing desires by asking which statement among five best indicated their feelings about having a child, and then measured intentions by asking “whether or not they actually intend to have a child” (Miller, 2011a, p. 79). The two interview questions might seem different in English, but they have almost the same meaning in Chinese: “To what extent do you want a child?” To test the feasibility of differentiating between the two concepts, I also conducted a small-scale experiment before the formal data collection among 20 female friends who got at least secondary education, and the most feedback I got was confusion about the two questions. Thus, considering the culture and language variations, I decided not to include fertility desires in the decision-making sequence in this thesis.

From the above discussion, we can tell that although the two theories share some generic features, they are fundamentally different. Except for the consideration on excluding fertility desire from the sequence, the reason that I adopt the TPB rather than the TDIB is twofold: (i) the TDIB assumes that the social influence of an individual’s sexual partner outweighs that of other family members and friends in reproductive behavior. It suggests measuring each stage for both the individual and their partner, taking a dyadic approach (Miller, 2011b, p. 27). This might hold true when studying final behavior, as in most cases, partners are integral to pregnancy and parenthood. However, this study focuses on intentions of working females rather than their behaviors. In an East Asian context, social influence from partners is not necessarily stronger than that from parents, peers, or even society at large, and the TPB is more appropriate for its inclusiveness. It is important to note that the partner’s influence is not dismissed here, and instead, partnership primarily serves as a demographic factor on differentiating individual characteristics of

working females in this study. (ii) An important component of the TPB is the mediating effect of individuals' perceived behavior control, or self-efficacy, which is proven to be one of the strong predictors of intentions across various empirical research (Ajzen & Klobas, 2013, p. 211; Dommermuth et al., 2011, p. 52). However, this vital construct is entirely overlooked by the TDIB (Miller, 2011b, p. 27).

3.2 The TPB & the research hypotheses

As mentioned above, the TPB distinguishes between three sets of mediating factors that form an individual's intentions: attitudes, subjective norms, and perceived behavior control toward having a child (Dommermuth et al., 2011, p. 43; see Figure. 1). According to Ajzen (1991, p. 189), each factor develops from and influenced by certain types of belief that people hold, and this will be addressed as follows.

3.2.1 Attitude

Attitudes (AT) mainly stem from an individual's subjective belief, which is termed by Ajzen as "behavior beliefs," that performing a behavior under the current context will produce certain outcomes, and the individual will then have an internal evaluation of that produced outcomes (Ajzen & Klobas, 2013, p. 209). These two components jointly contribute to an individual's positive or negative attitude toward the decision to have a child. Ajzen and Klobas (2013, p. 209) devised an equation to illustrate this relationship, where AT stands for the attitude, it is proportional to the sum of the person's behavior beliefs b_i and the evaluation of the beliefs e_i , and i stands for one of the outcomes generated by the behavior.

$$AT \propto \sum b_i e_i$$

In the context of overtime work and female workers childbearing intentions, this factor can be understood as a woman's attitude towards having (or not having) children after obtaining information about the consequences of having (or not having) children under the toxic overtime culture in China (background factor) and self-evaluating both positive and negative consequences of that behavior. For example, it is reported that many women in China have faced job discrimination during the recruiting process regarding their parental status and their tolerance to overtime (see Yeung & Gan, 2021; Yan, 2022). They were asked questions during the interview such as "Are you available to work overtime?" "Would you be pregnant soon?" Or "Will you quit your job after having children?"

Even though these questions do not directly threaten employees, they subtly connect overtime with pregnancy and send out a clear message to female candidates that overtime is a common rule and being pregnant during employment might need to face the consequence of losing jobs for not being able to fulfill the role of working long hours. Therefore, when women believe this is true and evaluate this potential

consequence in advance, it forms a favorable or unfavorable attitude towards the decision of having (or not having) children. Besides, when this phenomenon in the employment market becomes routine, female workers would likely postpone the childbearing plan considering the socially and financially negative outcome the behavior can lead to. This argument has also been supported by Langdrige and his colleagues (2005, p. 127) in their study by confirming that women’s concern about interference with their careers is one of the major reasons against having children.

Therefore, based on the first consideration of the theory, I hypothesized the following:

H1. *Overtime work will negatively affect working women’s attitudes toward having children. Higher intensity of overtime will likely produce more negative attitudes toward having children.*

H2. *Fertility intentions can be predicted by working women’s attitudes toward having children. The more unfavorable attitudes that women have toward having children, the lower fertility intentions they will hold.*

3.2.2 Subjective norm

The second mediating factor of the TPB in predicting an individual’s behavior intentions is termed “subjective norm” (SN) by Ajzen and Klobas (2013, p. 211), which refers to the normative belief or perception about social support for or social pressure on having a child under the specific context. It is ‘subjective’ because it is only about an individual’s perception, no matter what the actual opinions of other people are. Similar to the attitude, the subjective norm can also be presented in the following equation: n_i refers to an individual’s normative belief about those around them (i), and m_i signifies the person’s motivation to conform to these beliefs (Ajzen & Klobas, 2013, p. 211).

$$SN \propto \sum n_i m_i$$

This consideration is aligned with the social norm theory widely studied by social influence scholars. The theory argues that we should differentiate between two types of normative beliefs, the injunctive norm and the descriptive norm, because they influence (the intentions of) behaviors in distinct ways (Lapinski & Rimal, 2005, p. 130). Descriptive norms characterize an individual’s observation of what people in one’s social group actually do, whereas injunctive norms refer to an individual’s belief about what people in one’s social group want and expect them to do, which makes much sense considering that the latter was formed out of the desire of avoiding social sanctions (Cialdini et al., 1990, p. 203).

In the context of overtime and female workers’ fertility intentions, for example, they may believe that their parents want them to get married and have children regardless of their working status (a common tradition in China), but most of their friends and colleagues (especially employers) do not think that having children when they need to work overtime is a good idea, despite the fundamentally different

starting points of thinking between friends and employers. A deterring injunctive normative belief on having children is formed in this case. As for the descriptive norm, it can be understood together with a special concept in China called “内卷” (nèi juǎn: involution), which describes the current phenomenon of excessive competition and overwork within a group or society for the sake of career success or social recognition (Dou, et al., 2022, p. 3), which leads to a negative cycle of intense competition and high pressure, often at the expense of health and family life. For example, working overtime with sacrificing private time or postponing life plans, such as marriage or childbearing, is often seen as a sign of dedication and commitment to one’s job in terms of the current social norm in China (Dou, et al., 2022, p. 2). Thus, a descriptive normative belief against having children is formed when women observe that other female workers follow this social rule and do not intend to have children in the short term.

It is worth noting that scholars in behavior research who utilize TPB often focus more on injunctive than descriptive norm, so this thesis will be no exception as the method used here is a questionnaire-based vignette experiment, which means that measuring descriptive norm in a made-up scenario is relatively tricky. Based on the discussion on the second consideration of the TPB, I derive the following hypotheses regarding fertility intentions.

H3. *Overtime work will negatively affect subjective norms of working women toward having children. Higher intensity of overtime will likely produce less favorable subjective norms.*

H4. *Fertility intentions can be predicted by working women’s subjective norms regarding having children. The lower the subjective norms are, the lower fertility intentions women will hold.*

3.2.3 Perceived behavior control

The last type of mediating consideration in the TPB is perceived behavioral control (PBC), which draws on women’s control beliefs or self-efficacy in having a child in the context of overtime work (Ajzen & Klobas, 2013, p. 212). Control beliefs refer to a woman’s perceived self-ability to perform the behavior considering both resources and obstacles during the process under current conditions. It is worth noting that the control beliefs are built on women’s empowerment with fertility autonomy, which addresses women’s ability to formulate strategic decisions regarding their fertility (Qian & Jin, 2018, p. 4). Again, Ajzen and Klobas (2013, p. 212) use the following equation to illustrate this relationship, where c_i is the control belief on the facilitating or obstacle factors that influence the behavior, p_i stands for the perceived power or effectiveness of the factors.

$$PBC \propto \sum c_i p_i$$

In fact, PBC is probably the most important one in the theory not only because it distinguishes this theory from others (such as the TDIB), as noted in the previous

part, but also because perceived behavioral control over fertility can be most seriously and directly influenced by the toxic overtime schedule. Specifically, the sense of perceived behavioral control can be weakened because working women may feel that the demands of their job and overtime work limit their ability, such as reduced time and energy, worsened mental and physical health, to start or expand their family, which further lead to a low fertility intention. Therefore, I formulate the subsequent hypotheses concerning fertility intentions based on the discussion of the third mediating factor PBC:

H5. *Overtime work will negatively affect working women’s perceived behavioral control over having a child. Higher intensity of overtime will likely produce lower perceived behavioral control.*

H6. *Fertility intentions can be predicted by working women’s perceived behavioral control over having a child. The lower the perceived behavioral control is, the lower fertility intentions women will hold.*

To sum up, drawing from the TPB framework as discussed earlier, it is proposed that overtime work, acting as a background factor, indirectly impacts fertility intentions. The relationship between the two is thus expected to be mediated by the attitude, subjective norm, and perceived behavioral control concerning the decision to have a child. Therefore, a holistic hypothesis can be drawn as follows:

H7. *The correlation between overtime work and working women’s fertility intentions in urban China is mediated by attitudes, subjective norms, and perceived behavioral control.*

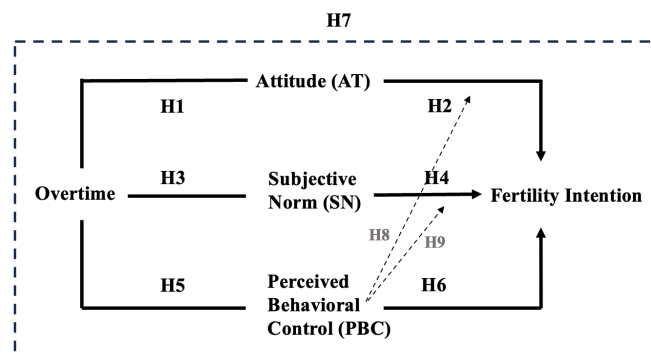


Figure 3.3. Model of the hypothetical framework based on the theory of Ajzen and Klobas (2013)

Furthermore, researchers who utilize the TPB to analyze and predict human behaviors often neglect a crucial aspect. Both the original theory and recent research by La Barbera and Ajzen (2020, p. 402) propose a notion that perceived behavioral control also plays a moderating role in shaping behavioral intentions in relation to attitude and subjective norm. This moderating effect of PBC has been proved in several different behavioral domains, such as voting intentions and intentions to save energy. However, less research has been done on testing the moderating effects of PBC in the field of fertility behavior (La Barbera & Ajzen, 2020, p. 402). While

the interaction between attitude and PBC in predicting behavioral intentions is usually found positive, some studies have demonstrated a contrasting moderation effect of PBC on the connection between subjective norm and intentions, meaning that stronger PBC would weaken the SN-intention relation. The possible explanation provided by La Barbera and Ajzen (2020, p. 413) is that individuals with a higher self-efficacy in performing the behavior are less likely to care or follow what others expect them to do, which weakens the SN-intention link.

Thus, to test this part of the theory in this thesis, two auxiliary hypotheses can be made as follows, and the complete hypothetical model of this thesis is shown in Figure 3.3.

Perceived behavioral control moderates the attitude-fertility intention relationship positively (H8) and subjective norm-fertility intention relationship negatively (H9).

4 Method

This chapter includes all method-related decisions. Specifically, I will first justify my decision on the method choice of a questionnaire-based vignette experiment and then explain the specific research design and operationalization of each part of the procedure, such as the manipulations of vignettes and the measures of variables. Then the data collection process and target population will be discussed, and the statistical analysis and model estimation for the structural equation modeling will be explained in more detail later.

4.1 Design and Procedures

The causal effect of exposure to the toxic overtime work culture on female workers' fertility intention is difficult to measure with the traditional cross-sectional survey method. For example, it is hard to account for the fact that women who wish to have children (high fertility intention) may choose jobs with less overtime intentionally from the beginning. Moreover, a conventional cross-sectional survey could also encounter issues related to common method bias, which concerns the inherent systematic error introduced by the measurement method – the respondent is asked to answer questions about both independent and dependent variables at the same time (Podsakoff et al., 2003, pp. 880&885). Importantly, given that my research is focused on working women and considering the topic's sensitive nature in a Chinese context, directly asking them survey questions about working status, subjective norms, and perceived behavior control towards fertility might be problematic and end up with socially desirable answers rather than honest ones.

Thus, to address these issues, this thesis conducted a questionnaire-based vignette experiment to test the hypotheses. This approach consists of vignette experiments embedded in survey research, known as “factorial surveys,” commonly used in social behavioral and political analysis (Atzmüller & Steiner, 2010, p. 128). A vignette refers to a brief or detailed narrative that presents a hypothetical scenario in which the single attributes (or factors) that are deemed theoretically significant to a decision relating to respondents' beliefs, attitudes, or intended behaviors are experimentally manipulated in their levels (Auspurg & Hinz, 2015, p. 16), and during this process, the subjects are like actors and observers.

This approach enhances the experiment's external validity while also increasing the survey's internal validity (Schlüter & Schmidt, 2010, p. 93). Specifically, the vignette experiment allows scholars to manipulate specific variables and control for extraneous factors, which helps establish a cause-and-effect relationship between the manipulated variable and the outcome of interest (Shadish et al., 2002, pp. 6-7).

Furthermore, the flexibility of vignettes allows for the construction of scenarios relevant to the research question, which can help uncover the attitudes and intentions of participants towards the topic in a more natural and non-threatening way. At the same time, the survey part allows scholars to collect data from a more diverse and representative sample of participants than a pure lab-based experiment setting, which can increase the generalizability of the findings to the broader population.

4.1.1 Experimental vignette design

As discussed in the theory chapter, I was interested in working women's explicit responses to the overtime working scenarios, reflected on their answers to fertility-related questions. Thus, the independent variable in this study was the perceived overtime status, manipulated across three levels or conditions: the toxic overtime regime and the moderate overtime regime, both as my treatment groups and the no-overtime regime as the control group. A sample vignette scenario is shown below (Figure 4.1), and the complete set of vignettes and the translated version are presented in Appendix A, [Table A.1](#).

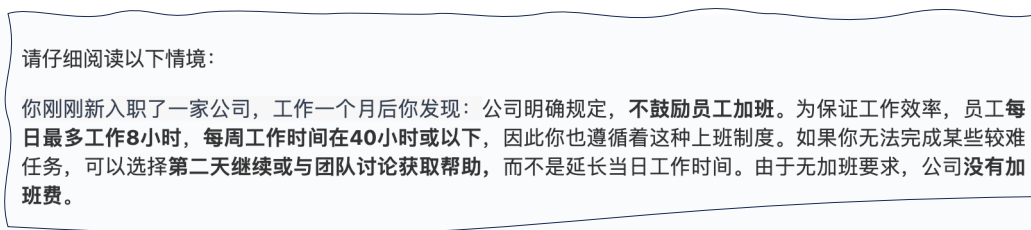


Figure 4.1. A sample vignette for the moderate overtime regime

Among the various designs in vignette experiments, this thesis opted for a between-subject design, meaning that each subject was presented with only one vignette out of three instead of the within-subject design that requires each respondent read all scenarios. By deploying a between-subject design, I can effectively minimize the risk of carryover effects, precluding respondents from comparing the vignettes during the process and answering subsequent survey questions correspondingly (Rosenthal & Rosnow, 2008, p. 203). Besides, monitoring participants' responses in real-time could be difficult since I conducted an online study. A between-subject design can effectively control order effects and reduce participant fatigue which usually happens in a within-subject design.

Specifically, using a between-subject design, participants were randomly assigned to one of the three vignette conditions in this research. Each vignette describes a mock scenario where participants had just secured their ideal position at a prestigious company. These scenarios depicted the company's internal policies on overtime expectations and the overall work environment. The most realistic way to present these scenarios is to mimic the company's welcome letter and show them up as a mock DingTalk message, a commonly used communication platform in Chinese organizations (Cardon et al., 2021, p. 1). However, following an initial

attempt and discussions with some working women in China, I came to realize that in many cases, companies do not explicitly outline their overtime policies, as they prefer employees to engage in overtime work ‘voluntarily’ or ‘proactively,’ without additional compensation for the extra hours put in. Given this reality, I adjusted my approach and pursued an alternative strategy.

In the final plan, each vignette was described as realistic as possible within a real Chinese working context so that participants feel more natural and relaxed to give a response. The overtime scenario in each vignette mainly consisted of three dimensions: while the working hour is the most explicit and direct dimension used to define an overtime regime, the other two dimensions were inspired by research conducted by Dong and Yan (2022). Specifically, I set the three levels of working hours as 72 hours per week (simulating the 996-work regime), 41-50 hours per week (up to 10 hours overtime per week as the labor law regulated), and 40 hours or fewer per week (baseline working hours without overtime).

As Dong and Yan’s study suggested (2022, p. 1), work time is not the only indicator of defining overtime. As mentioned above, we should also consider (1) voluntary or involuntary overtime work and (2) rewards for extra working hours. From an employee’s perspective, it might be hard to draw an explicit line between voluntary and involuntary overtime behavior as there is a complex mechanism behind employees’ decisions on choosing to work overtime or not, as discussed previously, such as the conflict between their own beliefs and the general work atmosphere. Thus, in this thesis, the concept of voluntary or involuntary overtime is defined more based on the company’s perspective, which refers to whether the company gives employees control over working hours (Beckers et al., 2008, p. 34). The third part or dimension of the vignettes explained the rewards for overtime. The levels of rewards are usually explicitly recognized as paid overtime and unpaid overtime. However, in the context of Chinese society, especially tech companies that conduct 996-work systems, they do not directly pay for extra hours to employees as the law requests but take a variety of measures to compensate instead, such as providing free gyms, restaurants, and taxi fares for working late at night or providing a ‘saved’ time-off option for later (Dong & Yan, 2022, p. 2). Therefore, the rewards for overtime were set as two situations: no payment with only other types of implicit compensation and payment for extra hours 1.5 times regular hours.

It is worth noting that I manipulated circumstances across only three vignettes, rather than using all potential combinations (e.g., 12 variations – $3*2*2$: three factors with two or three levels for each), for two specific reasons. Firstly, in addressing my research question, the objective of this study is not to measure each factor in detail, but rather to measure overtime level in general, which means I treat those factors more as components of the independent variable – which, in this case, is overtime status. Secondly, the reason behind not manipulating every level of each factor is tied to the real-world context of overtime practices in China. Unlike an ideal laboratory setting, the actual overtime situation in Chinese workplaces differs. It is uncommon to encounter situations where long working hours, compulsory overtime, and extra payment for additional hours all coexist. The reality is that more companies in China prioritize cost-cutting efforts, making such combinations rare.

4.1.2 Survey design

The survey questions consist of three sections used to measure the dependent variable, the mediating variables, and demographical information, respectively. The questions were created based on this study's hypotheses and the standardized TPB questionnaire guidelines provided by Ajzen (2002). The survey part is right after the vignette experiment and starts with a question asking participants' fertility intentions in the constructed overtime scenario. As noted in the theory chapter, a prerequisite for using intention as a reliable proxy of actual behavior is to adhere to the principle of compatibility. This involves precisely defining the behavioral objective under examination, ensuring consistent measurement across different phases within the TPB framework (Ajzen & Klobas, 2003, p. 208; Ajzen, 1991, p. 185). In this case, the specific behavior goal is therefore delineated as "planning to conceive a child within the next three years." The inclusion of a time frame here serves to concretize behavioral intention and provides respondents with a clear reference point to answer the questions (Fishbein & Ajzen, 2010, p. 44).

The next part of the survey measures the attitude, subjective norm, and perceived behavioral control – key stages that precede the formation of fertility intentions. Since it is hard to directly observe and measure the three mediating variables considering their features as perceptions and attitudes, a set of observed items, adapted from previous studies and the TPB questionnaire guideline, were employed as indicators for each (Billari et al., 2009, p. 450; Ajzen, 2002). While prior research has confirmed the validity and reliability of the indicators for each latent variable, a thorough reassessment of indicator reliability, composite reliability, Cronbach's alpha, and average variance extracted for each scale was still conducted to ensure a reliable result for subsequent analyses of the structural model. The specific items utilized to measure the three variables will be explained in the operationalization section 4.2, and the descriptive statistics for all measurements are shown in Table A.2 within Appendix A.

The final part of the survey is designed to collect demographical information. Respondents were mainly queried about their age, educational background, partnership status, parental status, post-tax income, health condition, and type of employment.

4.1.3 Sample size

The sample size should usually be determined before data collection and analysis (prospective estimation) based on the specific statistical analysis method. Since this study includes complex models, such as multiple mediating variables and indicating items for latent variables, I will conduct the Structural Equation Modeling (SEM) for the data analysis. A consensus has yet to be reached concerning the optimal sample size requirement for conducting SEM. However, empirical research has indicated that a minimum sample size of 200 is recommended in this context (Weston & Gore, 2006, p. 734). Another widely used guideline in academia is the 10-time rule, which suggests that an ideal sample size should at least equal ten times

the number of parameters in the model (Hair et al., 2021, p. 16). Since this rule of thumb only matters to the number of parameters and the arrows pointing at the parameter, which completely ignores the absolute value of the path coefficients in the model, the calculated minimal sample size based on this rule may be too rough and small.

Kock and Hadaya (2016, p. 245) have proposed an alternative approach called “the inverse square root method,” which is proved to be relatively more precise and safer than other methods, even with the non-normal distributed data. This approach mainly depends on the model’s path coefficient and standard error, considering the expected statistical power and the significance level (Kock & Hadaya, 2016, p. 234). I will not explain the specific statistical and operational logic behind the method since it is not the purpose of this thesis, but the final stage of calculation can be presented by the following equations (with a statistical power at 80%), where N_{min} stands for the minimal sample size, and β_{min} is the minimum value of the path coefficient with a significance level among 10%, 5%, or 1% in the SEM model (Hair et al., 2021, p. 17; Kock & Hadaya, 2016: 236).

$$N_{min} > \left\{ \frac{2.123/2.486/3.168}{|\beta_{min}|} \right\}^2 \text{ (Significance level = 10\%, 5\%, or 1\%)}$$

Note: The equation is adapted from Hair et al. (2021, p. 17)

For example, assuming the minimum path coefficient as -0.15 (a negative effect) under the condition of the significance level as 5% and a power of 80% (the most commonly used value), then based on above equation, the minimal sample size should be calculated as

$$N_{min} > \left\{ \frac{2.486}{|-0.15|} \right\}^2 = 274.68$$

Thus, the final sample size is supposed to be 275 after rounding the result to the integer. However, a problem with conducting a prospective estimation is that I do not yet have the value of the minimum path coefficient (β_{min}) before data collection and analysis. Kock and Hadaya (2016, p. 246) suggested that we can follow Cohen’s power assessment guidelines (Cohen, 1992, p. 156), which the value of β can be calculated through $\beta^2/(1 - \beta^2) > .04$, where .04 is twice the minimum acceptable effect size proposed by Cohen (1992, p. 157). Therefore, following the inverse square root method and the rule of thumb on the effect size, a minimum required sample size would be 160. However, to ensure a sounder statistical power of this study, I decided to set my target of data collection as around 300.

It is worth noting that a pilot study is neither necessary nor suggested by Kock and Hadaya (2016, p. 247) when using the inverse square root method, as a pilot study with a relatively small number of sample data may lead to a large minimum path coefficient, which further produces an underestimated sample size and requires additional data collection.

4.2 Operationalization

4.2.1 Vignettes manipulation check

Following exposure to the vignette illustrating hypothetical overtime scenarios involving toxic, moderate, or no overtime conditions, participants were instructed to immerse themselves in the presented scenarios and then proceed to complete the questionnaire. Prior to the survey section, participants were also asked to respond to two questions aimed at assessing the effectiveness of the vignette manipulations in creating distinct levels of overtime intensity.

To be more specific, the first manipulation check question required participants to rate their perceived intensity of overtime when working at the company depicted in the vignettes. This rating was conducted using a 5-point scale, ranging from 1 (indicating *very low intensity*) to 5 (indicating *very high intensity*). The second question sought to assess participants' perceptions regarding the company's emphasis on work-life balance. In this case, participants were asked to assess the likelihood of effectively managing their personal life and familial responsibilities while employed at the company described. This assessment was also carried out on a 5-point scale, with options ranging from 1 (*very unlikely*) to 5 (*very likely*).

4.2.2 Variable measures

While the independent variable of this study is conveyed through the vignettes, remaining variables will be measured using the survey questions. As noted in the survey design section, the latent constructs from the TPB were evaluated using questions adapted from the standardized guidelines developed by Ajzen (2002) and the questionnaire employed by Billari and colleagues (2009). Specifically, there are five questions designed to capture attitudes (AT), five for subjective norms (SN), three for perceived behavioral control (PBC), and one for fertility intention (INT). The specific items, variables, and corresponding descriptive statistics are detailed in [Table A.2](#) within Appendix A. Here is a brief explanation of these measures:

Fertility intention (INT) within the next three years, as the dependent variable, was assessed by the question, "Do you intend to have a child within the next three years while working at this company?". Participants indicated their response on an 11-point Likert scale, ranging from 0 (*certainly not*) to 10 (*certainly yes*). A higher score reflected a more robust intention to have a child within the specified timeframe.

Attitudes (AT) about the prospect of having a child within three years were assessed using five items, with participants providing ratings on 5-point bipolar adjective scales (e.g., *worthless-valuable*, ...). A higher score on this scale indicated greater affirmative attitudes held by participants regarding the prospect of having a

child within the following three years while employed at the company outlined in the vignette scenario.

Subjective norms (SN) were measured by inquiring about the likelihood of approval from significant others if the participants opted to have a child within three years, given the current work circumstances. Subsequently, participants were asked how much specific individuals would support or approve of this decision (such as *parents, friends, colleagues, and relatives*). It is essential to emphasize that these questions were framed in terms of participants' perceptions rather than the actual opinions of those individuals. Responses were also recorded using a 5-point scale, ranging from 1 (*strongly disapprove*) to 5 (*strongly approve*).

Perceived behavior control (PBC) concerning reproductive choice within three years was initially assessed through two questions (e.g., "It would be feasible for you to have a child in the next three years." ...). The term 'feasible' here indicated whether the participants believed the decision was achievable based on their personal capacities, such as health and financial circumstances. The final question asked participants to indicate how confident they were about exercising full control over their reproductive choices. This question aimed to assess their self-governing ability in fertility decisions. Responses still employ a 5-point Likert scale, ranging from 1 (completely disagree/not sure at all) to 5 (completely agree/very sure).

4.3 Target population & data collection

The data were collected online between March 20 and May 8, 2023, through a professional market research institute Credamo in China, which allows users to conduct various public opinion research (<https://www.credamo.com/s/BFrmIbano>). The Lund University-owned survey tool 'Survey&Report' was tested at the initial stage (to test the initial version of survey questions by differentiating 'fertility desire' and 'fertility intention') but not adopted in the end due to technical reasons. First, the design is neither complete nor convenient when creating the survey in other languages, especially Chinese. For example, I made an initial survey questionnaire and distributed it to around 20 working female friends, but the feedback I received most was that they could not find the submission button. Then I realized that it is a built-in design flaw that when the survey language is Chinese, the submission button becomes a tiny black square at the corner of the page, which is very hard to notice, and this would mislead some participants to think that the survey was automatically saved. The 'Survey&Report' platform also leaves few options for spreading strategy: the most commonly used strategy for survey distribution in China, which is the QR code, is not available on this platform.

Moreover, since my data collection process was conducted entirely online, I would need to find a way to assign the three scenarios to the respondents randomly, and it turned out that the 'Survey&Report' cannot fulfill this function, whereas the Credamo platform can address all the problems. Besides, this platform has cooperated with some universities and commercial companies in China, which naturally has a sample pool that includes part of the target population of my study.

The target group of this study was full-time female workers aged 20 to 40 residing in the five busiest cities (Beijing, Shanghai, Shenzhen, Guangzhou, Hangzhou) in China. The restrictive conditions on participants' gender, age, employment status, and geography were realized through the sampling function of the platform. Further, I also designed two preliminary questions to screen out DINKs (Double Income No Kids) candidates who will not have children regardless of overtime status and candidates who are currently pregnant and will have children in a limited period regardless of overtime status.

The final data were collected in three rounds and mainly from two sources through a combination of convenience sampling and snowball sampling. The first source was the sample pool of the Credamo platform, where participants who matched the target population conditions were recruited by sending invitations to participate in the study (N = 196, 64.69% in the final sample). The second source was the distribution of QR codes on WeChat Moments. Interested participants who matched the condition stated in my posts were required to scan the QR code, which redirected them to the Credamo to participate in the study. The existing participants were welcome to forward the recruiting message on their WeChat Moments and other social media platforms (N = 107, 35.31% in the final sample).

A common concern for online study is the difficulty of guaranteeing the quality of the collected data. The strategies I used to improve the data quality are 1) to set a screening question in the middle of the survey, which is a special item irrelevant to the study, that asks participants to choose or write a certain answer no matter what the honest answer of this question is, so that participants who did not read questions carefully would give a wrong answer and the survey would be automatically terminated; 2) to check the response time, which is recorded on the platform, and the careless participants who spent too short (< 2 minutes) or distracted participants who spent too long (> 15 minutes) to complete the questionnaire would be deleted, as well as those who repeated the same answer for all questions; 3) to conduct a multivariate outlier analysis, which has been done during the data analysis process, and it was proved to be no outlier in the data of this study (Meade & Craig, 2012).

The initial sample consisted of 303 participants gathered during the data collection phase. During the data processing stage, a minor reduction of three (0.99%) subjects occurred. One subject was excluded due to an extended response time exceeding 15 minutes, another due to providing repetitive answers by selecting '1' for all questions, and one more resulting from unmatching with the criteria of "not pregnant currently." Consequently, the final dataset for analysis comprised 300 participants.

4.3.1 Ethical consideration

A separate inform consent was provided on the front page before the experiment and survey questions to ensure that the survey was ethical and posed no harm to the participants. It was clearly conveyed to them that the information they provided would be treated as confidential and anonymous, and solely used for research purposes. Furthermore, they were informed of the right to withdraw from the study

whenever they wished without any obligation to provide reasons. By clicking the ‘I agree’ button, participants indicated their voluntary participation in the study and their commitment to providing truthful responses.

4.4 Analytical strategy

This thesis used R 4.3.0 (R Core Team, 2023) to construct all the models and perform calculations for data analysis. Firstly, this thesis employed a multivariate analysis of variance (MANOVA) to test the effect of overtime status on the manipulation check questions to ensure that I successfully manipulated the experiment on different levels of overtime status. Then I started to analyze the data based on the hypotheses officially. Conducting exploratory factor analysis (EFA) is usually considered unnecessary if the scale is adopted from prior studies or theories. However, even though the items were adapted from the TPB questionnaire guidelines as noted above, I would still need to design my own survey questions to adapt to the context of overtime and fertility, so it would be necessary to conduct an EFA, as it provides information on cross-loading and wrong-loading indicators so that I can remove or reallocate those ill-defined indicators to ensure discriminant validity of constructs for the later structural equation modeling (SEM) analysis.

Based on Hair et al. (2010, p. 112), the thresholds for factor loading cut-offs in EFA depend on the sample size, and for a sample size of 300, like this study, the cut-off could be around 0.30-0.35. Tabachnick and Fidell (2007) suggest using more stringent cut-offs to decide the final number of items to retain for each factor, such as 0.45 as a fair loading, 0.55 as a good loading, and above 0.63 as a very good loading. Thus, I decided to adopt the latter thresholds for factor loading cut-offs.

4.4.1 PLS-SEM

Once EFA was done and the preliminary factor structure was established, the Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to delve into the comprehensive theory structure and test the hypotheses proposed. The selection of SEM over other regression-type methods is justified in three key aspects: 1) SEM facilitates the simultaneous estimation of complex structures involving multi-layer variables, particularly when dealing with multiple mediating variables, as is the case in this study; 2) it is handy for analyzing theoretical concepts that are not directly observable or measurable, such as the latent variable ‘subjective norm’ in this specific study; 3) unlike multivariate analysis methods, SEM takes into account potential measurement errors in observed variables, enhancing the accuracy of the analysis (Bollen, 1989, p. 154; Hair et al., 2021, p. 4).

Importantly, the SEM analysis in this study employed the partial least squares approach (PLS-SEM) instead of the more commonly adopted and widely known covariance-based approach (CB-SEM). This choice is primarily attributed to the PLS method’s ability to alleviate the strict assumption of data normality, which is a requisite in CB-SEM. Further, this approach works well with complex models

without requiring a large sample size (Hair et al., 2021, p. 9). It does not mean that there is no minimum sample size requirement; in fact, it suggests that the inverse square root method can be used to decide the minimum sample size, as I have done in the previous section. In addition to the above advantages, Hair et al. (2021, p. 11) also claim that PLS-SEM holds greater statistical power than CB-SEM and other regression-type methods, and parameter estimation is also more efficient in PLS-SEM.

In this thesis, all the latent variables (constructs) under examination were considered endogenous, indicating their susceptibility to influences from other latent or observable variables, namely, the three mediating variables, and they were impacted by the introduced overtime scenarios. While fertility intention is an observed endogenous variable, overtime status serves as an exogenous observed variable, which was defined based on two experimental groups (toxic and moderate level of overtime scenario) and compared against the control group (the reference group with no overtime at all).

Testing theory using PLS-SEM usually consists of two stages: measurement models testing, which aims to confirm the reliability and validity of the latent variables (constructs), and then structural model testing, which aims to check the relationship among variables based on hypotheses. Estimates in this part were mainly performed with the R package SEMinR, version 2.3.2 (Ray et al., 2021).

4.4.2 Measurement theory

The measurement model assessment stage in PLS-SEM has been denoted as ‘confirmatory composite analysis’ in some academic literature (CCA; Hair et al., 2020), which has been argued to serve a similar purpose as confirmatory factor analysis (CFA) but with distinct statistical objectives. Within the measurement model, the initial focus was on evaluating the indicator reliability to determine the extent of variance each indicator contributes to its associated construct, and it is calculated by squaring the indicator loadings (Hair et al., 2021, p. 77). Since the values of 0.708 or above of indicator loadings were recommended, the threshold value of indicator reliability should be at least 0.501 (0.708^2).

Then the internal consistency reliability would be assessed through Jöreskog’s (1971) composite reliability (CR: ρ_c) and Cronbach’s alpha (α). This step examines how much the indicators under the same construct are related. Some scholars also proposed using the reliability coefficient (ρ_A) to replace the above two, as ρ_A produces more moderate values (Dijkstra, 2010), so this study would report all three values for the sake of preciseness. The acceptable reliability criteria for all three measures need to be above 0.70 and lower than 0.95.

The convergent validity was then measured through the Average Variance Extracted (AVE), and an AVE of 0.50 (50%) or above was considered a compelling demonstration of convergent validity (Hair et al., 2021, p. 78). The last step of the measurement model would be to assess the discriminant validity of the constructs, which aims to ensure the distinctiveness of each construct. An approach to determining discriminant validity is to measure the heterotrait-monotrait ratio

(HTMT) of correlations (Henseler et al., 2014, p. 121), and an HTMT significantly lower than 0.90 was deemed acceptable.

4.4.3 Structural theory

After the measurement models were confirmed, the structural model assessment followed. Unlike CB-SEM, which has a set of established indices for structural model fit evaluation, PLS-SEM lacks a universally acknowledged goodness-of-fit (GOF) statistic, as PLS-SEM places greater emphasis on assessing the model's explanatory power rather than measuring the degree to which the theoretical model aligns with the actual data (Hair et al., 2021, p. 117). However, there are also some steps that scholars usually adopt in assessing the structural model in PLS-SEM.

The multicollinearity issue should be checked first by computing the variance inflation factor (VIF) value. VIF values lower than 3.0 indicate the absence of collinearity concerns among constructs (Hair et al., 2021, p. 117). Following this, the examination of the significance and relevance of the path coefficients allows for testing hypothesized relationships among constructs. The range of path coefficient values typically falls between -1 and +1, and the proximity of the coefficient's value to the absolute magnitude of 1 signifies its potency in predicting or explaining endogenous constructs. Regarding the significance of path coefficients, it is tested through the utilization of bootstrapping analysis, with the absolute t-values (> 1.960) determined from the bootstrapping process. Specifically, the assessment of the structural model involved the utilization of 10,000 iterations of bootstrap, adhering to the recommendation of Streukens and Leroi-Werelds (2016, p. 622), and the bootstrapping confidence intervals ($\alpha = 0.05$) and t-values would also be reported later.

Additionally, to quantify the explanatory power of the structural model, it is essential to compute the coefficient of determination (R^2) for the endogenous constructs and determine the effect size (f^2) (Hair et al., 2021, p. 118; Rigdon, 2012, p. 348). Different thresholds for R^2 values have been suggested by various scholars. For instance, Chin (1998, p. 323) recommended that R^2 values for endogenous variables be assessed as: 0.67 (strong), 0.33 (moderate), and 0.19 (weak). Alternately, Hair et al. (2021, p. 118) proposed that R^2 values of 0.75, 0.50, or 0.25 could approximately signify substantial, moderate, or weak levels of explanatory power. Nevertheless, there is a consensus that an R^2 value exceeding 0.10 is considered marginally acceptable for an endogenous construct (Falk & Miller, 1992, p. 80). Regarding the f^2 , Cohen's classification (1988) designates a value of 0.02 as indicative of a small, 0.15 as a medium, and 0.35 as a large effect.

And last, after confirming that the structural model meets all quality criteria, a multiple mediation analysis would be conducted to test the mediating relationships as hypothesized before, and I would still use the results of the bootstrap routine for assessing the significance of the direct and indirect mediating effects in this step. Moreover, an extra moderation analysis would also be conducted in the PLS-SEM to test the two auxiliary hypotheses about the moderating effects of perceived behavioral control on the relationship between attitude and fertility intention and between subjective norms and fertility intention.

5 Results

This chapter presents the outcomes of the data analyses in line with the formulated hypotheses. The first part shows the background profiles of participants and the descriptive statistics results. Preliminary analyses include a MANOVA for manipulation check and an EFA for items check. Subsequently, the results of the main hypothesis tests, using PLS-SEM and mediating path analysis, followed by testing the auxiliary moderating hypotheses.

5.1 Preliminary analyses

The analyzed dataset comprised a total of 300 subjects, with their background characteristics detailed in [Table A.2](#). The entire sample consisted of female participants engaged in full-time employment, with ages varied between 20-40, among which 180 women were aged 30 years or younger (60%), while 120 were aged 31 years or older (40%). Approximately 59.67% of the women did not have children, while 40.33% had one or more children. A significant majority of the participants held tertiary education degrees (69%), with 15.67% possessing postgraduate qualifications, while roughly 15.33% of women did not attain tertiary education. In terms of employment type, the majority of women were employed in private companies or operated as freelancers (76%), while a smaller proportion held permanent positions (24%) in state-owned enterprises or public sectors. Descriptive statistics for all the items used to measure the latent variables were also reported across the three distinct overtime scenarios (see [Table A.3](#) within Appendix A).

5.1.1 Manipulation check analysis

A MANOVA has been employed to test the effect of the experimental overtime status (independent variable) on the manipulation checks (the two questions). The results indicate successful manipulation of overtime status, as evidenced by the significant impact of the experimental conditions on the two items combined. This difference among the overtime scenarios was statistically significant with an acceptable value of effect size η^2 (Wilks $\lambda = 0.06$, $F_{(4, 592)} = 441.35$, $p < 0.0001$, $\eta^2 = 0.75$). In the first manipulation check question, the overtime scenario was evaluated as more intense ($M = 4.64$, $SD = 0.54$) in the toxic overtime regime rather than the moderate overtime regime ($M = 2.75$, $SD = 0.46$). And in the second manipulation check question about the work-life balance, it was evaluated as more challenging to deal with personal life and family issues in the toxic overtime regime

($M = 1.69$, $SD = 0.63$) than in the moderate scenario ($M = 3.77$, $SD = 0.64$). Visualization of the comparison is shown in Figure 5.1.

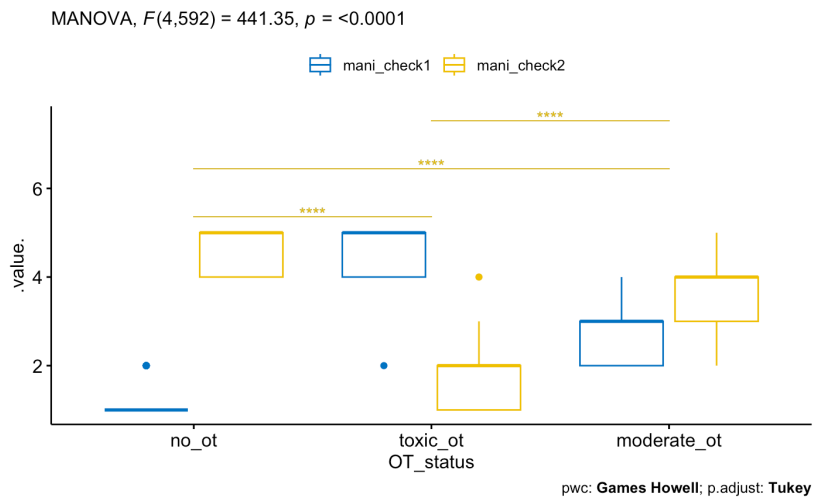


Figure 5.1. Boxplot: Experimental overtime status and the perceived level of overtime intensity. (The x-axis represents three experimental vignettes, and the y-axis represents the perceived value of 1-5.)

5.1.2 Exploratory factor analysis (EFA)

An EFA was performed for the TPB constructs. The check of assumptions has shown that the items in the data had acceptable skewness (-2 to +2) and kurtosis (-7 to +7), and there is no multivariate outlier in the data (Hair et al., 2010). The assumption of reliability and factorability were also tested good for conducting a factor analysis: the Cronbach's alpha (α) was 0.93, showing a good internal consistency; Bartlett's test of Sphericity (Barlett, 1950) has a significant chi-square output ($p < .05$), which rejected the null hypothesis that the item correlation matrix was an identity matrix (Tabachnick & Fidell, 2007); and the total KMO (Kaiser-Meyer-Olkin) correlation was 0.93 (> 0.6), meaning that the sample is considered adequate for a factor analysis (Kaiser, 1970; Netemeyer et al., 2003). However, the results of the Henze-Zirkler test and the multivariate skewness and kurtosis tests were all at a significant level (< 0.05), indicating a violation of the multivariate normality assumption. Thus, it suggests using the principal axis factor extraction instead of maximum likelihood estimation (Costello & Osborne, 2005).

A parallel analysis was conducted then to confirm the factor structure, which suggested retaining three factors, as Figure 5.2 shows (in accordance with the original structure of the TPB framework). It is worth noting that parallel analysis has been claimed to be the best to determine the factor structure compared with others, such as Scree Test or Kaiser's eigenvalue method (Ledesma & Valero-Mora, 2007, pp. 3-4).

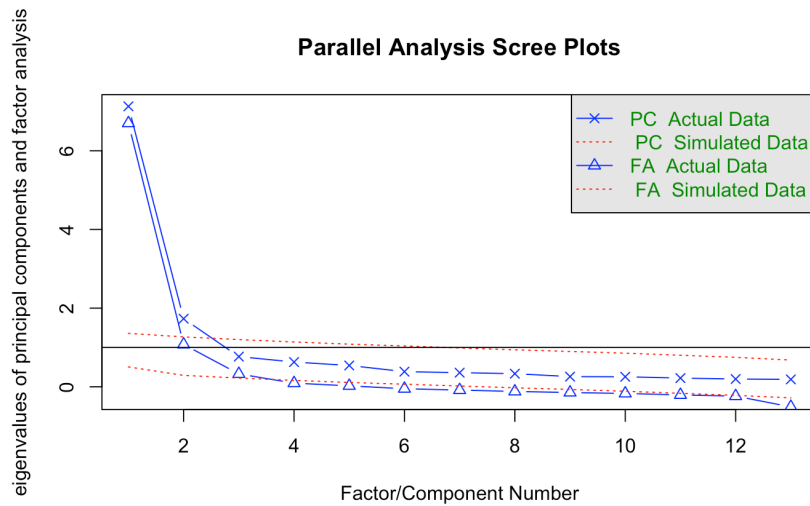


Figure 5.2 Parallel analysis: The actual eigenvalues of three factors in FA surpass the simulated ones, differentiating the three from other less important factors.

Further, the factors were extracted with oblique rotation (oblimin/promax) rather than a commonly used orthogonal rotation (varimax) because the latter assumes no correlations between factors, which is not the case in this study. This can be evidenced by the factor correlation matrix: the lowest correlation between factors was about 0.41, which exceeded the Tabachnick and Fidell (2007, p. 646) threshold of 0.32, meaning that there was more than enough variance (> 10%) among factors to guarantee the oblique rotation (check Table 5.1).

Table 5.1. Eigenvalues, variance explained, and factor correlations.

Eigenvalues, Variance Explained, and Factor Correlations for Rotated Factor Solution:			
Property	Factor_1	Factor_2	Factor_3
SS loadings (eigenvalues)	3.976	2.437	2.250
Proportion Var	0.306	0.187	0.173
Cumulative Var	0.306	0.493	0.666
Proportion Explained	0.459	0.281	0.260
Cumulative Proportion	0.459	0.740	1.000
Factor_1	1.000	0.801	0.407
Factor_2	0.801	1.000	0.435
Factor_3	0.407	0.435	1.000

As explained in the previous chapter, by setting the threshold of factor loading cut-off as 0.45 (a fair loading), the EFA result for the TPB indicators showed that most items loaded on their respective factors, as Table 5.2 shows. The item SN_item4 was excluded from further considerations due to cross-loading and low-loading issues, but other items with high factor loadings were all retained for later SEM analysis (check Figure B.1 within Appendix B for factor analysis diagram).

Table 5.2. The 3-factor structure with communalities and loadings of each item

Factor analysis results						
	Factor_1 (Attitudes)	Factor_2 (Perceived behavior control)	Factor_3 (Subjective norms)	Communality (h ²)	Uniqueness (1-h ²)	Complexity
AT_item3	0.962	-0.126	0.021	0.76	0.24	1.04
AT_item5	0.846	0.021	-0.040	0.72	0.28	1.01
AT_item4	0.782	0.052	-0.028	0.66	0.34	1.01
AT_item2	0.775	0.092	0.045	0.76	0.24	1.04
AT_item1	0.743	0.169	0.032	0.81	0.19	1.11
PBC_item2	-0.033	0.854	0.050	0.72	0.28	1.01
PBC_item1	0.038	0.833	0.059	0.79	0.21	1.01
PBC_item3	0.101	0.689	-0.153	0.51	0.49	1.14
SN_item2	-0.009	0.032	0.864	0.77	0.23	1.00
SN_item5	-0.057	-0.071	0.833	0.62	0.38	1.02
SN_item3	0.226	0.183	0.511	0.59	0.41	1.66
SN_item1	0.261	0.108	0.491	0.52	0.48	1.64
SN_item4	0.231	0.275	0.289	0.44	0.56	2.90

Note: “Complexity” stands for Hoffman’s index of complexity, and it shows how much an item reflects the corresponding factor.

5.2 PLS-SEM estimation and hypothesis testing

As explained in the method chapter, the evaluation of the results obtained from the PLS-SEM was conducted in two stages: measurement model evaluation to confirm the reliability and validity of the model and then structural model evaluation to test the hypothesized relationships between variables.

5.2.1 Reliability and validity of the measures

The overtime-fertility intention hypothetical model in this thesis comprises three constructs characterized by reflective measurement approaches (i.e., attitudes, subjective norms, and perceived behavioral control), as well as a single-item construct (fertility intention). The reliability and validity analysis results for this measurement model, including the indicator loadings, indicator reliability, internal consistency reliability, and convergent validity, have been shown in Table 5.3.

Specifically, all indicator loadings for the constructs AT, SN, and PBC significantly exceed the threshold value of 0.708, and their squared loadings are also well above 0.501, indicating satisfactory indicator reliability (Hair et al., 2021, p. 77). Notably, even though the indicator SN_item5 exhibits the lowest variance explained by an indicator at 0.514 ($= 0.717^2$), it still surpasses the minimum threshold of 0.501.

Internal consistency reliability was measured through three alternate metrics: composite reliability (ρ_c), Cronbach's alpha (α), and reliability coefficient (ρ_A). The ρ_A values for AT, SN, and PBC were 0.935, 0.876, and 0.858, respectively, surpassing the threshold of 0.70 and remaining below the upper limit of 0.95 (Dijkstra, 2010). Similarly, the ρ_c and Cronbach's alpha results also exceeded 0.70, confirming strong internal consistency reliability for all three constructs (Figure 5.3). Besides, the AVE was calculated, yielding values of 0.788 (AT), 0.658 (SN), and 0.771 (PBC), respectively, all greater than 0.50. This indicates that, on average, the constructs explain over 50% of the variance in their indicators, thus affirming satisfactory convergent validity (Hair et al., 2021, p. 78).

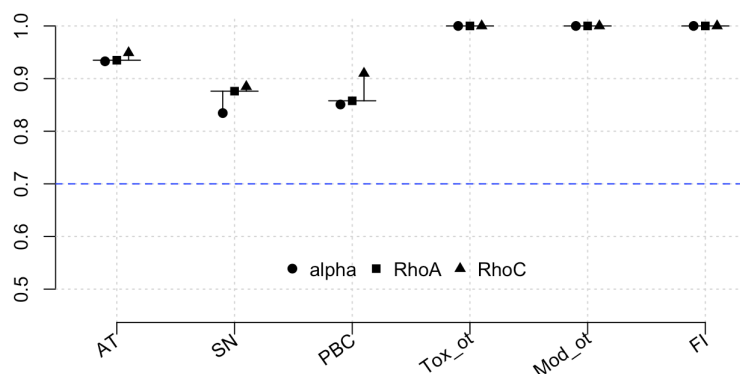


Figure 5.3. Internal consistency reliability charts (including the three major metrics).

Then, the HTMT values and the significance level of HTMT were measured to test the discriminant validity. It was found that all pairs of constructs exhibited HTMT values below the threshold of 0.90, as suggested by Henseler et al. (2014, p. 121). In the bootstrapped model (significance level = 0.10, bootstrap subsamples = 10,000), we can tell that both the confidence intervals' upper and lower boundaries (95% CI and 5% CI) were lower than the threshold value of 0.90 as well, meaning that the HTMT values significantly differ from the threshold, which demonstrates that the constructs in the model have an acceptable discriminant validity (check Table 5.4.).

Table 5.3. The measurement part of the estimated PLS-SEM

Indicator Reliability			Internal Consistency Reliability			Convergent Validity
	Indicator loadings	Loadings ²	Composite reliability (rho _c)	Cronbach's alpha (α)	Reliability coefficient (rho _A)	Average variance extracted (AVE)
Attitudes (AT)			0.949	0.933	0.935	0.788
AT_item1	0.914	0.835				
AT_item2	0.901	0.811				
AT_item3	0.886	0.785				
AT_item4	0.865	0.748				
AT_item5	0.873	0.763				
Subjective norms (SN)			0.885	0.834	0.876	0.658
SN_item1	0.848	0.719				
SN_item2	0.845	0.714				
SN_item3	0.828	0.686				
SN_item5	0.717	0.514				
Perceived behavioral control (PBC)			0.910	0.851	0.858	0.771
PBC_item1	0.908	0.824				
PBC_item2	0.904	0.818				
PBC_item3	0.820	0.672				

Table 5.4. Bootstrapped results for HTMT (with confidence intervals)

	Original Est.	Bootstrap Mean	Bootstrap SD	T Stat.	5% CI	95% CI
AT -> SN	0.588	0.588	0.047	12.393	0.508	0.664
AT -> PBC	0.839	0.839	0.032	26.469	0.785	0.890
AT -> FI	0.825	0.825	0.029	28.526	0.776	0.871
SN -> PBC	0.583	0.585	0.048	12.129	0.505	0.663
SN -> FI	0.547	0.547	0.049	11.143	0.465	0.625
PBC -> FI	0.864	0.864	0.021	41.974	0.829	0.897
Tox_ot -> FI	0.657	0.656	0.036	18.023	0.595	0.713
Mod_ot -> FI	0.244	0.244	0.048	5.060	0.164	0.323

5.2.2 Structural model evaluation and mediation analysis

Given that reliability and validity of the measurement model were both confirmed, the structural model was tested without any further modification. The results show that all VIF values are below the threshold value of 3.0 (see [Figure B.2](#) within Appendix B), suggesting no collinearity problems among constructs (Hair et al., 2021, p. 117). The explanatory power was then evaluated by calculating the endogenous constructs' coefficient of determination (R^2). According to Chin (1998), the R^2 value of fertility intention (0.796) in this study can be considered strong, and AT (0.273) and PBC (0.225) are moderate, whereas the R^2 value of SN (0.077) is weak, even lower than the marginal threshold of 0.10 (Falk & Miller, 1992, p. 80).

The greater R^2 value observed for fertility intention is reasonable because R^2 tends to be influenced by the number of predictors within the model. Given that fertility intention, serving as the dependent variable, inherently involves multiple predictors, a more precise evaluation was performed using an additional metric – the effect size (f^2) for evaluating the explanatory power of the predictor constructs. The results have shown that the toxic overtime regime exhibited a strong effect size of 0.315 on fertility intention, along with medium effect sizes of 0.287 on AT and 0.238 on PBC, whereas its effect size on SN was very small (0.050; Cohen, 1988), aligning with the R^2 findings. For a more detailed breakdown of the R^2 and f^2 results, refer to [Figure B.3](#) and [Figure B.4](#) in Appendix B.

According to the findings of the path coefficients and their significance estimates, it can be affirmed that overtime work does have an impact on working women's fertility intentions over a 3-year period, which aligns with the foundational logic and hypotheses of this thesis. Nevertheless, notable distinctions were observed across different levels of overtime status, as delineated in Table 5.5. It is worth noting that 10,000 iterations were employed for the bootstrapping procedure, assuming a 5% significance level. This extensive number of

bootstrapping iterations was chosen to ensure a more precise approximation of the significance of the T statistics, as recommended by Streukens and Leroi-Werelds (2016).

When compared with the no-overtime group (control group), the adverse effects of the toxic overtime condition on attitudes ($\beta = -0.525$, $t = -9.528$), subjective norms ($\beta = -0.248$, $t = -3.828$), and perceived behavior control ($\beta = -0.493$, $t = -9.203$) toward fertility were evidently significant. This implies that women envisioning a scenario involving toxic overtime schedules tend to hold less favorable attitudes, encounter less supportive subjective norms, and perceive reduced control over the prospect of having a child within the next three years. Conversely, in comparison to the control group, no impact of the moderate overtime scenario was observed on any of the three constructs mentioned above. The effects were statistically insignificant for all three constructs ($|t| < 1.960$). This suggests that attitudes, subjective norms, and perceived behavioral control regarding childbearing remained unchanged when participants were exposed to a moderate level of overtime, as opposed to working without any overtime. As a result, Hypotheses 1, 3, and 5 were partially confirmed based on these findings.

Table 5.5. The structural part of the estimated PLS-SEM (path coefficient estimates, significance, and confidence intervals)

	Original Est.	Bootstrap Mean	Bootstrap SD	T Stat.	2.5% CI	97.5% CI
AT -> FI	0.316	0.318	0.061	5.180	0.202	0.441
SN -> FI	0.083	0.084	0.036	2.304	0.011	0.153
PBC -> FI	0.378	0.375	0.052	7.200	0.271	0.478
Tox_ot -> AT	-0.525	-0.525	0.055	-9.528	-0.632	-0.417
Tox_ot -> SN	-0.248	-0.251	0.065	-3.828	-0.377	-0.123
Tox_ot -> PBC	-0.493	-0.494	0.054	-9.203	-0.597	-0.389
Tox_ot -> FI	-0.335	-0.334	0.041	-8.178	-0.416	-0.254
Mod_ot -> AT	-0.005	-0.006	0.059	-0.090	-0.119	0.111
Mod_ot -> SN	0.053	0.054	0.060	0.891	-0.065	0.170
Mod_ot -> PBC	-0.042	-0.042	0.062	-0.672	-0.163	0.078
Mod_ot -> FI	-0.091	-0.092	0.029	-3.128	-0.149	-0.036

This model further enabled the examination of Hypotheses 2, 4, and 6, which presumed, based on the TPB, that the three mediating factors could predict fertility intentions. As expected, the fertility intentions of female workers were indeed predicted by their attitudes ($\beta = 0.316$, $t = 5.180$) and perceived behavioral control ($\beta = 0.378$, $t = 7.200$). Therefore, the stronger a woman's favorable attitude and perceived control over fertility, the more robust her intentions to have children.

Subjective norms also displayed a significant positive effect on intentions, although this effect was relatively weak ($\beta = 0.083$, $t = 2.304$). These findings provided substantial support for the validity of the three hypotheses. For a visual representation of the comprehensive model including both the measurement and structural components, refer to Figure 5.4.

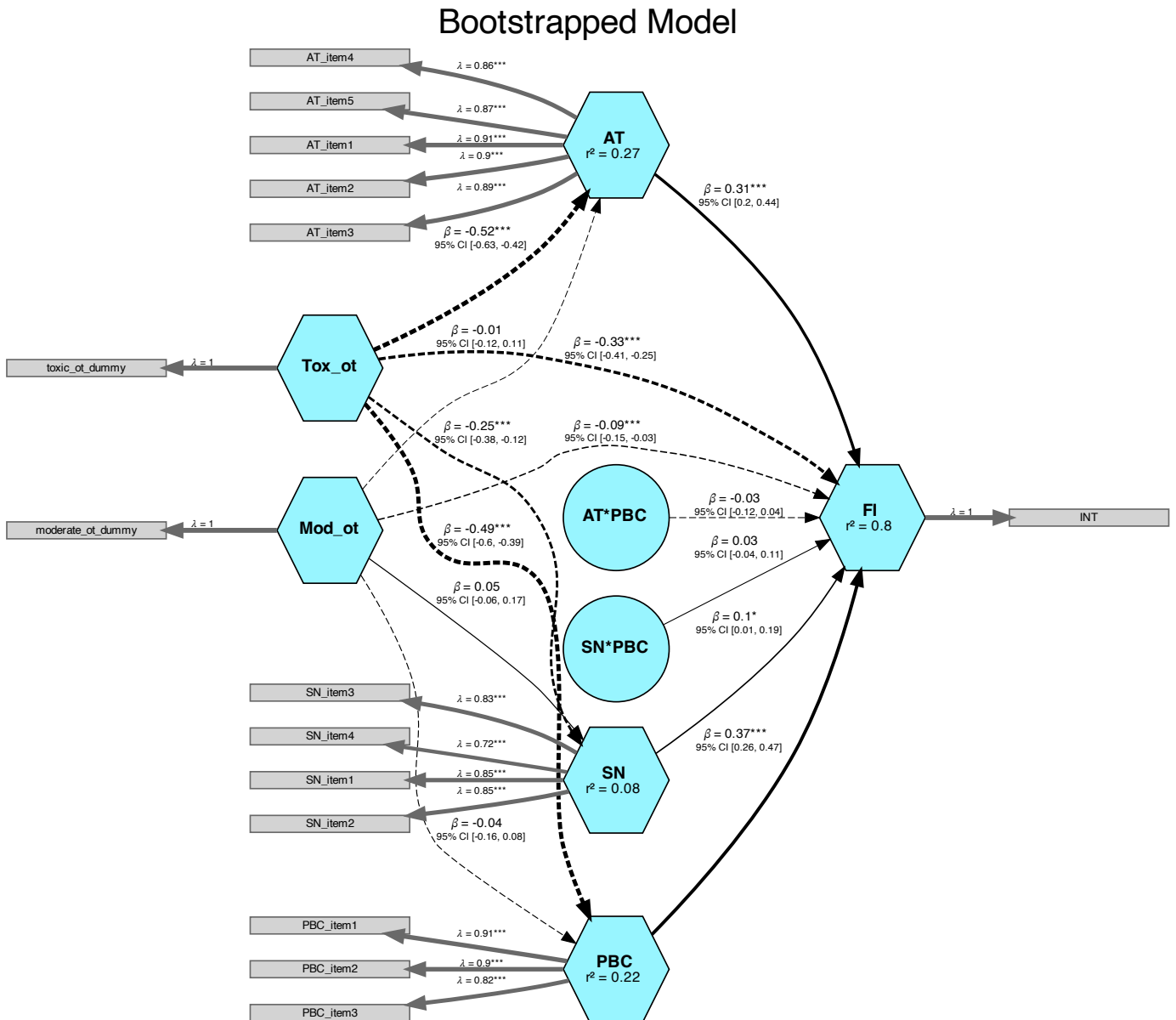


Figure 5.4. Measurement and structural part of the final estimated model (Note: the original SN_item5 was renamed to replace the original SN_item4)

An additional mediation analysis was conducted to test Hypothesis 7, assuming the mediating effects of the attitude, subjective norm, and perceived behavioral control of employed women on the relationship between overtime status and fertility intentions. The results showed that the total indirect effect of the toxic overtime scenario on fertility intention was -0.373. The bootstrap confidence intervals did not include zero, signifying the statistical significance of the indirect effects at the specified 5% level. Simultaneously, the direct effect of the toxic

overtime scenario on fertility intentions was -0.335, and its 95% confidence interval [-0.416, -0.254] was also significant. Thus, I conclude that the relationship between the toxic overtime regime and female workers' fertility intentions is partially mediated (complementary mediation) through their attitudes, subjective norms, and perceived behavioral control over fertility (Baron & Kenny, 1986, p. 1177).

On the other hand, the total indirect effect of the moderate overtime scenario on fertility intention was notably weak (-0.013) and lacks statistical significance. The direct relationship between these factors was characterized by a path coefficient of -0.091, which also exhibited limited strength. The 95% confidence interval [-0.149, -0.036] did not include zero, indicating that mediation was absent, which suggests a faint direct effect between the two variables. Consequently, Hypothesis 7 was only partially substantiated by these findings.

5.2.3 PBC as moderating variable

Despite not being a primary objective of this research, I deemed it necessary to explore the potential moderating effects of PBC on both the relationship between attitudes (AT) and fertility intentions (FI) as well as the relationship between subjective norms (SN) and fertility intention (FI). These analyses were conducted to assess the auxiliary Hypotheses 8 and 9. To this end, I extended the analysis with an additional examination of moderation with the bootstrapped model. This involved incorporation of interaction terms, specifically AT*PBC and SN*PBC, utilizing a two-stage approach. As shown in Figure 5.4, the interaction term AT*PBC displayed a negative impact on fertility intention (-0.035), while the interaction term SN*PBC exhibited a positive effect of 0.033. However, it is noteworthy that the 95% bootstrap confidence intervals for both interaction term effects included zero, which means that the moderating effects lack statistical significance. This conclusion is further underscored by the visual representation of the simple slope analysis depicted in Figure 5.5. Therefore, I could draw the conclusion that the findings do not provide support for Hypotheses 8 and 9.

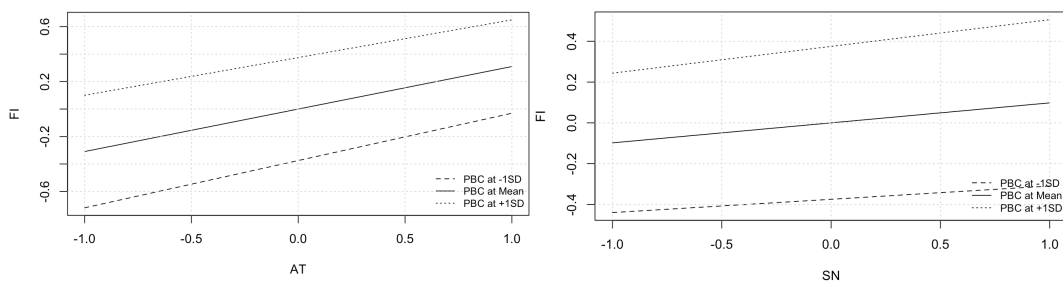


Figure 5.5. The two-way interaction effect of AT*PBC and SN*PBC on FI.

6 Discussion

This chapter first discusses the results obtained from the previous chapter and the implications of these findings so that I can answer the first research question. Secondly, the theoretical implications will be discussed to answer the second research question regarding the TPB. A discussion regarding the practical and methodological implications follows. The chapter will end with several limitations and suggestions for future research.

6.1 Overtime and fertility intentions

Contemporary research in demographics and behavior, particularly concerning the challenges of low total fertility rates and demographic transition in China, often overlooks the potential negative impacts of an excessively demanding overtime culture on the reproductive decisions of working women. This study aims to enhance the understanding of the factors affecting fertility intentions by offering experimental insights into the influence of perceived overtime conditions on fertility intentions among employed women in urban areas of China.

The theoretical foundation of this study is rooted in the Theory of Planned Behavior (Ajzen & Klobas, 2013; Ajzen, 1991), and data collection was carried out using a questionnaire-based vignette experimental approach (Atzmüller & Steiner, 2010, p. 128). The experimental vignettes, which presented varying levels of overtime intensity, were carefully designed to replicate the real overtime scenarios experienced in bustling Chinese cities. These scenarios were shaped by factors such as working hours, overtime rewards, and voluntariness. The results of the multivariate analysis of variance validated the successful manipulation of different overtime scenarios through the experimental vignettes, effectively creating distinct levels of overtime intensity for the participants. However, as revealed in the subsequent structural equation modeling analysis, variations emerged in the effects of overtime status on the fertility intentions of working women.

Overall, the outcomes of the study indicate a negative correlation between the intensity of overtime and the fertility intentions of female workers. This suggests that their inclination to have children within a three-year timeframe diminishes notably when they perceive the necessity of working overtime in the given scenario. Additionally, in alignment with the hypothesis, a toxic overtime regime – characterized by an extensive workload of around 72 hours per week without proportionate pecuniary compensation (refers to the notorious ‘996’ overtime culture) – exerts a much stronger negative effect (-0.335) on the fertility intentions of working women compared to a moderate level of overtime (-0.091), in which

women work with a normal system and have options of working extra hours voluntarily. This result is also consistent with the assumption of role strain theory mentioned at the beginning of the research (Goode, 1960, p. 485): an individual's finite time and energy resources for fulfilling various social roles could lead to conflicts. Consequently, excessive investment in work can erode the individual's family role, thereby weakening their willingness to have children.

Furthermore, in line with the foundational principles of the Theory of Planned Behavior (Ajzen & Klobas, 2013), the findings also reveal that under the pressures of a toxic overtime routine, women tend to hold less positive attitude, weaker subjective norm, and diminished perceived control regarding fertility-related decisions. The three factors subsequently exert a significant influence over individual fertility intentions, thereby confirming their role as partial mediators in the central connection between engaging in overtime work and the shaping of fertility intentions. This sequential decision-making process further provides insights into the psychological mechanisms underlying the observed correlations between overtime work and fertility intentions.

Nevertheless, it should be emphasized that among the three mediating factors, both attitudes and perceived behavior control over fertility were found crucial in shaping the intentions of working women to have a child in a three-year span, aligning with the theoretical assumptions of the TPB (Ajzen & Klobas, 2013). In contrast, the impact of subjective norms on the formation of intentions exhibited a marginal effect. This suggests that contemporary Chinese female employees attribute greater significance to their personal sentiments and attitudes as opposed to the expectations of others when considering fertility plans. This particular finding, to a certain extent, diverges from the conventional propositions of the Theory of Planned Behavior and contradicts certain prior research that emphasizes normative pressures as influential determinants of behavioral intentions (Billari et al., 2009, p. 458; Dommermuth et al., 2011, p. 43). Moreover, it is noteworthy that within the items composing the latent construct of subjective norms, one item was excluded after undergoing factor analysis due to its remarkably low loading. This particular item pertained to the influence of colleagues, implying that among the majority of working women in China, colleagues do not appear to exert substantial influence as reference points within their decision-making processes regarding fertility.

Another notable finding of this research is that the above-mentioned mediating process does not apply to the moderate level of overtime scenario, as the data analysis results have shown that in comparison to the absence of overtime, the moderate overtime status yields no significant effects on female workers' attitudes, subjective norms, and perceived behavior control regarding fertility. These findings suggest that engaging in moderate extra work hours with proper compensation does not influence their attitudes toward fertility, their perceived control over having children, and perceived normative pressure from significant others on giving birth to a child. Only when asked to work unreasonable long hours, as seen in the '996' work culture, would their attitudes and perceptions concerning fertility plans be significantly affected.

In addition, an exploration into the potential moderating impact of perceived behavioral control on the attitude-intention and subjective norm-intention

relationships was conducted, as suggested by La Barbera and Ajzen (2020, p. 412), considering the established relevance of this connection in other spheres of behavioral analysis. However, the results indicate the absence of any notable interactions. These findings imply that the assumed moderating mechanisms, as proposed within the framework of the TPB, may not be readily applicable to the domain of fertility research within the specific cultural context of Chinese society.

Beyond the above theoretical implications, the findings of this study also hold practical significance for policymakers and relevant authorities. Firstly, as described in the toxic overtime scenario, the prevalent overtime culture in many Chinese companies often operates in a covert manner, which empowers the companies or employers to impose ‘legal injury’ upon their employees (for instance, coercing them to work overtime under the guise of ‘voluntary’ engagement to secure their positions). In response, labor regulatory authorities must enhance their vigilance in monitoring and enforcing labor laws to counteract such practices effectively. It is worth noting, however, that while a moderate level of overtime, compliant with labor regulations, generally maintains its legitimacy, the statistical results still suggest that it may have limited impact on women’s intentions regarding fertility.

Secondly, for policymakers aiming to promote fertility rates through potentially revising policies on childbirth limits, it is crucial to recognize the prevalent challenges that women confront currently. This involves addressing the structural barriers within society that deter women from embracing motherhood, rather than merely advocating for women to prioritize family or return home for childbirth. In pursuing this goal, it is vital to acknowledge that an unsustainable and excessive overtime work culture should be mitigated among other factors. This acknowledgement underscores the need to first address the adverse impact of such a work environment on women’s intentions to start a family.

6.2 Methodological implications

In addition to the theoretical and practical implications discussed above, it is also important to briefly discuss the methodological implications of the approach employed in this research. Firstly, the utilization of a vignette-based experimental survey through a between-subject design effectively balanced both external and internal validity, thereby mitigating some potential issues like common method bias (Podsakoff et al., 2003, pp. 880-885), carryover effects (Rosenthal & Rosnow, 2008, p. 203), and the influence of socially desirable responses (Rasinski et al., 1999, p. 465). Besides, using a semi-experimental approach facilitated causal inference and allowed for a certain level of randomization during data collection and sampling, which improved the overall validity of the research (Schlüter & Schmidt, 2010, p. 93). Hence, researchers can consider incorporating such designs more in future studies, especially within social science research domains.

Furthermore, the decision to opt for the PLS-SEM approach for data analysis instead of the more commonly used CB-SEM carries notable methodological

implications. PLS-SEM proves advantageous for studies with limited sample sizes and avoids CB-SEM's strict normality assumption for the data, affording researchers greater flexibility (Hair et al., 2021, pp. 18-19). Additionally, though not applicable in this study, PLS-SEM effectively handles formative measurement models and single-item assessments without encountering parameter identification issues (Hair et al., 2021, p. 11). While extensively utilized in business and marketing research, this study underscores the potential of PLS-SEM to find broader application within the realm of social science research.

6.3 Limitations

It is also crucial to recognize the inherent limitations of this study. Firstly, while the construction of three vignettes combining dimensions like extended working hours, involuntary overtime, and inadequate financial incentives facilitated a holistic assessment of 'overtime intensity,' it also introduced a limitation. This approach makes it challenging to statistically differentiate the impact of long working hours from that of insufficient overtime compensation (Rossi & Anderson, 1982). For example, although the study indicates that a moderate overtime regime does not significantly affect working women's perceived control over fertility plans, it is difficult to conclusively determine whether this result stems from the lack of influence exerted by reasonable additional work hours on fertility perceptions or due to financial compensation offsetting potential negative feelings. Future research could design more refined vignettes to examine specific variations across these dimensions.

Secondly, the data collection process for this study was exclusively conducted online due to time and geographical constraints. This approach raises potential concerns about sample selectivity, as a portion of participants were pre-registered within the survey platform's sample pool. Moreover, the study was confined to five major urban centers, which might limit the generalizability of the findings.

Thirdly, adopting a purely quantitative approach, this study focused exclusively on statistical relationships among variables, omitting an exploration of the underlying mechanisms that explain how overtime impacts fertility intentions. To address this limitation, future research could employ qualitative or mixed methods, such as interviews or focus groups, to uncover the nuanced reasons behind the observed relationship between overtime and fertility intentions.

Lastly, beyond addressing these limitations, future research could consider adopting a longitudinal design, which would allow for a more comprehensive investigation of the causal relationships between intentions and subsequent behaviors, adding depth to the insights of the research.

7 Conclusion

The relationship between overtime work and fertility intentions holds significant relevance within China, a nation witnessing a concerning decline in fertility rates alongside the normalization of the '996' overtime culture. This thesis aimed to measure the extent to which working overtime affects fertility intentions among employed women of reproductive age in urban China. Additionally, it sought to assess the applicability of the Theory of Planned Behavior in this unique context, considering the scarcity of research applying the theory to investigate the interplay of overtime and fertility.

To achieve these objectives, a questionnaire-based vignette experiment was created, targeting professional women residing in five bustling Chinese cities. This experimental survey was distributed through an online platform and QR codes on WeChat Moments, attracting participation from 300 employed women. Employing Partial Least Squares Structural Equation Modeling, the collected data were subjected to rigorous analysis, consistently confirming the negative impact of overtime work on working women's fertility intentions. This substantiates the focal hypothesis of this study, indicating that higher levels of overtime intensity correspond to decreased fertility intentions among working women. Moreover, this research also reveals that attitudes, subjective norms, and perceived control over family planning act as mediators in the relationship between toxic overtime intensity and fertility intentions. However, the mediating effects are negligible when overtime intensity is at a moderate level. The results also offer limited support for the moderating effects of perceived behavior control on the connections between attitude and intention, as well as between subjective norm and intention, as proposed by the TPB, which rejects the two auxiliary hypotheses.

Integrating the research findings with the implications discussed in the previous chapter, this thesis provides a twofold contribution. Firstly, from an academic perspective, it expands the understanding of how modern work practices intersect with family planning decisions. The study's identification of nuanced associations between toxic overtime culture and fertility intentions, mediated by psychological factors, adds to the broader discourse on how work-related stressors impact choices related to reproduction. Secondly, from a practical standpoint, the study underscores that the widespread dominance of overtime work extends beyond individual concerns, influencing societal dynamics as a normative cultural phenomenon within China's contemporary job market. This cultural shift detrimentally affects various facets of life, including health considerations and family planning.

8 References

- Abernethy, V. (1993). The demographic transition revisited: Lessons for foreign aid and U.S. immigration policy. *Ecological Economics*, 8(3), 235–252. [https://doi.org/10.1016/0921-8009\(93\)90060-j](https://doi.org/10.1016/0921-8009(93)90060-j)
- Ajzen, I. (1988). *Attitudes, Personality, and Behavior*. Chicago: Dorsey Press.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/074959-78\(91\)90020-t](https://doi.org/10.1016/074959-78(91)90020-t).
- Ajzen, I. (2002). Constructing a TPB questionnaire: Conceptual and methodological considerations. Retrieved from: [http://people.umass.edu/\\$ajzen/pdf/tpb.measurement.pdf](http://people.umass.edu/$ajzen/pdf/tpb.measurement.pdf).
- Ajzen, I. (2010). *Fertility intentions: Theory of planned behavior*. Paper presented at BBAW/Leopoldina-Conference on Theoretical Foundations for the Analysis of Fertility, Lausanne, 14–16.
- Ajzen, I., & Klobas, J. (2013). Fertility intentions: An approach based on the theory of planned behavior. *Demographic Research*, 29(8), 203–232.
- Attempts to regulate overtime work at China's tech giants are not going well*. (2022, Feb. 25). China Labour Bulletin. <https://clb.org.hk/en/content/attempts-regulate-overtime-work-china's-tech-giants-are-not-going-well>
- Atzmüller, C., & Steiner, P. M. (2010). Experimental vignette studies in survey research. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, 6, 128–138.
- Auspurg, K., & Hinz, T. (2015). Factorial survey experiments. In *SAGE Publications, Inc. ebooks*. <https://doi.org/10.4135/9781483398075>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bartlett, M. S. (1950). Tests of Significance in Factor Analysis. *British Journal of Psychology* 3(2), 77–85. <https://doi.org/10.1111/j.2044-8317.1950.tb00285.x>
- Becker, G. S. (1960). An economic analysis of fertility. *RePEc: Research Papers in Economics*, 209–240. https://econ.duke.edu/~vjh3/e195S/readings/Becker_Fertility.pdf
- Becker, G. S., & Barro, R. J. (1988). A Reformulation of the Economic Theory of Fertility. *Quarterly Journal of Economics*, 103(1), 1–25.
- Beckers, D. G. J., Van Der Linden, D., Smulders, P., Kompier, M. a. J., Taris, T. W., & Geurts, S. a. E. (2008). Voluntary or involuntary? Control over overtime and rewards for overtime in relation to fatigue and work satisfaction. *Work & Stress*, 22(1), 33–50. <https://doi.org/10.1080/02678370801984927>
- Behrman, J. A., & Gonalons-Pons, P. (2020). Women's employment and fertility in a global perspective (1960-2015). *Demographic Research*, 43, 707–744. <https://doi.org/10.4054/demres.2020.43.25>
- Berrington, A., & Pattaro, S. (2014). Educational differences in fertility desires, intentions and behaviour: A life course perspective. *Advances in Life Course Research*, 21, 10–27. <https://doi.org/10.1016/j.alcr.2013.12.003>.

- Billari, F. C., Philipov, D., & Testa, M. (2009). Attitudes, norms and perceived behavioural control: Explaining fertility intentions in Bulgaria. *European Journal Population* 25(4), 439–465. <https://doi.org/10.1007/s10680-009-9187-9>
- Bollen, K. A. (1989). Structural Equations with Latent Variables. In *John Wiley & Sons, Inc. eBooks*. <https://doi.org/10.1002/9781118619179>
- Budig, M. J., & England, P. (2001). The wage penalty for motherhood. *American Sociological Review* 66(2): 204–225. <https://doi.org/10.2307/2657415>
- Cardon, P. W., Feng, M., Ma, H., & Ma, Q. (2021). Employee voice, communication formality, and employee engagement: Is there a “New Normal” for internal communication in China? *Business Communication Research and Practice*, 4(2), 82–91. <https://doi.org/10.22682/bcrp.2021.4.2.82>
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In *G. A. Marcoulides (Ed.), Modern Methods for Business Research*, 295–336. <https://psycnet.apa.org/record/1998-07269-010>
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58(6), 1015–1026. <https://doi.org/10.1037/0022-3514.58.6.1015>
- Čipin, I., & Međimurec, P. (2013). The impact of atypical working hours on fertility intentions across Europe. *International Union for the Scientific Study of Population*. <https://www.bib.irb.hr/764418>
- Clutterbuck, S., Adams, J., & Nettle, D. (2014). Childhood Adversity Accelerates Intended Reproductive Timing in Adolescent Girls without Increasing Interest in Infants. *PLoS ONE* 9(1): e85013. <https://doi.org/10.1371/journal.pone.0085013>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). *Routledge*. <https://doi.org/10.4324/9780203771587>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research and Evaluation* 10(1), 1–9.
- Daily Economic News. (2022, Feb. 19). 26-year-old employee reportedly died of overwork. The company denies: not during working hours, not due to overtime. https://www.sohu.com/a/523836129_115362
- Del Boca, D. (2002). The effect of child care and part time opportunities on participation and fertility decisions in Italy. *Journal of Population Economics*, 15(3), 549–573. <https://doi.org/10.1007/s001480100089>.
- Dijkstra, T. K. (2010). Latent variables and indices: Herman Wold’s basic design and partial least squares. In Esposito Vinzi, V., Chin, W., Henseler, J., & Wang, H. (Eds.), *Handbook of partial least squares: Concepts, methods and applications Springer Handbooks of Computational Statistics Series* (Vol. II, pp. 23–46). Berlin: Springer. https://doi.org/10.1007/978-3-540-32827-8_2
- Dommermuth, L., Klobas, J., & Lappegård, T. (2011). Now or later? The Theory of Planned Behavior and timing of fertility intentions. *Advances in Life Course Research* 16(1): 42–53. <https://doi.org/10.1016/j.alcr.2011.01.002>
- Dommermuth, L., Klobas, J., & Lappegård, T. (2015). Realization of fertility intentions by different time frames. *Advances in Life Course Research*, 24, 34–46. <https://doi.org/10.1016/j.alcr.2015.02.001>.
- Dong, J., & Yan, S. (2022). Evolutionary game analysis between employees and employers about working overtime from the perspective of information

- asymmetry. *BMC Psychology* 10(1), 95. <https://doi.org/10.1186/s40359-022-00802-y>
- Dou, G., Li, G., Yuan, Y., Liu, B., & Yang, L. (2022). Structural dimension exploration and measurement scale development of employee involvement in China's workplace field. *International Journal of Environmental Research and Public Health*, 19(21), 14454. <https://doi.org/10.3390/ijerph192114454>
- Falk, R., & Miller, N. B. (1992). *A primer for soft modeling*. Akron, OH: University of Akron Press. <https://psycnet.apa.org/record/1992-98610-000>
- Feng, Tao. (2019). Labor Law of the People's Republic of China. The National People's Congress of the People's Republic of China. <http://www.npc.gov.cn/npc/c30834/201901/ffad2d4ae4da4585a041abf66e74753c.shtml>
- Goode, W. J. (1960). A theory of role strain. *American Sociological Review*, 25(4), 483–496. <https://doi.org/10.2307/2092933>
- Greenhalgh, S. (2003). China's One-Child Policy: How and how well has it worked? *The China Quarterly*, 174, 451–466. doi: 10.1017/S0009443903000257
- Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101–110. <https://doi.org/10.1016/j.jbusres.2019.11.069>.
- Hair, J. F., Hult, G. T., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). An introduction to structural equation modeling. In: *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. Classroom Companion: Business*. Springer, Cham. https://doi.org/10.1007/978-3-030-80519-7_1
- Hair, J. F., Hult, G. T., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Evaluation of the structural model. In: *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. Classroom Companion: Business*. Springer, Cham. https://doi.org/10.1007/978-3-030-80519-7_6
- Hair, J., Black, W.C., Babin, B. J., & Anderson, R.E. (2010). *Multivariate Data Analysis (7th Edition)*. NJ: Prentice-Hall Publication.
- Hakim, C. (2003). A new approach to explaining fertility patterns: Preference Theory. *Population and Development Review*, 29(3), 349–374. <https://doi.org/10.1111/j.1728-4457.2003.00349.x>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2014). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hesketh, T., Lu, L., & Xing, Z. W. (2011c). The consequences of son preference and sex-selective abortion in China and other Asian countries. *Canadian Medical Association Journal*, 183(12), 1374–1377. <https://doi.org/10.1503/cmaj.101368>
- Impicciatore, R., & Tomatis, F. (2020). The nexus between education and fertility in six European countries. *Genus*, 76(1). <https://doi.org/10.1186/s41118-020-00104-4>
- Jacobs, J. A., & Gerson, K. (2004). Working Time from the Perspective of Families. In *The Time Divide: Work, Family, and Gender Inequality* (pp. 41–56). Harvard University Press. <https://doi.org/10.2307/j.ctv1q16rx7.6>
- Jing, W., Liu, J., Ma, Q., Zhang, S., Li, Y., & M, L. (2022). Fertility intentions to have a second or third child under China's three-child policy: a national cross-sectional study. *Human Reproduction*, 37(8), 1907–1918. <https://doi.org/10.1093/humrep/deac101>
- Jöreskog, K. G. (1971). Simultaneous factor analysis in several populations. *Psychometrika*, 36(4), 409–426. <https://doi.org/10.1007/bf02291366>

- Kaiser, H. F. (1970). A second generation little jiffy." *Psychometrika*, 35(4), 401–415. <https://doi.org/10.1007/bf02291817>
- Kaufman, G. (2000). Do gender role attitudes matter? *Journal of Family Issues*, 21(1), 128–144. <https://doi.org/10.1177/019251300021001006>
- Kock, N., & Hadaya, P. (2016). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal*, 28(1), 227–261. <https://doi.org/10.1111/isj.12131>
- La Barbera, F., & Ajzen, I. (2020). Control interactions in the theory of planned behavior: Rethinking the role of subjective norm. *Europe's Journal of Psychology*, 16(3), 401–417. <https://doi.org/10.5964/ejop.v16i3.2056>
- Lampic, C., Svanberg, A. S., Karlström, P., & Tydén, T. (2006). Fertility awareness, intentions concerning childbearing, and attitudes towards parenthood among female and male academics. *Human Reproduction*, 21(2), 558–564. <https://doi.org/10.1093/humrep/dei367>
- Langdridge, D., Sheeran, P., & Connolly, K. (2005). Understanding the reasons for parenthood. *Journal of Reproductive and Infant Psychology*, 23(2), 121–133. <https://doi.org/10.1080/02646830500129438>
- Lapinski, M. K. & Rimal, R. N. (2005). An explication of social norms. *Communication Theory*, 15(2), 127–147. <https://doi.org/10.1111/j.1468-2885.2005.tb00329.x>
- Le, H., Newman, A., Menzies, J., Zheng, C., & Fermelis, J. (2020). Work-life balance in Asia: A systematic review. *Human Resource Management Review*, 30(4), 1053–4822. <https://doi.org/10.1016/j.hrmr.2020.100766>.
- Ledesma, R. D., & Valero-Mora, P. M. (2007). Determining the Number of Factors to Retain in EFA: An easy-to-use computer program for carrying out Parallel Analysis. *Practical Assessment, Research & Evaluation* 12(1), 1–11. <https://doi.org/10.7275/wjnc-nm63>
- Liang, J. (2022). Interpretation on national population data released by the Chinese national bureau of statistics in 2021. Available at: <https://new.qq.com/omn/20220123/20220123A000PY00.html> (Accessed February 28, 2023).
- Liefbroer, A. C., Klobas, J., Philipov, D. (2015). Reproductive Decision-Making in a Macro-Micro Perspective: A Conceptual Framework. In *Springer eBooks*. <https://doi.org/10.1007/978-94-017-9401-5>
- Liu, S., & Hynes, K. (2012). Are difficulties balancing work and family associated with subsequent fertility? *Family Relations*, 61(1), 16–30. <https://doi.org/10.1111/j.1741-3729.2011.00677.x>
- Malthus, T. R. (1798). *An essay on the principle of population*. London: J. Johnson.
- McAllister, L., Pepper, G., Virgo, S., & Coall, D. A. (2016). The evolved psychological mechanisms of fertility motivation: hunting for causation in a sea of correlation. *Philosophical Transactions of the Royal Society B*, 371(1692), 20150151. <https://doi.org/10.1098/rstb.2015.0151>
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17(3), 437–455. <https://doi.org/10.1037/a0028085>
- Miller, W. B. (1994). Childbearing motivations, desires, and intentions: a theoretical framework. *PubMed*, 120(2), 223–258. <https://pubmed.ncbi.nlm.nih.gov/8045374>
- Miller, W. B. (2011a). Differences between fertility desires and intentions: implications for theory, research and policy. *Vienna Yearbook of Population Research*, 9, 75–98. <https://doi.org/10.1553/populationyearbook2011s75>

- Miller, W. B. (2011b). Comparing the TPB and the T-D-I-B framework. *Vienna Yearbook of Population Research*, 9, 19–29. <https://doi.org/10.1553/population-yearbook2011s19>
- Miller, W.B. (2003). The role of nurturant schemas in human reproduction. In *Springer eBooks* (pp. 43–55). https://doi.org/10.1007/978-1-4615-1137-3_3
- Mills, M., Rindfuss, R. R., McDonald, P., & te Velde, E. (2011). Why do people postpone parenthood? Reasons and social policy incentives. *Human Reproduction Update*, 17(6), 848–860. <https://doi.org/10.1093/humupd/dmr026>
- Netemeyer, R. G., Sharma, S., & Bearden, W. O. (2003). *Scaling Procedures: issues and applications*. London, Sage. <http://ci.nii.ac.jp/ncid/BA62836415>
- Ning, N., Tang, J., Huang, Y., Tan, X., Lin, Q., & Sun, M. (2022). Fertility Intention to Have a Third Child in China following the Three-Child Policy: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 19(22), 15412. <https://doi.org/10.3390/ijerph192215412>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Qian, Y., & Jin, Y. (2018). Women’s fertility autonomy in urban China: The role of couple dynamics under the universal two-child policy. *Chinese Sociological Review*, 50(3), 275–309. <https://doi.org/10.1080/21620555.2018.1428895>
- R Core Team. (2023). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>
- Rasinski, K. A., Willis, G., Baldwin, A. K., Yeh, W., & Lee, L. (1999). Methods of data collection, perceptions of risks and losses, and motivation to give truthful answers to sensitive survey questions. *Applied Cognitive Psychology*, 13(5), 465–484. [https://doi.org/10.1002/\(sici\)1099-0720\(199910\)13:5](https://doi.org/10.1002/(sici)1099-0720(199910)13:5)
- Ray, S., Danks, N. P., & Valdez, A. C. (2021). SEMinR: Building and estimating structural equation models. R package version 2.3.2. Retrieved from <https://cran.r-project.org/package=seminr>
- Rholes, W. S., Simpson, J. A., & Blakely, B. S. (1995). Adult attachment styles and mothers' relationships with their young children. *Personal Relationships*, 2(1), 35–54. <https://doi.org/10.1111/j.1475-6811.1995.tb00076.x>
- Rigdon, E. E. (2012). Rethinking partial least squares path modeling: in praise of simple methods. *Long Range Planning*, 45(5–6), 341–358. <https://doi.org/10.1016/j.lrp.2012.09.010>
- Rosenthal, R., & Rosnow, R. L. (2008). *Essentials of Behavioral Research: Methods and Data Analysis*. 3rd Edition. New York: McGraw-Hill.
- Rossi, P. H., & Anderson, A. B. (1982). The factorial survey approach: An introduction. In Rossi, P., & Nock, S. (Eds.), *Measuring social judgments: The factorial survey approach*. Beverly Hills: Sage Publications.
- Schlüter, E., & Schmidt, P. (2010). Special issue: Survey experiments. *Methodology European Journal of Research Methods for the Behavioral and Social Sciences*, 6(3), 93–95. <https://doi.org/10.1027/1614-2241/a000010>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasiexperimental designs for generalized causal inference*. Boston: Houghton Mifflin Company.
- Shreffler, K. M., & Johnson, D. R. (2013). Fertility intentions, career considerations and subsequent births: The moderating effects of women's work hours. *Journal of*

- Family and Economic Issues*, 34(3), 285–295. <https://doi.org/10.1007/s10834-012-9331-2>
- Sobotka, T., Skirbekk, V., & Philipov, D. (2011). Economic recession and fertility in the developed world. *Population and Development Review*, 37(2), 267–306. <https://doi.org/10.1111/j.1728-4457.2011.00411.x>
- Streukens, S. & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. *European Management Journal*, 34(6), 618–632. <https://doi.org/10.1016/j.emj.2016.06.003>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Upper Saddle River, NJ: Pearson Allyn & Bacon.
- The Economist. (2015, Sep. 3). We're busy. Get an abortion. *The Economist*. <https://www.economist.com/asia/2015/09/03/were-busy-get-an-abortion>
- Torr, B. M., & Short, S. E. (2004). Second Births and the Second Shift: A research note on gender equity and fertility. *Population and Development Review*, 30(1), 109–130. <https://doi.org/10.1111/j.1728-4457.2004.00005.x>
- Wang, F., Cai, Y., & Gu, B. (2016). China's fertility transition: A new policy perspective. *Population and Development Review*, 42(4), 675–690.
- Wang, Y. (2023). “Take maternity leave and you’ll be replaced.” In Human Rights Watch. <https://www.hrw.org/report/2021/06/01/take-maternity-leave-and-youll-be-replaced/chinas-two-child-policy-and-workplace>
- Weeden, K. A., Cha, Y., & Bucca, M. (2016). Long work hours, part-time work, and trends in the gender gap in pay, the motherhood wage penalty, and the fatherhood wage premium. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 2(4), 71–102. <https://doi.org/10.7758/rsf.2016.2.4.03>
- Weston, R., & Gore, P. A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34(5), 719–751. <https://doi.org/10.1177/0011000006-286345>
- Willis, R. J. (1973). A new approach to the economic theory of fertility behavior. *Journal of Political Economy*, 81(2, part 2), S14–S64. <https://doi.org/10.1086/260152>
- Work safety*. (2021, Sep. 12). China Labour Bulletin. <https://clb.org.hk/en/content/work-safety>
- Yan, A. (2022, Oct. 16). Chinese firm under fire for asking job applicants unreasonable questions. *South China Morning Post*. Retrieved on March 20th, 2023. <https://www.scmp.com/news/people-culture/trending-china/article/3195-762/overtime-free-late-paycheques-chinese-firm-under>
- Yeung, J., & Gan, N. (2021). Chinese women were already discriminated in the workplace. *CNN Business*. Retrieved on March 20th, 2023. <https://edition.cnn.com/2021/06/05/business/china-three-child-policy-discrimination-intl-hnk-dst/index.html>
- Yu, X., & Liang, J. N. (2022). Social norms and fertility intentions: Evidence from China. *Frontiers in Psychology*, 13. DOI=10.3389/fpsyg.2022.947134
- Zheng, S., Zhao, Z., Ren, Q., & Yan, M. (2022). Female Off-Farm employment and fertility timing in rural China. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.790436>
- Zhongwei Zhao, ANU and Guangyu Zhang, & UN. (2021). The reality of China’s fertility decline. *EastAsiaForum*.

Appendix A. Experimental Vignette Survey

Table A.1. Experimental vignette scenarios

Overtime status	Vignette scenarios (Chinese ver.)	Vignette scenarios (English ver.)
Toxic overtime regime	你刚刚新入职了一家公司，工作一个月后你发现：虽然没有明确规定，但几乎所有的员工都在按照“996”的标准工作，也就是每周大概 72 小时，迫于同辈压力以及新员工的身份，你也不得不按照同样的标准工作，有时即使完成了工作也继续加班到很晚。由于不是公司直接要求的，所以也没有额外的加班费，但公司提供了一些其他形式的补偿，比如提供免费健身房、加班时的免费晚餐，夜晚加班打车费等等。	You have recently joined a new company, and after one month of work, you realize that although there is no explicit policy, almost all employees are working according to the "996" standard, which means working approximately 72 hours per week. Due to peer pressure and being a new employee, you find yourself compelled to work according to the same standard, sometimes staying late even after completing your tasks. Since it is not a direct requirement from the company, there is no additional overtime pay, but the company offers some other forms of compensation, such as a free gym membership, free dinner during overtime, and reimbursement for late-night taxi fares.
Moderate overtime regime	你刚刚新入职了一家公司，工作一个月后你发现：该公司明确规定，不强迫员工加班，但如果员工觉得无法在每日 8 小时正常时间内完成某些较难任务，可以选择自愿加班，因此你和周围同事都只是偶尔加班。根据公司规定，每周加班不能超过 10 小时，也就是说每周总工作时间在 41-50 小时之间，超出 40 小时的加班时长会给予 1.5 倍时薪的加班费。	You have recently joined a new company, and after one month of work, you discover that the company has a clear policy of not forcing employees to work overtime. However, if employees find it difficult to complete certain challenging tasks within the regular 8-hour workday, they have the option to work extra hours voluntarily. Therefore, you and your colleagues only occasionally work overtime. According to company regulations, the maximum weekly overtime allowed is 10 hours, which means the total weekly working hours range between 41-50 hours. Overtime hours exceeding 40 hours per week are compensated at 1.5 times the regular hourly wage.
No-overtime regime	你刚刚新入职了一家公司，工作一个月后你发现：公司明确规定，不鼓励员工加班。为保证工作效率，员工每日最多工作 8 小时，每周工作时间在 40 小时或以下，因此你也遵循着这种上班制度。如果你无法完成某些较难任务，可以选择第二天继续或与团队讨论获取帮助，而不是延长当日工作时间。由于无加班要求，公司没有加班费。	You have recently joined a new company, and after one month of work, you discover that the company has a clear policy of not encouraging employees to work overtime. In order to ensure work efficiency, employees are limited to working a maximum of 8 hours per day and a total of 40 hours or less per week. Therefore, you also adhere to this work schedule. If you find it difficult to complete certain challenging tasks, you have the option to continue the next day or seek assistance through team discussions rather than extending the working hours for the day. Since there is no requirement for overtime, the company does not provide overtime pay.

Table A.2. Measures and descriptive statistics for all the variables

Construct	Indicator	Questions	Responses	N	Mean	Standard deviation	Skewness	Kurtosis
Fertility intentions	INT	While working at this company, do you intend to have a child within the next three years?	0 <i>certainly not</i> to 10 <i>certainly yes</i>	300	5.17	2.85	-0.27	-1.21
Attitudes (AT)	AT_item1	How would you describe your feelings about having a child within the next three years?	1 <i>unpleasant</i> to 5 <i>pleasant</i>	300	3.05	1.24	-0.19	-1.08
	AT_item2	How would you describe your feelings about having a child within the next three years?	1 <i>negative</i> to 5 <i>positive</i>	300	3.02	1.27	-0.02	-1.11
	AT_item3	How would you describe your feelings about having a child within the next three years?	1 <i>foolish</i> to 5 <i>wise</i>	300	3.12	1.25	-0.23	-1.03
	AT_item4	How would you describe your feelings about having a child within the next three years?	1 <i>dangerous</i> to 5 <i>safe</i>	300	3.27	1.29	-0.23	-1.17
	AT_item5	How would you describe your feelings about having a child within the next three years?	1 <i>worthless</i> to 5 <i>valuable</i>	300	3.47	1.28	-0.40	-0.95
Subjective norms (SN)	SN_item1	To what extent do you believe that people who are important to you would support your decision of having a child in the next three years?	1 <i>not at all</i> to 5 <i>very much</i>	300	3.43	1.16	-0.61	-0.72
	SN_item2	How much would your parents approve if you decide to have a child in the next three years?	1 <i>strongly disapprove</i> to 5 <i>strongly approve</i>	300	4.27	1.00	-1.28	0.64
	SN_item3	What about your friends?	1 <i>strongly disapprove</i> to 5 <i>strongly approve</i>	300	3.19	1.10	-0.28	-0.63
	SN_item4	What about your colleagues?	1 <i>strongly disapprove</i> to 5 <i>strongly approve</i>	300	2.99	1.08	-0.13	-0.70
	SN_item5	What about your relatives?	1 <i>strongly disapprove</i> to 5 <i>strongly approve</i>	300	3.96	0.95	-0.88	0.35
Perceived behavioral control (PBC)	PBC_item1	It would be easy for you to have a child in the next three years.	1 <i>completely disagree</i> to 5 <i>completely agree</i>	300	2.70	1.33	0.25	-1.23
	PBC_item2	It would be feasible for you to have a child in the next three years.	1 <i>completely disagree</i> to 5 <i>completely agree</i>	300	3.10	1.36	-0.12	-1.25
	PBC_item3	How sure are you that you could have full control over your reproductive choices.	1 <i>not sure at all</i> to 5 <i>very sure</i>	300	3.30	1.28	-0.35	-1.03
Overtime regime	OT_status		<i>toxic overtime regime</i> (99, 33.00%) <i>moderate overtime regime</i> (99, 33.00%) <i>no overtime regime</i> (102, 34.00%)	300				
Age	age		1 ≥ 20 age < 26 (92, 30.67%) 2 ≥ 26 age < 31 (106, 35.33%) 3 ≥ 31 age < 40 (102, 34.00%)	300				

Education	edu		1 <i>below tertiary</i> (46, 15.33%) 2 <i>tertiary education</i> (207, 69.00%) 3 <i>postgraduate</i> (47, 15.67%)	300				
Partnership status	part		0 <i>not living with partner</i> (125, 41.67%) 1 <i>living with partner</i> (175, 58.33%)	300				
Parental status	parity		0 <i>no kids</i> (179, 59.67%) 1 <i>have kids</i> (121, 40.33%)	300				
Income after tax	inc		0 ≤ 70000 ¥/year (91, 30.33%) 1 > 70000 ¥/year (209, 69.66%)	300				
Health condition	hlc		0 <i>not completely healthy</i> (184, 61.33%) 1 <i>very healthy</i> (116, 38.67%)	300				
Employment type	emp		0 <i>private company/freelance/temporary worker</i> (228, 76.00%) 1 <i>state-owned enterprise or civil servant</i> (72, 24.00%)	300				

Table A.3. Summary of descriptive statistics: Means (SD) for manipulating perceived overtime status.

Experimental condition	AT_item 1	AT_item 2	AT_item 3	AT_item 4	AT_item 5	SN_item 2	SN_item 3	SN_item 5	PBC_item 1	PBC_item 2	PBC_item 3	Fertility Intention	N
No overtime regime (control)	3.48 (1.14)	3.44 (1.17)	3.51 (1.25)	3.75 (1.18)	3.82 (1.21)	4.34 (0.90)	3.34 (1.03)	4.08 (0.81)	3.18 (1.24)	3.52 (1.33)	3.71 (1.09)	6.79 (2.24)	102
Toxic overtime regime	2.17 (1.00)	2.11 (0.98)	2.35 (1.05)	2.42 (1.14)	2.70 (1.22)	4.00 (1.10)	2.81 (1.18)	3.79 (1.10)	1.90 (0.97)	2.32 (1.08)	2.54 (1.33)	2.51 (2.12)	99
Moderate overtime regime	3.49 (1.08)	3.49 (1.15)	3.49 (1.09)	3.61 (1.13)	3.88 (1.04)	4.46 (0.94)	3.42 (0.99)	4.02 (0.92)	3.01 (1.37)	3.44 (1.33)	3.66 (1.07)	6.16 (2.07)	99

Appendix B. Additional Results for Data Analysis

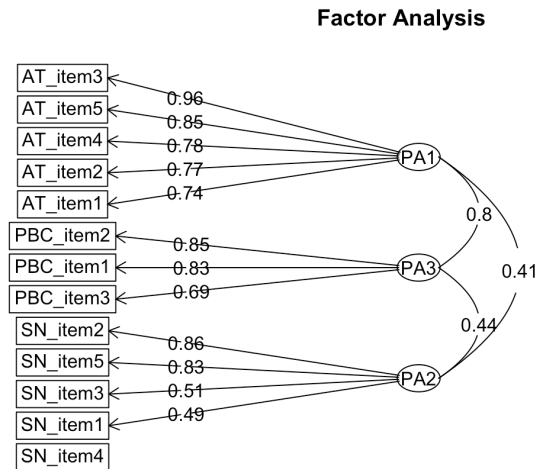


Figure B.1. Factor analysis diagram with loadings greater than the threshold (loading of SN_item4 does not qualify)

```

FI :
  AT      SN      PBC Tox_ot Mod_ot
  2.730  1.545  2.464  1.751  1.331

AT :
  Tox_ot Mod_ot
  1.32   1.32

SN :
  Tox_ot Mod_ot
  1.32   1.32

PBC :
  Tox_ot Mod_ot
  1.32   1.32
    
```

Figure B.2. VIF values for the structural model.

	FI	AT	SN	PBC
R ²	0.796	0.273	0.077	0.225
AdjR ²	0.793	0.268	0.071	0.220
AT	0.316	.	.	.
SN	0.083	.	.	.
PBC	0.378	.	.	.
Tox_ot	-0.335	-0.525	-0.248	-0.493
Mod_ot	-0.091	-0.005	0.053	-0.042

Figure B.3 Path coefficient estimates, R², and adjusted R² values.

	AT	SN	PBC	Tox_ot	Mod_ot	FI
AT	0.000	0.000	0.000	0.000	0.000	0.179
SN	0.000	0.000	0.000	0.000	0.000	0.022
PBC	0.000	0.000	0.000	0.000	0.000	0.285
Tox_ot	0.287	0.050	0.238	0.000	0.000	0.315
Mod_ot	0.000	0.002	0.002	0.000	0.000	0.031
FI	0.000	0.000	0.000	0.000	0.000	0.000

Figure B.4 Values of f² effect size.

Appendix C. Supplementary Data

Supplementary data to this thesis can be found online at:

<https://github.com/Dino-Lu/Data-and-R-Code-for-Exchanging-Life-For-Money->