REFORMS AND FEMALE FIRST MARRIAGE CONFIGURATION IN CONTEMPORARY CHINA

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CHAPTER ONE: INTRODUCTION

Motivation and Purpose

Since the late 1970s, China’s role in the global economy and its exposure to other cultures, ideologies via the media, education, business investments and technology has burgeoned at an amazing speed, especially in the urban cities. At the same time, the performance of the Chinese economy since 1978 has been unprecedented for such a vast country, growing at an annual rate of around 10% between 1980 and 1990.

Economic reform in China can be categorized under rural and urban reforms. In the rural areas, the abolition of communes and the introduction of the Household Responsibility System (HRS) were two of the major changes in the rural areas. Communes were important political and economic bodies that fulfilled most local government functions (such as police, justice, education, welfare and social services), and held a monopoly on economic functions (such as assignment of production plans, allocation of procurement quotas, and control over leadership of the teams). This meant that the commune determined how incomes were allocated, as well as restrictions on the size and use of private plots, and non-agricultural production. The abolition of the communes was intended to separate the communes’ governmental functions from their economic functions. This resulted in an increase in the control of the ordinary farm family over its affairs as to what and how much to produce. In particular, farmers had less restrictions on performing on non-agricultural activities.

Meanwhile, the HRS, which lowered the state quota, increased the state procurement price and allowed greater freedom and possibility for rural households to produce and sell beyond the state quota, was almost fully in place by 1984. The reported improvement in grain production with the introduction of the HRS was remarkable. In 1977, total grain production in the villages was 35,000 kilograms, but by 1986, it reached 265,000 kilograms.

3 See Johnson, 1990, p32.
In urban areas, the focus was on industrial production and the growth of the tertiary sector. Urban reform included relaxation of state controls in State-owned enterprises (SOEs), greater freedom for collective, joint and township-owned enterprises, and reform of the compensation systems. The Responsibility System implemented in 1980 allowed 6,600 or 45%^5 of state-owned industrial enterprises to make decisions based on local and market conditions. In addition, price reforms in 1985 allowed part of the enterprise output to be sold at state controlled prices and the surplus output to be sold at market prices.

Foreign-owned enterprises and foreign direct investment also became a key source of economic growth in China, especially in the designated Special Economic Zone (SEZs) of Shanghai, Xiamen, Shenzhen, Shantou and Zhuhai which provided tax and administrative privileges for foreign investors. Between 1979 and 1996, approved foreign direct investment in China grew at an astonishing pace from around US$6 billion to US$73 billion^6.

Together with the new economic environment in China, clear social transformations in values and perspectives have occurred. Examples of some more direct and major observations include a general sense of better economic well-being, increased willingness to consume, and a greater economic value placed on women.

This paper will focus on one specific area of social change that has occurred in China -- the development and changes in marriage trends in China. The choice to focus on female marriage decisions was due to the growing importance in dealing with female issues especially in a traditionally patriarchal country such as China. Marriage has always been seen as a natural stage of life for women in China, but this assumption is visibly shifting in China. In addition, the study of marriage trends of contemporary Chinese women gives an insight into the future of China in terms of its human resources. Hence, the complexities underlying female marriage decisions, stressing the institutional, economic and socio-cultural factors which impose constraints on and provide opportunities for women’s choices as a result of evolution in the Chinese economy, deserves to be looked into.

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^6 1999 China Statistical Yearbook.
Past literature on this subject have largely been from sociological and anthropological angles. While some studies have looked at marriage from an economic perspective, few have studied China’s female first marriage from a micro and macro combination of economic, sociological and anthropological standpoints. Although this paper only conducts a preliminary analysis, it is a starting point for which future research and surveys can continue.

Chapter Two begins this study from various angles by describing Becker’s Theory of Marriage, Ye’s sociological observations and key points from an interview with a 20 year-old female student from Qinghua University in Beijing.

Chapter Three takes a look at the macro level, and aims to analyze the effects of reform in China by focusing on three key indicators of female marriage decisions: age of first marriage, unmarried rate and the divorce rate. It is noticed that before 1990, the average first marriage age was actually falling, but since the 1990, the average age of first marriage has been gradually increasing. Also, the unmarried rate amongst females, while falling across the board, is rising significantly amongst females who are older than 30 year old. Lastly, the divorce rate in China has risen at a rapid rate of 170% between 1980 and 19977.

Later in Chapter Three, I identified some explanatory variables by studying the trends of each of these, which I classified under: individual characteristics, domestic policies, foreign influences and social phenomenon. In particular, under individual characteristics, I looked at educational opportunities, female economic value and economic participation. Under domestic policies, I focused on institutional factors such as China’s marriage laws, population control policies, ownership structures, urban economic development, housing provision, social security and healthcare system. China’s open door policy was looked at to account for foreign influences, and global social phenomena were also discussed.

Admittedly, many of the issues that this paper attempts to discuss fall out of the realms of statistical analysis. Consequently, this paper uses sociological arguments as well as data gathered from the various provincial statistical yearbooks and the China Statistical Yearbooks from 1993 to 1999, to provide both data analysis on the above

variables which I was able to quantify as well as provide clear arguments for variables that cannot be quantified. The data used were from sixteen provinces and one SEZ, from various parts of China so as to reflect a more accurate picture of the trends. Most of the yearly data I was able to obtain was also limited to post-1980 because of the lack of complete and common statistics of previous years. Specific data collected included: opportunity to secondary education, post-secondary education, percentage of the total workforce engaged in agricultural activities, percentage of the total workforce employed by SOEs, SOE industrial output, gross domestic income and total value of trade.

With these explanatory variables in mind, I hypothesized that higher secondary and post-secondary education will have a positive relationship with late marriage rate, the unmarried rate amongst females older than 30 years old, and the divorce rate. Also, I hypothesize that economic reform such as a decrease in focus on agricultural production, opportunities outside SOEs, the declining economic contribution of SOEs and the resultant GDP growth are all positively related to later marriages and higher incidences of divorces. Thirdly, that foreign influence measured by the total volume of foreign trade positively affects the marriage age, unmarried and divorce rate.

Some results of the regression analysis performed in Chapter Four fit my predictions. In particular, predictions on the education as a factor influencing marriage age and the divorce rate were correct. As for reforms, declining SOE output was related to the rise in the marriage age and divorce rate, and rising GDP significantly influenced female marriage age. Meanwhile, the total value of trade was related to the unmarried rate.

The nature of this paper extends over the areas of Economics, Population Studies, Sociology and Cultural Anthropology. As a result, while I could explain some of the variables with the support of figures, they are insufficient in providing a complete picture. To gain a broader perspective, I had to rely on the cultural understanding, and personal interactions that I experienced during my time in Beijing.

**Experience in Beijing**

I received funding from the Ford Foundation through the Duke University Economics and Political Science department, and from the Janet B. Chiang grant through
the Duke University’s Asian Pacific Studies Institute. The combined funding allowed me to make a four-week trip to Beijing China in the summer of 2000.

During the time in Beijing, I had the pleasure of meeting Professor Cai Wenmei and Professor Gu Jiantang from Beijing University’s Population Studies Institute, Professor Liu Shuang from Renmin University’s Population Institute, Mr. Yu Xuejun from the China Population Information and Research Center (CPIRC), and Professor Zhao Yaohui from the China Center for Economic Research.

The sessions with the various professors and researchers proved to be rewarding by allowing me to gain better insights into the marriage situation in China. Many of them had done significant research and data analysis on marriage decisions and trends in various provinces and on China as a whole. Speaking with these experts gave me a better understanding of the relevant institutional policies, reforms and social and anthropological developments from which I was able to form a basis to formulate a sensible analytical framework. This resultant framework enabled the collection and use of data in Chapter Four.

Initially, I had hoped to obtain more layman feedback by talking to people on the street. Unfortunately, as many of the issues that I wanted to research about seemed personal, many respondents were unwilling to share detailed information. I was able, however, to get some feedback from a 20 year old female student at Qinghua University from Shaanxi province. The next chapter will include parts of our conversation, which reflects her view on marriage in China. Partly due to a shortage of funding, and partly due to the time constraints[^8], I mainly relied on statistical figures to reflect the spread of views of the layman and of the professors in different parts of China.

My time in Beijing, although limited, was valuable in giving me a clearer understanding of the social expectations and values that people residing in Beijing held. By simply observing people in their daily lives provided one window into how values and perceptions on marriage are changing in China. It is through a social understanding of the mentality of the Chinese population that we can attempt to break down the motivations behind marriage.

[^8]: The Chinese tourist visa only lasts 30 days.
CHAPTER TWO: THE ECONOMICS OF MARRIAGE

Marriage is an issue that most humans have to consider at some point in their lives. Often studied from the sociological standpoint, marriage also entails strong economic considerations that are often underplayed. Perhaps this is due to the preconceived notion that marriage is something based primarily on the love and emotional attachment of two people. Although I do not discount the importance of love in the decision to marry, this romanticization of marriage fails to take into account the economics involved. Marriage is often motivated by economics, and marriage decisions in China are certainly no exceptions. As such there have been a number of papers written regarding the economics behind marriages.

Becker’s Theory of Marriage

In “A Theory of Marriage”, Becker points out that in the economic analysis of marriage under the following premises need to be understood. First, marriage is voluntary (either by the persons marrying or their parents). This assumption brings about the theory of preference and suggests that people get married due to the increased utility from singlehood to couplehood, and also that there will be competition in seeking partners in the marriage market. Secondly, like any economic model, this theory works under the assumption that marriage means sharing the same household, that both are made better off, and that the parties involved want to maximize all household produced commodities.

If one was to look at the household like one would look at a firm, the husband and wife are basically workers in the firm, each with their own unique traits and skills. Household produced commodities such as the quality of meals, quality and quantity of children, prestige, recreation, companionship, love and health status however are not marketable nor transferable between households. Consequently, specialization occurs such that if the wage of the husband is greater than the wife and the marginal product of time at home of the wife is greater or equal to the marginal product of time at home of the husband, when both the husband and wife have the same amount of time, then the husband should allocate more time in the market sector. This theory works by
considering the slope of the marginal product of time of the wife over that of the husband (if it is greater than 1, the wife remains at home and the husband works).

In a single’s household, the single person will allocate his/her time differently because the former does not have time or goods supplied by a mate. These differences depend partly on the elasticities of substitution among the budget constraints, and time inputs of the parties, and partly on the differences between the market wage rates of the parties. For example, if single females are more likely to “work” more than married females and single males less than married males, the greater the percentage excess of the male’s wage over the female’s.

Hence, the necessary condition to combine two single households into one is that the total output of a combined household is greater or equal to the sum of the output of the single male and the output of the single female. Becker notes that while economies of scale may be secured by joining households, two for more males or females could equally well take advantage of these economies and do so when they share an apartment and the household responsibilities, which is why this theory must go beyond economies of scale. To address this point, Becker introduces the idea of complementarity that occurs when two singles marry because the time input of the male and female are not perfect substitutes. Complementarity exists because the price a male would be willing to pay for the time-home input of a female would exceed the wage of the female (or vice versa), and the price a female would be willing to pay for the time-home input of a male would exceed the wage of the male (or vice versa). Both gain from marriage because the male in effect can “buy” an hour of the female’s time-home input at her wage rate, and the female can similarly “buy” an hour of the male’s time-home input at his wage rate, each at lower prices then they would be willing to pay.

Becker goes on to explain the prevalence of monogamous union, and attributes it to the fact that it is the most efficient choice considering the law of diminishing returns. Becker however, readily admits that polygamy is encouraged when the sex ratio is significantly far from 1 and when men or women differ greatly in wealth, ability or other attributes. In addition, he noted that polygyny of many women to one man is far more prevalent because of the ease in identifying the father and mother of children that result.
Becker also considered the costs of marriage such as legal fees, cost of searching for a mate, in order to determine if marriage is worthwhile. Subsequently, balancing the gains and costs of marriage will determine the net gains of marriage, and the larger this net gain is, the more likely that people will get married.

Becker identified the following determinants of the net gain of marriage. First, complementarity of the couple as explained above exists. Second, market opportunities, such as the value of the person’s time in marriage compared to the value of being single. This means that if a working married female is less productive than a single female, and a working married male is more productive than a single male, an increased wage of females relative to males decreases the incentive to marry. Therefore, the gain to a man and women from marrying compared to remaining single is shown to depend positively on their incomes, human capital, and relative difference in wage rates. Third, traits such as beauty, IQ, education affect the utility of marriage. As superficial as it seems, the stereotype that less intelligent and attractive people are less likely to marry might seem true. Men differing in physical capital, education or intelligence, height, race etc, will tend to marry women with like values of these financial and genetic traits. Meanwhile, the correlation between mates for wage rates or for traits of men and women that are close substitutes in household production will tend to be negative.

Moreover, one has to account for love and caring in a marriage. While these factors are not easily measurable, one can observe that the effects of emotional attachment can be reflected in the utility curves and functions in the sense that the male’s utility depends on the female’s utility and vice versa. Trust and mutual respect also decreases the possibility and hence cost of ‘policing’. Therefore it can be said that people who care for each other are more likely to have greater gains to marriage.

Lastly, life-cycle marital patterns will affect when a person enters the marriage market, and how rigorously and long they search for a partner. Logically, the age of entry would be earlier the larger the number of children desired, the higher the expected lifetime income, and the lower the level of education. Once in the marriage market, a person searches until the value to him/her of many expected improvements in the mate he/she could find is no greater than the cost of his time and other inputs into additional

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search. Therefore, the search would generally be longer in dynamic, mobile and diversified societies than in static, homogeneous ones, and also when divorce is more difficult. People may end their search early when they are lucky or when they become pessimistic about better prospects, so early marriage contain both lucky and pessimistic persons, while later marriages contain unlucky and optimistic ones.

**Marriage in China**

Generally, marriage in China has always been in large part an economic motivation. In the past, marriage mobilized the whole family or clan, and one would have to seek approval from both families. Often, families used marriage as a means of improving their social and economic standing and networks. The gains from marriage thus fell to the families, not necessarily the marrying couple. Before 1949, arranged marriages in China was widespread and a socially accepted (and expected) practice. Few couples had a say in determining whom they were to spend the rest of their lives with. Often, females were betrothed at a young age in exchange for a “bride price” paid by the groom’s family. In effect, the bride was sold to the groom’s family and was considered an “outsider” in her own biological family, and her primary economic value laid in her bride price.

However, with the Communist Party rise to power, the practice of arranged marriages that prevailed in China for over hundreds of year was deemed illegal. Nonetheless, while that was true in theory, many marriages still remained a strong economic motivation for families. Even as arrange marriages became less popular, family stature remained a factor in picking potential mates. This belief suffered a large defeat however, during the 1960s and 1970s when the Cultural Revolution and the attack against the bourgeois class meant that a family's wealth or position could no longer be used as a playing card (in fact it was more likely counter productive) during marriage decisions.

By the 1980s, the ideas of individuality and freedom of love became widespread, allowing marriage to become recognized as one’s own responsibility. Consequently, the benefits from marriage also moved from the family level to the individual's level. This shift led to a further decrease in percentage of arranged and forced marriage as individuals had more say as to who, when, and how to get married.
All of these meant that there is growing competition in the marriage market. Individuals are realizing the need to keep up with any change and remain dynamic, flexible and of 'high quality' in order to not lose 'edge' over others if people want to find marry-able and qualified spouses. Ye Wenzhen calls this change the “commercialization of marriage”, as people are 'displaying and selling themselves' on the marriage market, and seeking to cut out unnecessary effort and emotions. He sees this focus as a strong threat to the quality of marriage, as economic motivations are beginning to outweigh emotional motivation.

In his paper, Ye states that “In Beijing, 1/3 of the females interviewed wanted their male partners to have incomes greater than theirs, while only 1% of males were willing to have their female partner's income to be higher than their own”. In addition, “in the coastal urban cities, most females who marry foreigners do so mainly for economic motivations”. As such, we can see that the quest for material provisions is beginning to override the quality of marriage, especially in the urbanized areas of China. Ye also noted that with market openness and lower barriers, marriage has become a means by which individuals can migrate to a better place. On a more positive note, Ye also acknowledged that by increasing exposure and networks, one could formulate better ideas of their ideal partner and hence increase their quality of life.

In another paper, “Marriage in Contemporary China: An economic consideration” (Nov 1997), Ye observed the following trends. First, the age of first sexual activity is decreasing; second, extra-marital affairs are on the rise; third, marriage quality (based on happiness, satisfaction, dynamism, ability to resolve conflicts, cooperation, communication and sexual activity) is low; fourth, the divorce rate is increasing; and last, new marital situations such as singles, cohabitation, remarriage and homosexuality are beginning to emerge. Ye attributes the root cause of these trends to the evolving economic climate in China and the marketization of marriage.

While this paper looks at marriage from a similar perspective, it chooses to focus on different, but related trends that Ye observed. In particular, it will attempt to explain the trends behind the rising age of female first marriage, the unmarried rate, and the

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10 See Ye, May 1997.
rising divorce rate. In gathering information about such trends, I spoke to a female undergraduate student from Qinghua University in Beijing.

I asked Xia Hui how she saw the marriage market in China, and she expressed that while she has not paid much attention to it, giving consideration to marriage in two to three years would be necessary. She explained that as a university student, focusing on her studies was primary, and she wanted to continue in the academic track after graduating from Qinghua University. She feels that while there is certainly greater freedom of choice as to who to marry, there is still societal pressure on females as to when to marry. It is still commonly held that if a woman does not have someone in mind by the time she reaches 26 or 27 years old, family and friends will become extremely worried. By 30, if a woman is not married, she is basically “doomed to spinsterhood”. Xia Hui expressed her displeasure with such perceptions. She argued that increasingly, females are choosing to remain unmarried – whether because they are not able to find “eligible” partners and are unwilling to “make do”, or simply because they prefer to not be “tied-down” by marriage. Xia Hui found it unfair that society assumes that a female is less valuable just because she is unmarried, but also added that this perception is unlikely to change much within the next decade.

When I asked her about the divorce trends, Xia Hui felt that divorce was on the rise and saw this as both a positive and negative indicator of the Chinese society. She pointed out that rising divorce rates could mean that there is increasing ease (whether legally or socially) in and willingness to end relationships that are not worth continuing, while allows the parties to explore other options that may be more favorable. Nonetheless, she also recognized that a rising divorce rate also reflected rash decisions being made about marriage and the falling value being put on the sanctity of marriage. She noted that a couple with a child going through divorce not only affects their lives, but also that of the child.

While the information gained from this interview with Xia Hui was extremely insightful, it is important to note that Xia Hui is an educated, relatively independent female studying at one of the top universities in Beijing, and represents the views of only a section of the female population. Nevertheless, her input was important in getting a
sense of what some women in China felt about the issues that I will be discussing throughout this paper.

In addition, Xia Hui’s response reflects the fact that the issue of marriage is a global concern that involves population studies, sociology, psychology, biology and Economics. This is why, the discussions on the historical, cultural and political underpinnings of marriage in China is an important one. Before moving into further details on this aspect however, it is first essential to describe the trends noticed in the Chinese society in the last few decades.
CHAPTER THREE: TRENDS DESCRIBED AND EXPLAINED

SECTION A: Contemporary trends in China's female marriage configuration

Rising average age of female at first marriage

“Early”\textsuperscript{12} and “universal” are two prominent features of the traditional Chinese marriages. As Coale\textsuperscript{13} documented, the percentage of women ever married by 29 and 30 was more than 98\%, and over 99\% for all older ages. Regarding the same data as embodying the demographic history of China for the previous thirty years, he calculated the mean age at first marriage to be 18.68 in 1950. After two decades of continuous and gradual increase, the mean age had reached 20.19 by 1970.

One would expect that after 1978, female first marriage age should continue to increase, but 1990 study showed that first marriage age actually fell. In 1990, 4.63\% of China's female population between 15 - 19 years of age were married, 0.3\% points higher than in 1982. Although this is not a big figure, if the change in demographic structure is taken into account (there are less 15 - 19 year olds in 1990), percentage of early marriage has significantly increased. Both these increases have caused China's female first marriage age to move from 22.8 years in 1982 to 22.1 years in 1990\textsuperscript{14}.

However, China experienced a J-shape development of the average age of female first marriage figures, and the trend changed starting from 1990. China's female first marriage age rose from 22.12 years in 1990 to 22.73 years in 1994, an increase of 0.61 years in 4 years. Early marriage statistics continued to fall. In the 15 - 19 years age group, female early marriage stands at 2.4\%, of which only less than 10\% of that were from urban areas\textsuperscript{15}.

Another important statistic that reflects the falling female first marriage age in China is the late marriage rate. Since 1980, late marriage in China is defined as females marrying after 23 years old. This figure followed a similar J-shape development, and is

\textsuperscript{12} In the PRC context since 1980, female early marriage is defined as getting married before turning 19 years of age.
\textsuperscript{13} See Coale, 1984.
\textsuperscript{14} 1993 China Population Yearbook, p292
\textsuperscript{15} 1995 China Population Yearbook, p337
rising since 1990. In 1994, China’s aggregate late marriage rate stood at 58.5%; in 1998 the figure had risen to 60.12%\textsuperscript{16}.

Therefore, while the average age of female’s first marriage was falling between 1980 to 1990, there has been a reversal since then. Although the data provided can only show a short term development of the upward trend, it is an important progress that needs continued observation and study. Regrettably, this paper is only able to account for changes until 1998, a relative short period. Nonetheless, many studies and predictions have shown that the average age of females at first marriage will continue to rise.

**Unmarried females and age differentials**

Given the improvements of the female status and the mergence of opportunities globally, females in China have been able to enjoy similar improvements. In fact, Chinese women have been granted equality in theory since Mao’s era. Access to education, occupational opportunities and social expectations for women in China has been evolving since the 1950s. Although its effects can be strongly felt in the urban areas, less can be said about the position of women in the rural areas of China. Consequently, although there is a gradual incremental percentage of unmarried females, most of these are in the cities and the coastal areas. Most of the unmarried females are in the 30 - 44 age group, of which 67% of unmarried females reside in towns and cities (as opposed to most, 81.62% of unmarried males who are from the villages)\textsuperscript{17}.

A significant percentage of unmarried women are also well educated (High school education and above) and have white collar jobs (as opposed to most unmarried males who have less than middle school education and hold blue collar jobs)\textsuperscript{18}. Figures show that in 1997, 11.73% of the female unmarried population who are older than 30 years old held post-secondary education\textsuperscript{19}. Dixon\textsuperscript{20} explains that this is because “Women voluntarily chose non-marriage in preference to marrying down.” Furthermore, she explains that the discrepancy between the rural and urban areas by stating: “Where

\textsuperscript{16} taken from sfpc.gov.cn
\textsuperscript{17} 1998 China Population Yearbook, p453.
\textsuperscript{18} 1994 China Population Yearbook, p402.
\textsuperscript{19} 1998 China Population Yearbook, p454.
opportunities for employment in urban industries are expanding and the average agricultural holdings is very small, many single persons of both sexes move to the towns, causing a reduction in the proportions unmarried on the land and a rise in the cities.”

Furthermore, Chinese women are beginning to compare the cost and benefits of marriage as oppose to single-hood. The deterioration of marital life, of decreasing marginal utility of marriage and the relieving constraints of the cost of divorce has brought about a growing number of singles. However, that trend is visible primarily for educated, and/or women who are already in the 30s.

Across China in general, there has been a decreasing percentage of unmarried females. This is an interesting trend given the social and economic improvement of women. More women are actually getting married despite being better educated and having better job opportunities. Various explanations for the decreasing aggregate unmarried rate, but increasing unmarried rate amongst women above 30 years old will be explained later.

**Rising divorce rate**

Regardless of whatever culture, divorce is typically seen as an indicator of weak-spiritedness, family destruction and an unstable society. In the context of China, the divorce rate has been experiencing an upward trend since the 1970s. In 1978, China's divorce statistics stood at 2,850,000 couples, or 0.3% of the population then. This propensity for divorce in China increased 42% between 1982 and 1990, and by 1995, it was 10,550,000 couples or 0.88% of the total population – a growth of 2.9 fold in 18 years.\(^{21}\)

Other marital statistics show that there was an increasing growth in divorce rate from 5.9% in 1990 to 7.1% in 1994. Such rates are most significant in Beijing, Liaoning, Shanghai, Qinghai and Tibet, where divorce rates exceed 10%.\(^{22}\) While the divorce rates are rising, the divorce age is also falling visibly. Thus, when we take into account the previously noted later average age of marriage, it then appears that couples are increasingly less likely to tolerate poor or low quality marriages. Amongst those who get

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\(^{20}\) See Dixon 1978

\(^{21}\) 1997 China Population Yearbook,
divorced, figures show that the divorce rate is greater for middle-aged people, better educated people and are less frequent among senior citizens and those living in rural areas. Legislative changes, economic reforms and political unrest are identified as the major variables responsible for the waves of divorce that is sweeping the country and will be discussed in greater detail later in the paper.

**Are these trends unique?**

The age of female first marriage in Asia has always been lower compared to the earlier industrialized West. Due to the high value put on keeping the family or clan line and name, Asia’s agrarian history coupled with a relatively high infant mortality rate, having a lot of children was a high priority. Because the number of children a female could bear was directly related to when she got married, the female first marriage age in Asia has generally been low, and still remains relatively low. Compared to most Western countries, China’s average female first marriage age is still 1.2 to 2.1 years lower, and compared to countries such as Japan and Korea, China’s figures are 0.8 to 1.6 years lower\(^2\). While the average age of females’ marriage age worldwide is increasing, the Chinese situation is interesting because of the large female population that still reside in the rural areas where many of the factors that may determine marriage age has not made significant inroads in raising it. Taking this situation into account, one can postulate that the increase in marriage age is considerably higher for women in the more urbanized parts of China.

The division in the unmarried rate due to age is interesting in the Chinese case because of factors that are working in both directions. On one hand, factors such as education, job opportunities, the idea of independence and steady openness to the idea of remaining single are reducing the urge to get married. On the other hand, increased ease in divorce and lower costs involved in getting married and unmarried means that more people might be willing to do so since there’s a relatively easy way out if the marriage fails.

\(^2\) 1995 China Population Yearbook, p338
\(^3\) 1999 China Population Yearbook
The incidence of divorce in China is by far lower than nations such as Sweden and England, and negligible as against the United States. Moreover, married people in China appear to be less prone to cut nuptial ties than their counterparts in most other Asian countries, especially in comparison to Japan. Admittedly, the short-term trend reveals a somewhat threatening picture for China. During the 1979 – 1984 period, the divorce rate in China almost doubled, in relative terms an increased unmatched by Japan, Singapore, England, Sweden, USSR, Canada, Australia, Germany and the US (countries noted for their high rates)\(^\text{24}\). Despite this, China’s current divorce rate remains low by world standards, but remains an important indicator of social development in a populous country facing massive change.

Although the trends may not necessary be unique to China, the circumstances under which these patterns have developed are. Given the population size of China, one has to recognize the larger scale effects of these trends. Moreover, the rate at which China is urbanizing is increasing and the above trends may exacerbate. Therefore, it is essential to study and explain the factors that may have contributed to these marriage trends in China. These factors may range from changes in individual characteristics, to domestic and institutional policies, to the type of exposure to foreign ideas, to far larger scale global social phenomenon.

\(^{24}\) See Platte 1988
SECTION B: Possible Explanations for Trends

I. Individual Characteristics

Education Opportunities

As Becker noted in his study, education is one of the largest factors determining the decision of whether and when to marry because education affects the value of individuals as well as their life-cycle patterns. Therefore, observing developments in the educational opportunities for females in China is a good start in explaining the trends.

Along with Mao's ideals of equity between classes, the practice of giving men and women equal opportunities was also advocated. In such, the promotion of equal opportunity to education between men and women during Mao's era meant that China actually had a relatively educated female population. This situation was especially true in the urban areas where women held a considerable portion of positions in skilled occupations such as doctors, administrators, professors and technicians - positions usually heavily dominated by men even in the Western industrialized countries.

Nonetheless, there exists an educational pyramid, such that there are few top educated women compared to the general female population. The growth in the education attainment of females in urban China however, meant that they are more likely to marry later as they would wish to concentrate on their schooling or careers. Once they are able to attain a certain level of financial and economic stability, they are generally already in their early 30s, which by Asian standards is old for marriage.

Moreover, with increased educational levels, it is easier to achieve economic independence, and so women are less likely to feel the need to get married based on economic motivations. Although this scenario is true in the urban parts of China, rural China still experiences a significantly lower female average first marriage age and a lower unmarried rate. This could be because all other factors being held constant, the wider the gap between the sexes in occupational skills, wages and promotional opportunities, the more likely women will be discouraged from employment and seek marriage. In rural China, many females are still poorly educated and trained relative to

their male counterparts, and so remain reliant on marriage to support themselves. This factor might be a major reason as to why the non-marriage rate continues to remain low despite the growing unmarried rate amongst women older than 30.

In accounting for the effects of education in female marriage decisions, this paper focuses on secondary and post secondary education. Primary education typically has negligible effect on female economic value and hence their propensity for marriage. Therefore, although China boasts a generally high primary education level amongst its population and females compared to many other more developed countries, females in China tend to marry at younger ages. Secondary and post secondary education are better indicators because they directly reflect skill level and occupational opportunities.

The statistical data collected on education showed the percentage of females out of the total enrolled population in school at the secondary and post-secondary level for each province in each year. Admittedly, the data collected was not the best statistic to use because it does not account for the sex ratio at the age groups enrolled at these levels of education. In general, there are slightly more males to females at most age groups, therefore, a 45% to 48% of students being females probably reflects a rather equal proportion of females compared to males being educated. However, compiling data from various provinces which did not coincide on statistics recorded meant that that was the only education statistic that was consistently reported in all the provinces in the analysis.

**Female economic value and participation**

Together with rising educational opportunities and level for females in China, there has been a rise in the market value of female labor, which has directly affected their income and feeling of independence. While women traditionally have contributed to the economy, they have done so mainly in household production. Such unrecorded, unpaid economies have also add towards China's economic growth, but have never gained recognition because such chores were expected of women and are rather difficult to measure. Therefore, women’s true economic value has always been understated.

While Mao greatly advocated equality between the sexes and female involvement in the revolutions and industrial production between the 1950s and the 1970s, female participation in general still fell short in comparison to other developed countries. During
the 1970s, China's female participation rate stood at 34% while developed countries' average was around 41%\(^\text{27}\), but it has been growing consistently and now almost matches the developed countries’ figures.

With the onset of a gradually opening economy and a greater availability of goods and services for the Chinese population, business investments by local, governmental and foreign bodies have brought along a greater appreciation and demand for the economic contributions females can make to the market.

As a result, the female workforce has boomed significantly since the 1980s. In 1982, 46.63% of Chinese women worked, but by 1990, 53.06% of women in China were working – showing a 6.41% point increase in 8 years\(^\text{28}\). All these mean that increasingly, women’s contribution to China’s economic growth cannot be overlooked. In 1990 there were 291,100,000 women working (or 45% of the working population), a 27.8% increase compared to the 1982 figure of 227,800,000 working women\(^\text{29}\). The growth rate of female labor force was also 6.4% higher than that of the male labor force between 1982 and 1990\(^\text{30}\). In addition to the explosion in female participation, their GDP per capita has also seen significant improvements. Between 1979 and 1992, on average, Chinese female's GDP per capita rose by 7.5%\(^\text{31}\).

While there have been increases in female participation in all sectors of the economy, it has been most noticeable in naoli laodong (‘brain’ labor), such as professions such as professors, lawyers, accountants etc. Female labor in this sector rose by 12.1% points between 1982 and 1990\(^\text{32}\). In addition, between 1982 and 1990, the proportion if females in administrative work rose from 24.4% to 25.7%, in businesses that rose from 46.1% to 46.7%, and in services, it grew from 48% to 51.6%. Meanwhile, female participation in agriculture, forestry, nomadic, fishery, herding labor increased only 0.9% points, and factory and delivery work labor only increased by 0.3% points\(^\text{33}\).

\(^{27}\) Personal communication with Cai (Summer 2000). Also see Cai “Nuxing shenchan yu fazhan (Female Productivity and Development)”, 2000.

\(^{28}\) Personal communication with Cai Wenmei (Summer 2000). Also see Cai “Nuxing shenchan yu fazhan (Female Productivity and Development)”, 2000.

\(^{29}\) 1991 China Statistical Yearbook.

\(^{30}\) See Liu & Sun, 1995, p195

\(^{31}\) See Cai “Nuxing shenchan yu fazhan (Female Productivity and Development)”, 2000.

\(^{32}\) See Cai “Nuxing shenchan yu fazhan (Female Productivity and Development)”, 2000.

\(^{33}\) See Cai “Nuxing shenchan yu fazhan (Female Productivity and Development)”, 2000.
In particular, the boom in the service industry over the last few years has provided attractive and suitable job opportunities for many women. Some sectors of this tertiary industry are essentially social extensions of women’s role in the family\(^{34}\), such as sales positions in store, waitressing in restaurants, and receptionists or operators in hotels, all which require low professional skills, but pay reasonably well. While this holds more true for urban females, rural females who transfer to non-agricultural activities by either joining the township enterprises or become part of the ‘floating population’ in the cities are often limited to the low skilled, heavy labor and lower paying jobs that urban women are unwilling to do\(^{35}\). Therefore, while there has been visible growth in the female participation rate, there are some gaps between the type of occupation that the urban and rural women are able to engage in.

Within occupational units (meaning jobs assigned by the state), female workers stand at 36.8% (in cities it is around 40%). Other breakdowns show female employment in technical jobs at 33%, in educational services at 38%, in healthcare at 51% and at the supervisinal level at 11.6%\(^{36}\). Hence, female involvement in various areas of the economy is continues to grow.

Despite such improvements however, it is important to note that women’s employment status in China still lag significantly behind males for higher level occupations. For example, in organizational structures, of those in high level supervisinal positions, only 0.9% are women, and only 4% of party leaders are female\(^{37}\).

Another trend emerging in China is that of fewer and fewer people engaging in agriculture related work. With improvements in technology and cultivation know-how, there has been a decline in the need for human labor in the fields. In addition, many in the rural areas are being attracted by the prospects in the urbanizing areas and choose to leave the farms for the towns and cities. Given the prospects with non-State owned enterprises and the attraction to collectively owned, jointly owned, privately owned or foreign owned enterprises that tend to pay higher wages (despite less security) more people are choosing to leave their occupational units. As more and more women enter the

\(^{34}\) See Liu & Sun, 1995. p198  
\(^{35}\) See Liu & Sun, 1995. p198  
workforce, they are more inclined to search for jobs outside their occupational units given the expanding choices beyond jobs with State-Owned enterprises (SOEs) and government-links positions. Increasingly, women are becoming aware of the higher pay and future promotional opportunities offered by non-SOEs, and thus making conscious efforts to choose job vacancies that could advance their socio-economic status.

As mentioned in Chapter Two, as the market value of females increase, the opportunity cost of searching for a mate rises while the narrowing gap in income between males and females means that women will be less likely to remain in the house. This possibly has effects on all three trends noticed. First, as women become more focused on their careers and money-making opportunities, they will have less time and energy to spend on searching for a mate. Consequently, marriage age falls while unmarried rate increases. Second, because China is still a strongly patriarchal-dominated country, many still believe that the man should be the primary breadwinner while the woman’s primary focus should be on looking after the daily needs of the family in terms of cleaning, cooking etc. This has led to many women being unable to find partners who are willing to accept having to share household responsibilities. In addition, it has also led to deteriorating relationships between married couples over the division of labor in the household and in the market.

Nonetheless, it has been noticed as well, that the improving female economic standing has consequently brought about an improvement in female’s family status. Increasingly, wives are beginning to have a larger say in family decisions. In a study, it was found that in China, the incidence of a husband and wife discussing and deciding together family decisions stands at 58.1%, of which it was 68.2% in cities and 55.9% in villages. For course, such improvements are not just unique to China as this paper will discuss later, since women are beginning to achieve greater recognition globally. Nevertheless, rising economic value and participation by women in China have led to the patterns observed.

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38 See Beijing Sociology Committee, 1999.
II. Domestic policies

Marriage Laws

The major purpose of the new marriage law promulgated on 1 May 1950 was to dismantle the feudalistic marriage system left over from the pre-1949 China. One of the major statutes the 1950 PRC marriage law clearly stated was the abolishment of forced and arranged marriages. This law forbade marriage without the woman’s consent and gave women equal standing in law, if not in practice, in all matters relating to the marriage. At the same time, women were given land property rights and thereby, in theory, a measure of economic independence as well as greater social independence through the provisions of the marriage laws.

Not surprisingly, many unhappy women availed themselves of their newly granted rights. In fact, the marriage law became known as the “divorce law”, as divorce evolved as the most threatening and controversial aspect of the new legislation. Divorces constituted the overwhelming majority of civil cases. Statistics on court proceedings reflect a virtual explosion in the field of divorce.

Nonetheless, even after the mid-1950s, divorce tended to be an urban phenomenon, for a number of reasons. Rural society was much less susceptible to social change and rural marriages remained an affair between the families involved, even if young couples did have a greater say in matters. Platte (1988) explains that this was because the marriage law and the agrarian reform laws were not mutually reinforcing.

The former soon met with resistance in rural China where it became extremely unpopular, except with those who had managed or intended to separate under it. The fact that divorced women were now entitled to take their property with them proved to be disruptive to the village economy. Moreover in those places where marriage continued to involve a “bride price”, the husband and his family objected to losing their “investment”. Thus instead of improving women’s status within the family, which was meant to be the primary purpose of the marriage reform, divorce actually

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destroyed the family. The dissolution of marriage came to be viewed as a negative thing which prompted the leadership to introduce medication as a device to block divorce. In February 1953, a marriage reform campaign was launched as a last attempt to attack the resistance of cadres to implement the law. However, with the onset of the first 5-year plan (1953-1957) priorities shifted to economic construction and cooperativization in the countryside. The major policy became to bring women into the workforce\textsuperscript{41}.

During the ten-year Cultural Revolution, lower level courts did not even accept matrimonial suits and divorce was approved only to separate a persecuted person from his/her family. Therefore, it can be projected that China must have experienced a significant drop in divorce proceedings, but the lack of official statistics renders the analysis of the trend in this particular period impossible\textsuperscript{42}.

The aftermath of the Cultural Revolution set in motion trends which would be responsible for marital problems and a rise in divorces by the 1980s. This was primarily due to a pent up demand dating back to the Cultural Revolution years when marriages had come to be contracted on the basis of certain class criteria. During that period, there were more cross-strata marriages: for example, intellectuals married workers, and urban youths who had been sent down to the countryside married rural youth. In some of these alliances, the attitudes, outlooks, habits and cultural levels of the partners were so different that severe marital strains were inevitable. In addition, in spite of the egalitarian policies espoused during the Cultural Revolution, material considerations such as position, income and urban registration ironically assumed increasing importance in the choice of a marriage partner\textsuperscript{43}. There existed a prevalence of hasty marriages as some got married simply to achieve certain selfish aims, for example, to obtain an urban residence permit, to get a job or housing or for material gain\textsuperscript{44}.

\textsuperscript{41} See Platte 1988.
\textsuperscript{42} See Conroy 1987.
\textsuperscript{43} See Platte 1988.
\textsuperscript{44} See Conroy 1987.
The goals of the 1980 Marriage Law\textsuperscript{45} as espoused by the government was a step towards providing greater freedom for people who felt they were in unhappy marriage situations, but was primarily aimed at population control by reducing the birth rate via the promotion of later marriages. However, this policy ironically worked unfavorably given the state’s past policy in 1973. In 1973, as part of the “Later, Longer, Fewer” policy (which will be discussed below), the state raised the minimum marriage age to 23 years of age for rural women and 25 years of age for urban women. Consequently, the relaxation to the minimum age in the 1980 law to 20 years of age for rural women led to many couples marrying quickly for fear the late marriage policy of 1973 would be reapplied soon after the 1980 law was announced, as seen in the considerable increase in marriage registrations (over 10 million in 1981 compared with just over 7 million in 1980)\textsuperscript{46}.

While the number of registered marriages rose, so did the divorce rate. Three major reasons are given for the upward trend. Firstly, divorces were granted in cases that had been long overdue; secondly, verdicts included appeals that had been unsuccessful in the past; and thirdly, the new law was misunderstood and abused by some\textsuperscript{47}.

Platte argues that in theory the 1980 marriage law “made divorce easier in the cases where only one party seeks divorce. While the old law stipulated that it ‘may’ be granted if mediation fails, the new law states that in such a situation, it ‘should’ be granted. Divorce would indeed be easier to get were it not for the process of mediation.”.

Clearly the marriage laws of 1950 and 1980 had significant impacts on the circumstances under which marriage occurs. Before 1949, 95% of marriages were sold/bought. Now 74% of all marriages are determined by the individuals involved. 80% of marriages for couples below 40 years of age are self-determined\textsuperscript{48}. In addition, the 1950 marriage law placed the legal age for marriage of females at 18 years of age, while the 1980 PRC marriage law increased the legal marriage age of females to 20. This control over the legal female marriage age was especially effective in the urban areas.

\textsuperscript{45} Actually the new marriage law was promulgated on 1 Jan 1981, but most refer to it as the 1980 marriage law probably because discussions and resolutions on it were made in 1980.
\textsuperscript{46} See Conroy 1987.
\textsuperscript{47} See Platte 1988.
\textsuperscript{48} Based on my conversation with Cai Wenmei from the Population Studies Institute in Beijing University, Summer 2000.
since governmental control was much more direct. The 1980s also saw relative ease in marriage and divorce procedures compared to pre-1978 periods when couples needed letter of introduction from respective work units to get permission to marry, and had seek authorization by work units to divorce\(^{49}\). Also, the 1980 marriage law allowed break-up in relations as a lawful reason for divorce eased the possibility of divorce.

Thinking back at Becker’s theory\(^{50}\), since benefits will be greater the longer the expected duration of marriage, people will search more carefully and marry later when they expect to be married longer, for example when divorce is more difficult or adult deaths are lower. Consequently, when divorce becomes easier, the fraction of persons legally married may actually increase because of the effect on the age at marriage. Therefore, while the marriage laws eased divorce, and accounted partly to the rise in divorce rates, it also led to an increase in registered marriages and actually could have accounted for a decline in the female unmarried rate as well as in the marriage age.

**Population control policies**

Looking back at Becker’s theory, one can see how the search in the marriage market is affected by goals such as number of children desired. In the Chinese context, having numerous children has traditionally been favored especially in the rural areas where children were seen as an important source of labor and infant mortality rates were higher. This could have accounted for the relatively low age of marriage especially amongst the females. However, with population control policies that begin in the 1970s, child-bearing became less of a factor in determining age of marriage.

In 1973, the First National Family Planning Conference report advocated the slogan “Later, Longer, and Fewer” meaning later marriage, longer intervals between births and fewer children\(^{51}\). In the 1950 marriage law, the legal minimum age of marriage for rural women was put at 18 years of age and 20 years of age for urban women, but this minimum age was jacked up to 23 years for rural women and 25 for urban women. Together with the state controls over marriage registration as mentioned earlier, the


\(^{50}\) See Becker 1974.

government worked hard towards achieving its goal of controlling birth via the control of when females could legally get married.

China's one-child policy was introduced in September 1980. This policy was implemented most successfully in the urban parts of China due to the government's ability to better enforce the policy as compared to the rural areas. Moreover, as the standard and cost of living in urban China increased, the cost of bringing more and one child became considerably higher. The one-child policy however, could have possibly had an adverse affect on marriage. For married couples, with only one child, they are less tied down to the marriage because there is less responsibility (as compared to having more than one child). For singles, they tend to be in less of a hurry to get married if only plan to have one child.

Ownership structures

Deng's economic reforms beginning in 1978 saw the beginning of a decline in the number of state owned enterprises. Furthermore, the SOEs that continued to exist saw a dramatic change in their role from one as an institution to maintain social structure to one focus on economic profit.

While SOEs fell in numbers, private enterprises and joint enterprises sprouted, creating new and more job opportunities. While most of these new enterprises offered higher wages, benefits and career development opportunities than SOEs did, they not longer prescribed to the 'iron rice bowl' idea. The relative instability of having a job and income meant that people were more likely to focus on their work (possibly that the expense of their marriage or a development of one).

With increased diversity in the ownership structures, there is a higher probability that co-workers were also more diverse in backgrounds because they came from various parts of the province or even country. Hence, working Chinese women were given new means of which to meet men of different backgrounds. This provided the unmarried with a wider pool of potential partners, but also made the married more conscious of the relationships they might be in and the availability of ‘better’ mates.

52 “iron rice bowl” refers to the state guaranteeing jobs and provision of basic needs.
Therefore, it can be argued that lowering participation in SOEs could have led to females marrying later, or not marrying, and also break ups in marriages. Based on this argument, analysis will be done based on data about the percentage of the total working population in SOEs later in this paper.

**Urban economic development**

Perhaps one of the most noticeable economic reforms the Chinese Central government made was the development of Special Economic Zones (SEZs) with the specific strategic focus on the coastal cities. This in many senses appeared to oppose the socialist ideals of equality, and it promoted the idea that “to get rich is glorious”\(^5^3\). Deng had also in a speech in 1992 during a around the country trip expressed that some parts of the country would get rich before other parts would. Of course to those not in the cities selected for the massive urbanization and modernization strategy became keen to have a bite of the cake. In the past, there was already a significant amount of rural-urban migration, but with the specialized developmental plan, both rural-urban and urban-urban migration exploded.

In the major cities such as Beijing and Shanghai, the ‘floating population’ that has resulted because of such migration has grown beyond control and has become a foremost concern for the municipal governments. In the city of Beijing alone, it is estimated that the floating population stands at a minimum of 3 million\(^5^4\). Besides the immediate social effects of this migration, another important result is its effects on marriages. Couples and families become separated when one party leaves for the urban cities, which consequently heightened instability in family structures. In addition, increased opportunity to venture out of ones original place allows for greater interaction with other people, which may possibly deteriorate husband-wife relationships and hence lead to more divorces.

Moreover, the increase in demand for labor as a result of urbanization and industrialization means that opportunities for females to join the labor market have risen. Greater economic self-sufficiency on the women’s part has left them feeling more

\(^{53}\) Title of Orville Schell’s 1984 book on China in the 1980s.  
\(^{54}\) Personal communication with Yu Xuejun.
independent. They are now more actively pursuing equality of in the home as well as in the labor market as already mentioned earlier in the paper.

Social Provisions: Housing, Social Security and Healthcare

Getting married often involves having a home in which the new household will reside or an expansion of the current home in which one party resides. However, finding housing is often a challenge especially in the urban areas. In addition, the emerging trends of nuclear families, where newly married couples prefer to have homes of their own instead of living with the older generation compounds this difficulty. Given the growth in rural-urban and urban-urban migration, there is even greater pressure in the housing market as large numbers of migrants continue to flow into the cities.

This housing pressure has resulted in a proportion of legally married couples having to live apart (often with their respective families), while waiting for housing to be assigned to them or while searching for a home. While this remains a reality, it could also possibly tear some couples apart. Meanwhile, some couples may chose to wait a few years to find the necessary housing first before getting married, which would delay their marriage age.

China’s social security system admittedly faces the perpetual problem of funding. Despite the limited social services the government is able to provide, China as a whole given its population size and composition, has been able to at least sufficiently care for its old and sick in the urban areas. Better health care facilities and improvements in the medical field together with the retirement pension system, make urban people less dependable on others. This may means that the usual worry that one would have no one to look after them at old age is less of a concern. Perhaps this is one indirect reason why the urbanites are less hurried to get married and have children.

III. Foreign influences

Open door policy and economic effects

With Deng’s Open door policy since 1978, communist China, who had isolated itself from most of the world for the last 3 decades, officially resumed economic, social and political exchanges with the of the world. Certainly, many foreign corporations saw a
market as large as China’s as an exciting and potentially profitable one. Not surprisingly, foreign imports into the Chinese market burgeoned at a rapid rate. Meanwhile, China was able to provide the labor input required for production of labor-intensive manufactured goods such as shoes, toys and radios.

China currently experiences heavy exchange with the rest of Asia, particularly Taiwan, Korea, Japan, and also trades in large volume with the USA. This paper will look at the total value of foreign import and export as a measure of foreign economic exchanges and analyze how that relates to the first marriage and divorce statistics.

In addition to just trade figures, the inflow of foreign ideas, technology, investment and increased job opportunities as a result of trade and business relations with the rest of the world not only contributed to the general economic health of China, but also raised expectations, desires and goals of the Chinese population. Increasingly, people are placing priority on meeting their material wants over emotional wants. Therefore, while difficult to support empirically, it can be said that the economic wealth that the open door policy has created in China has made marriage less of a means of which to use to improve economic positions and in fact could even be a barrier towards working towards that goal.

Open door policy and social effects

Sociologists have discovered that many people blame western influences and values on marriage as the cause for the rise in divorce statistics, and even discuss how opening China up to westerners has caused social disruption and economic troubles. In particular, the finger has been pointed towards foreign movies, music, television programs and books as sources that have led to the increasingly lax attitude towards marriage, especially among the youths. It is a widespread belief that liberal ideas promoted by the western media have led to disregard for traditional values and the selfish focus on personal wants. While it is difficult to assess the accuracy of this claim, Western influences as an inevitable part of China’s economic reforms has been widely targeted at least by many Chinese to be responsible for many of its contemporary social ills.

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55 Personal communication with Cai Wenmei.
56 Personal communication with Xia Hui
Certainly, ideas such as greater independence of females and women movements have contributed to elevating the confidence of women\textsuperscript{57}. Furthermore, the exchange of ideas include new standards and stances on women's expectations of marriage, the family and their roles. By recognizing women's economic potential, females are increasing realizing the need for self improvement and are working hard towards learning new skills to make themselves even more marketable. Obviously, such goals may get in the way of marriage (or vice versa, depending on the relative value put on each). Therefore, the number of marriages by the better educated is falling while the age of marriage is increasing as more and more women are investing more time and effort developing themselves.

\textbf{IV. Social Phenomenon}

Most of this paper has been focused on the economic aspects of how reform in China has affected female marriage decisions. Yet, marriages are choices made by humans after all. Therefore, it is important to also consider the sociological impacts and influences that the Chinese may have experienced over the last few decades.

Cai believes that there have been significant changes in the social psyche of many Chinese. First, there has been a shift from the "marriage first, romance later" mentality to "romance first, marriage later", and second a move from the "marriage so as to propagate" mentality to one of which marriage is a means to learn and complete two individuals' needs emotionally, physically and economically. Moreover, there have been significant changes in relationships between father and son, husbands and wives as one of domination and submission into cooperation and equal responsibility and status\textsuperscript{58}.

This shift of focus to pursue of self-interest and individuality has allowed for greater freedom in alternative choices to marriage such as singlehood, divorce, and separation\textsuperscript{59}. Nonetheless, while there has been a general improvement in societal understanding and acceptance of such choices, constraints still exist against cohabitation, and females are still expected to continue with their role at home, even while they have new roles in the labor market. According to Platte, the primary cause of divorce given is

\textsuperscript{57} Personal communication with Liu Shuang.
family rows over the division of household duties, accounting for 28% of the total number of divorces in 1985. As Whyte and Parish\textsuperscript{60} confirm, the burdens of domestic chores are in most cases still borne by the women in addition to their work obligations.

Surely the improvements of female status at work and in the home has meant that there is pressure to moving towards equal economic, social and personal standing between partners. According to a study done by the Beijing Sociology Committee\textsuperscript{61}, between the late 1980s and mid 1990s, the incidence of a husband & wife discussing and deciding together family decisions stands at 58.1% -- 68.2% in cities and 55.9% in villages. In daily economic decisions, there has been an increase in 10.4% in the cities, but a fall of 18.4% in villages in terms of whether both sides make the decision together. Moreover, there has been greater distribution of estates and inheritances, and increasingly, both can freely use family funds.

Another trend noted by Cai was the increased value of sexual activity and the concept of love in marriage as determinants on the quality of marriage. This is one reason why Cai believes that in the 1990s, despite the relatively stable marriage statistics, marriages were low in quality. It is estimated that 60% of marriages in China were "fake", and the relationship between the couple was poor. This could be an explanation for why extramarital relationships constitute a major cause of divorce in China, reaching 20% in a Beijing study\textsuperscript{62}.

V. Summary

Therefore, by considering the unique historical and political situation China was in prior and after 1980, we can identify certain socio-economic policies and historical events that have or will work towards the upward trends. At the same time, there are also certain policies that may have been working counter to that. In general however, it appears that the factors bringing about rising female average age of first marriage, divorce rate and unmarried middle aged females will dominate over the factors that do the opposite as trends show.

\textsuperscript{59} According to “Zhongguo Shehui Funu Diwei Diaocha” in Fan & Hu.
\textsuperscript{62} See Platte 1987.
The following section will provide the empirical analysis to explain some more measurable factors that may have contributed to the observed trends. Before conducting the regression analysis however, it might be helpful to outline certain hypotheses based on the discussion above. They are as follows: Firstly, that higher secondary and post-secondary education will have a positive relationship with late marriage rate, the unmarried rate amongst females older than 30 years old, and the divorce rate. Secondly, that economic reform such as a decrease in focus on agricultural production, opportunities outside SOEs, the declining economic contribution of SOEs and the resultant GDP growth are all positively related to later marriages and higher incidences of divorces. Thirdly, that foreign influence measured by the total volume of foreign trade positively affects the marriage age, unmarried and divorce rate. In addition, one can expect regional and time differences, and that by taking those differences in account, the contribution of the explanatory variables should be greater than if such differences are not account for.

Data analysis will be useful in showing if the several explanatory variables taken are significant in determining the observed trends, and if so which ones, and how important each are.
CHAPTER FOUR: DATA ANALYSIS

SECTION A: Methodology

The causes of trends noticed in female first marriage decisions in China will be evaluated empirically with various population and economic statistics. Linear multi-variable regressions, which includes proxies of educational level, economic reform, and foreign trade as explanatory variables are specified.

The linear multi-variable form was chosen partly due to its computational ease and after taking the fairly large number of explanatory variables in consideration. So as to duly account for the significance of the various sorts of explanatory variables, a series of regression were preformed for each dependant variable. In addition, differences in time and location were accounted for as much as possible by using dummy variables for years and regions. Therefore, in explaining the late marriage rate for example, eleven regressions were done as follows:

\[
L_1 = \alpha_0 + \alpha_1 E_1 + \varepsilon_1 \\
L_2 = \beta_0 + \beta_1 E_2 + \varepsilon_2 \\
L_3 = \chi_0 + \chi_1 E_1 + \chi_2 E_2 + \varepsilon_3 \\
L_4 = \delta_0 + \delta_1 A + \varepsilon_4 \\
L_5 = \phi_0 + \phi_1 S + \varepsilon_5 \\
L_6 = \gamma_0 + \gamma_1 P + \varepsilon_6 \\
L_7 = \eta_0 + \eta_1 G + \varepsilon_7 \\
L_8 = \iota_0 + \iota_1 A + \iota_2 S + \iota_3 P + \iota_4 G + \varepsilon_8 \\
L_9 = \varphi_0 + \varphi_1 T + \varepsilon_9 \\
L_{10} = \kappa_0 + \kappa_1 E_1 + \kappa_2 E_2 + \kappa_3 A + \kappa_4 S + \kappa_5 P + \kappa_6 G + \kappa_7 T + \varepsilon_{10} \\
L_{11} = \lambda_0 + \lambda_1 E_1 + \lambda_2 E_2 + \lambda_3 A + \lambda_4 S + \lambda_5 P + \lambda_6 G + \lambda_7 T + \lambda_8 y_1 + \lambda_9 y_2 \\
+ \lambda_{10} y_3 + \lambda_{11} r_1 + \lambda_{12} r_2 + \lambda_{13} r_3 + \lambda_{14} r_4 + \lambda_{15} r_5 + \lambda_{16} r_6 + \varepsilon_{11}
\]

Where

\[ L = \text{percentage of females who were 23 years of age and older at marriage} \]

\[^{63}\text{In accordance with the 1980 marriage law, if a female is 23 years of age and older at marriage, it is considered a late marriage, while if she is 19 years old or younger is considered an early marriage.}\]
E1 = percentage of students in regular secondary schools who are female
E2 = percentage of students receiving post-secondary education who are female
A = percentage of total working population engaging in agricultural activities
S = percentage of total working population employed in State-Owned Enterprises
P = percentage of total industrial output produced by SOEs
G = gross domestic product
T = total value of exports and imports
y1 = 1 if data is from 1984 and before
y2 = 1 if data from 1985 to 1991
y3 = 1 if data from 1992 and after
r1 = 1 if province is in northern region
r2 = 1 if province is in northeaster region
r3 = 1 if province is in eastern region
r4 = 1 if province is in central-southern region
r5 = 1 if province is in southwestern region
r6 = 1 if province is in northwestern region

I grouped the years used into periods due to limitations in the Excel program, which did not allow me to regress with more than 16 variables. Thus, I broke the years into 3 periods: Prior to 1985 (when urban reforms began on a massive scale); 1985 – 1991; and after 1992 (when the designation of Special Economic Zones and urban development were pushed by Deng). In addition, I grouped the provinces into regions geographically due to limitations explained above. r1 represents the North, with data from Shanxi, Hebei and Tianjin; r2 represents the Northeast with data from Jilin and Heilongjiang; r3 represents the East with data from Anhui, Jiangsu, Shandong, Zhejiang and Jiangxi; r4 represents the Central-South with data from Henan, Hunan, Guangdong and Guangxi; r5 represents the Southwest with data from Sichuan; and r6 represents the Northwest with data from Gansu and Shaanxi.
Identical regressions were done for the dependent variables of the unmarried rate and the divorce rate, where U represents the percentage of females 15 years and older who have never been married; and D represents the percentage of divorces/marriages. (1), (2), (4), (5), (6), (7) and (9) each are single linear regressions of the explanatory variable on the dependent variable. These were done in order to provide a source of comparison in determining the importance and reliability of each variable in affecting the dependent variable. (3) combines the two education variables and performs a multi-variable regression which shows the collective effect of secondary and higher education. (8) combines variables of employment in agricultural, employment in SOEs and SOE output so as to measure the significance of domestic reforms in affecting the late marriage, unmarried and divorce rates. (10) combines all the above variants to determine their collective importance, and (11) in addition to (10) takes into consideration differences in regions and time by including dummy variables for those factors.

**Section B: Parameter Estimates**

In looking at the various explanatory variables used, certain hypotheses on the direction and magnitude of the coefficients can be made. It is expected that both secondary and post-secondary education will have positive coefficients for equations (1), (2) and (3) for all 3 dependent variables. The magnitude of the coefficient for post secondary education is predicted to be smaller than that of secondary education because a lesser change in post secondary education should be necessary in leading to increases in L, U and D.

For labor activity, one can expect negative relationships between the percentage of the working population in agriculture (4), and in SOEs (5) against the 3 dependant variables. The size of the negative coefficients will probably be significant and close for these two variables because the move away from agriculture and SOE employment reflects a movement away from more patriarchal systems and hence greater freedom of choice with regards to marriage.

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64 For these figures I conducted personal calculations by dividing each year’s absolute number of divorces over the absolute number of marriages for each province.
Meanwhile, SOE industrial output as a percentage of total industrial output and gross domestic product should be expected to have negative and positive effects on each of the three key independent variables respectively. As SOE employment falls, SOE industrial output should be expected to fall as well, so there is a collinear relationship between these two explanatory variables, which need to be accounted for when performing equation (8). Nonetheless, it can be predicted that the coefficient for (6) should be rather close to that of (5), while that of (7) would be significantly smaller for all three independent variables since a small change in GDP would affect the motivations and ease behind marriage. The same can be said about the total value of trade in equation (9), since trade as a indicator of foreign influence could affect these three independent variables regarding marriage decisions.

For the multi-variable regression done in (8), (10) and (11), prediction would be more difficult due to the effects of multicollinearity, which is extremely difficult to avoid. Since some of the explanatory variables used are correlated with each other, the signs and coefficient values may not be as previously predicted. Nonetheless, since multicollinearity only affects the precision of estimation of the contribution of each explanatory variable, the reported adjusted R-square can tell us how all those variables combined affect the independent variables. For (8), it can be predicted that the adjusted R-square is higher than individual variables were regressed against L, U or D. Similarly, for (10), one can expect the R-square to be a little higher than (8) since it accounts for education and trade. Lastly, for (11), by accounting for regional and time differences in the dummy variables, a high adjusted R-square value can be anticipated when multi-variable regressions are performed against L, U and D.

**Section C: Data Description**

The data used were collected from various official PRC statistical reports, such as each province’s statistical yearbooks, the China Population Yearbooks, and the China Statistical Yearbooks. Since each province reported statistics based on their own calculations and criteria, I used data from provinces that shared common methods and variables of calculating and reporting their data. For example, Xinjiang province’s
yearbooks tend to focus on minority issues, and therefore they categorize most of their findings according to ethnicity rather than gender. Also, while provinces such as Henan report detailed divorce statistics, others like Qinghai do not even include them. Moreover, further difficulties in data entry arose due to time constraints and availability of statistical sources I had access to. I was only able to gain access to official PRC statistical yearbook ranging after 1992. While some of the figures in the yearbooks for variables I was interested in were pre-1980, not all variables or provinces had them. In general pre-1980 data is difficult to attain because such figures were not allowed to be published during Mao’s era.

Based on these limitations, sixteen provinces and one SEZ were selected based on the availability of data as well as their locale within China in order to provide a fair representation of China as a whole. In addition, data used were also limited primarily to the years of 1980 to 1998.

Summary statistics on marriage decisions, education, employment, ownership structures, economic output and trade are reported in Table 1 (on p. 49). As Table 1 shows, the average age of females’ first marriage is gradually rising. As this figure approaches 23 years, we can also see that the late marriage rate is growing. By 1998, 60.12% of females who got married were 23 years of age or older. The divorce rate across China has been also rising at a steady rate.
TABLE 1: Summary of Variables Across China (1980 – 1998)

<table>
<thead>
<tr>
<th>Year</th>
<th>D</th>
<th>U</th>
<th>L</th>
<th>E1</th>
<th>E2</th>
<th>A</th>
<th>S</th>
<th>P</th>
<th>Y</th>
<th>100m USD</th>
</tr>
</thead>
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<tr>
<td>1980</td>
<td>4.74</td>
<td>39.6</td>
<td>23.4</td>
<td>68.7</td>
<td>76.19</td>
<td>75.98</td>
<td>7517.8</td>
<td>381.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4862.4</td>
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<td>1982</td>
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<td>5294.7</td>
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<td>1983</td>
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<td>1984</td>
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<td></td>
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<td></td>
<td></td>
<td>7171</td>
</tr>
<tr>
<td>1985</td>
<td>5.51</td>
<td>40.2</td>
<td>30</td>
<td>62.4</td>
<td>70.19</td>
<td>64.86</td>
<td>8964.4</td>
<td>696</td>
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</tr>
<tr>
<td>1986</td>
<td>5.72</td>
<td>60.9</td>
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<td>10202.2</td>
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<td>1987</td>
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<td>60</td>
<td>70.04</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>11962.5</td>
</tr>
<tr>
<td>1988</td>
<td>7.32</td>
<td>59.4</td>
<td>69.98</td>
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<td>14928.3</td>
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<td>1989</td>
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<td>60</td>
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<td></td>
<td></td>
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<td>16909.2</td>
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<tr>
<td>1990</td>
<td>8.41</td>
<td>21.06</td>
<td>41.9</td>
<td>33.7</td>
<td>60.1</td>
<td>62.27</td>
<td>18547.9</td>
<td>1154.4</td>
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<td></td>
</tr>
<tr>
<td>1991</td>
<td>8.72</td>
<td>42.7</td>
<td>33.4</td>
<td>59.7</td>
<td>62.81</td>
<td>56.17</td>
<td>21617.8</td>
<td>1356.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>8.9</td>
<td>21.1</td>
<td>43.1</td>
<td>33.7</td>
<td>58.5</td>
<td>63.16</td>
<td>26638.1</td>
<td>1655.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>9.97</td>
<td>18.84</td>
<td>43.7</td>
<td>33.6</td>
<td>56.4</td>
<td>62.08</td>
<td>34634.4</td>
<td>1957</td>
<td></td>
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<tr>
<td>1994</td>
<td>10.56</td>
<td>18.1858.5</td>
<td>44.3</td>
<td>34.5</td>
<td>54.3</td>
<td>60.9</td>
<td>46759.4</td>
<td>2366.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>11.35</td>
<td>16.35</td>
<td>58.85</td>
<td>44.8</td>
<td>35.4</td>
<td>52.2</td>
<td>58478.1</td>
<td>2808.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>12.12</td>
<td>15.94</td>
<td>59.36</td>
<td>45.3</td>
<td>36.4</td>
<td>50.5</td>
<td>67884.6</td>
<td>2898.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>13.18</td>
<td>15.95</td>
<td>59.31</td>
<td>45.5</td>
<td>37.3</td>
<td>49.9</td>
<td>74772.4</td>
<td>3250.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>13.4</td>
<td>16.01</td>
<td>60.12</td>
<td>45.6</td>
<td>37.8</td>
<td>48.5</td>
<td>81239.2</td>
<td>3541.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


For the explanatory variables, improvements in the opportunities women have been receiving can be seen in the percentage of females that make up secondary school going students and the total number of post-secondary students. Between 1980 and 1998, both these figures have grown, but there still appears to be a higher percentage of males receiving these levels of education.

Domestic economic reforms in China have led to the decline in the percentage of the working population engaged in agricultural activities, and the proportion of labor employed by SOEs. This means that increasingly people are focusing on the secondary and tertiary industries which are mostly located in the urbanized or urbanizing areas, and that people are looking beyond state jobs and are willing to venture into collectively, jointly or privately owned companies for employment. Meanwhile, total industrial output made up of SOE industrial output has fallen over the years as less people are engaged in
SOE production, and there have been tremendous growth in production in industries of other ownership types. Together with these, China’s GDP exploded and grew more than 16.6 times between 1980 and 1997.

Chinese exposure and exchange with foreign goods and ideas can be measured by considering the level of foreign trade China experiences. Certainly, the opening up the Chinese market to overseas businesses and companies as well as the importing of Chinese made goods abroad has seen significant growth in economic value by almost 10 fold between 1980 and 1997.

**Section D: Estimation Results**

I. Late marriage rate

Table 2 (on p. 52) shows the OLS estimates of late marriage as a result of various variants. Column (1) of table 2 shows that the opportunity to secondary education is significantly related to the rise in female late marriage rate, which fits with the context of the theory. Similarly, the result in for equation (2) for opportunity to post-secondary education is also statistically significant. However, it is interesting to note that in column (3), while the same can be said about the effects of secondary education, the effects of post-secondary education does not appear to be positive nor significant. This discrepancy may be attributed to the multicollinearity between the two explanatory variables since opportunity to secondary education is likely correlated to the opportunity to post-secondary education. However, because the effect of multicollinearity only affects the precision of estimation of the contribution of each explanatory variable, and the F value is sufficiently high, it can be said that opportunity to education as a whole is significant in affecting the late marriage rate. Moreover, the adjusted R-square value rose in (3) compared to both (1) and (2), showing that both factors contributed to the late marriage statistics.

Besides looking at the significance of the results, it is also interesting to note that the magnitude of the coefficient for opportunity to secondary education is greater than that of post-secondary education, as expected in initial predictions. A 78% increase in the percentage of total students that are female in secondary schools is necessary to cause a
## TABLE 2: OLS ESTIMATES FOR LATE MARRIAGE

Dependent Variable: Late Marriage Rate (L)

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>21.9*</td>
<td>43.19**</td>
<td>16.297</td>
<td>68.9**</td>
<td>59.5**</td>
<td>74.5**</td>
<td>50.45**</td>
<td>72.04**</td>
<td>54.98**</td>
<td>48.1**</td>
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</tr>
<tr>
<td></td>
<td>(9.31)</td>
<td>(5.706)</td>
<td>(10.17)</td>
<td>(3.752)</td>
<td>(2.314)</td>
<td>(2.485)</td>
<td>(1.308)</td>
<td>(11.79)</td>
<td>(1.042)</td>
<td>(16.51)</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>0.78**</td>
<td>1.22**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>1.08**</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.385)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>(0.385)</td>
<td>(0.2795)</td>
</tr>
<tr>
<td>E2</td>
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<td>-0.78**</td>
<td>-0.199</td>
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<td>(0.284)</td>
<td>(0.2441)</td>
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<tr>
<td>A</td>
<td></td>
<td></td>
<td>-0.23**</td>
<td></td>
<td></td>
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<td>0.515**</td>
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<td></td>
<td>(0.181)</td>
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<td>(0.18)</td>
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<td>(0.131)</td>
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<td>S</td>
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<td>-0.1544</td>
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<td>0.0181</td>
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<td>(0.102)</td>
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<td></td>
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<td>(0.295)</td>
<td></td>
<td>(0.226)</td>
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</tr>
<tr>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td>-0.37**</td>
<td></td>
<td>-0.301*</td>
<td></td>
<td>-0.289*</td>
<td></td>
<td>-0.143</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td>(0.047)</td>
<td></td>
<td>(0.118)</td>
<td></td>
<td>(0.122)</td>
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<td>(0.092)</td>
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<td>Y</td>
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<td></td>
<td></td>
<td></td>
<td>0.004**</td>
<td>0.0011</td>
<td></td>
<td>0.0011</td>
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<td>0.004**</td>
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<td></td>
<td></td>
<td>(0.0006)</td>
<td>(0.0008)</td>
<td></td>
<td>(0.001)</td>
<td></td>
<td>(0.0008)</td>
<td></td>
</tr>
<tr>
<td>T</td>
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<td></td>
<td></td>
<td></td>
<td>0.024**</td>
<td>0.0031</td>
<td>0.0059</td>
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<td></td>
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<td>(0.006)</td>
<td>(0.007)</td>
<td>(0.0049)</td>
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</tr>
</tbody>
</table>

Adj. $R^2$: 0.0539 0.0195 0.0574 0.047 0.0057 0.2135 0.1526 0.2201 0.0631 0.24 0.6842

ESS: 3074.9 1261.1 3483.5 2715 537.43 11494 8280.79 12392.8 3559.5 13958 37422.1
RSS: 49886 51700 49477 50246 52423 41467 44679.9 40567.9 49401 39003 15538.6

The figures in parentheses are the standard errors of estimated coefficients.
* denotes statistical significance at 5% level.
** denotes statistical significance at 1% level.
1% point increase in the female late marriage rate, but only a 40.3% increase in the percentage of total students that are female in post-secondary institutes is needed.

Also in table 2, columns (4) and (6) show that agricultural labor and SOE industrial output respectively are both negatively related to the female late marriage rate as predicted. Their F-values are high, with t-statistics and p-values showing significance. The magnitude of the coefficient for SOE output is greater than that of agricultural labor which may mean that the influence of the industrial sector is more important than the agricultural sector. The results show that a fall in 23% of total labor in agriculture, or a fall in 37% of SOE industrial output as part of total output lead to a 1% point increase of the late marriage rate.

Column (7) shows the anticipated positive relationship between GDP and late marriage rate, with a high F-value of 41.5 and adjusted R-square of 0.153, suggesting that domestic economic improvement accounts for about 15.3% of the changes in the female late marriage age. Moreover, it suggests that all else held constant, a 0.4% increase in the GDP brings about a 1% point increase in the female late marriage rate. This figure stays the same when a multi variable regression in equation (11) is done.

Equation (5) however, does not provide a sufficiently significant result in looking at the t-statistic, P, F and adjust R-square values, so it cannot be said that there is a linear relationship between SOE employment and the female late marriage rate. Column (8) presents the results when all domestic reform related variants are regressed against the female late marriage rate. SOE industrial output appears to be the only variant that is significant. Of all the variants, all the coefficients have anticipated signs (negative for Agricultural labor and SOE industrial output, and positive for GDP), except for SOE employment. This was earlier reflected when regressing each individual variant with the dependent variable as well. Given the high F-value and consistency between the separated and grouped regressions, the ‘insignificance’ of many of the figures may be a result of multicollinearity between the variants. For example, a fall in the proportion of labor engaged in agricultural activities allow for freed labor into other higher-value work that bring about a higher GDP.

In column (9), we can see that the positive effect of foreign trade on the late marriage rate is rather significant, as predicted. According to the adjusted R-square
statistic, foreign trade accounts for about 6.3% of the increases in late marriage. Also, a 2.4% increase in the total value of trade brings about a 1% point increase in the late marriage age, ceteris paribus.

Equation (10) groups all the variants together in a single multi-variable regression. In the results reported in table 2, it can be seen that only opportunity to secondary, postsecondary education, and the SOE output are significant. Of these however, the coefficient sign for post-secondary education is negative instead of the previously anticipated and measured positive figure. Once again, this may be a result of multicollinearity. Also, while the variants of agricultural labor, GDP and trade are not sufficiently significant in these results, they carry coefficient signs that correspond to earlier single regressions as well as predictions.

In Column (11), we can see that there are regional and time differences which contribute in some way to female late marriage trends because of the substantial increase in the adjusted R-square from 24% in column (10) to 68.4% in column (11). Another interesting point is that the variants that were insufficiently significant in (10) are shown to be significant in (11). This can mean that in taking dummy variables on time and geographical differences, variants that previously had strong correlations to such differences will account for that.

Therefore, in looking at all the regression results, we can tell that rising opportunities to secondary education for females holds the strongest relationship with rising late marriage rate. Meanwhile, declining SOE industrial output and increasing GDP are factors that are consistent with predictions and are statistically significant in most of the equations. Lastly, it cannot be said with any certainty as to whether opportunities to post-secondary education and the proportion of labor in SOEs have linear relationships with the late marriage rate.

II. Unmarried Rate

Table 3 (on p.56) shows the OLS estimates of non-marriage as a result of various variants. Column (1) of table 3 shows that the opportunity to secondary education is significantly related to the fall in female unmarried rate. Similarly, the estimated coefficient in for equation (2) for opportunity to post-secondary education is also
statistically significantly negative. One may find this strange in lieu of the argument that higher education for females should lead to more females not getting married, but the effects of higher education are very likely only significant on the unmarried rate for women who are older than 30 years old. Unfortunately, I was unable to find sufficient data that broke down marriage status into age groups in order to perform a more detailed analysis. What can be seen from the figures however, could mean that while
TABLE 3: OLS ESTIMATES FOR UNMARRIED RATE

Dependent Variable: Unmarried Rate (U)

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
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</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>23.7**</td>
<td>20.65**</td>
<td>23.57*</td>
<td>13.67**</td>
<td>18.58**</td>
<td>16.2**</td>
<td>17.68**</td>
<td>13.6**</td>
<td>17.2**</td>
<td>12.009**</td>
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<td></td>
<td>(1.868)</td>
<td>(1.131)</td>
<td>(2.048)</td>
<td>(0.726)</td>
<td>(0.455)</td>
<td>(0.282)</td>
<td>(2.535)</td>
<td>(0.213)</td>
<td>(3.377)</td>
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<td></td>
</tr>
<tr>
<td>E1</td>
<td>-0.15**</td>
<td>-0.132</td>
<td>0.0325</td>
<td>0.1044</td>
<td></td>
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The figures in parentheses are the standard errors of estimated coefficients.

* denotes statistical significance at 5% level.
** denotes statistical significance at 1% level.
opportunities to education for females are rising, marriage continues to be an important stage in life for women in China.

Columns (4), (5) and (6) all show that there are statistical significant linear relationship between each of those variants and the female unmarried rate. Once again, the estimated coefficients from agricultural activity and SOE output are positive in contrary to earlier hypotheses that postulate that as more females work beyond agriculture and as the importance of SOE’s industrial output declines, less people will be getting married. One explanation for this is that the linear regression model used between these variants may be inappropriate because it is a forms conditional regressional analysis on the given values of the regressor (A or P). Meanwhile, results from equation (5) are highly significant and show an anticipated negative relationship between proportion of labor employed by SOEs and the female unmarried rate. The coefficient value in (5) also shows that a 6.1% decline in the percentage of labor in SOEs causes a 1% point increase in the non-married rate, ceteris paribus, which is a reasonable figure. The estimated coefficient of GDP as a regressor on unmarried rate in column (7) does not fit conventional expectation, but the figure is not statistically significant anyway, so it is difficult to tell if GDP provides a good measure to the rate of marriage for females in China. The multi-variant regression performed by equation (8) produces results that are not sufficiently statistically significant, but fit the patterns of the earlier single linear regressions in (4)-(7), some of which were significant. These observations may be results of the possibility of multicollinearity, which is difficult to avoid.

Column (9) shows a significant positive relationship between the female unmarried rate and foreign trade, and that a 0.3% increase in the total value of trade leads to a 1% point increase in females not marrying. This is rather small as expected, but the value rises in column (10) and (11) and reflect rather similar results in those two columns. In the multi-variant model of equation (10), only the estimated coefficients for GDP and foreign trade are highly significant, while only the estimated coefficient for engagement in agricultural activities is significant. The adjusted R-square suggests that all these variants as a whole account for 20.2% of the change in the female unmarried rate. However, given that multicollinearity is a probable shortcoming of the linear model used, that may account for the discrepancies in estimated coefficients and significance.
The comparatively higher R-square value of 35.2% in Column (11) to that in (10) once again suggests that there are geographical and time differences. According to table 3, foreign trade is the only factor that is consistently significant and positively related to the unmarried rate. Thus, it appears then that foreign influences play a role (2.13% as reported) in females deciding whether to marry or not. This would make the widespread belief that ‘foreign ideas have broken down social structures in China’ hold some water.

### III. Divorce Rate

The OLS estimates of divorce as a consequence of the same series of variants are presented in Table 4 (on p. 59). Education amongst females as anticipated is strongly significant and is positively related to the divorce rate. When regressing the levels of education against the divorce rate individually, this effect is clearer. In column (1) of table 4 we can see that opportunities for female to receive secondary education accounts for 10.4% of the change in divorce, while column (2) reports that post-secondary
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The figures in the parentheses are the standard error of the estimated coefficients.

* denotes statistical significance at the 5% level.
** denotes statistical significance at the 1% level.
education accounts for 4.5%. Equation (3) produces results that combine the effects of both regressors and show that female opportunity to secondary and higher education contributes to 11.1% of the rise in divorce rates. The change in the sign on the estimated coefficient for post-secondary education could very well be a result of multicollinearity as explained earlier. Looking at the values of the coefficients, once again as in the late marriage rate regressions, secondary education appear to affect

A 25% rise in the percentage of students who are females in secondary schools causes a 1% point rise in the divorce rate, but only a 13% rise in the percentage of students who are female in post-secondary institutes is necessary to cause a similar effect. Therefore, opportunity to post-secondary education has a greater effect on the divorce rate than secondary education does.

Columns (4) to (7) all show that the estimated coefficient calculated when each variant is regressed singularly against the dependent variable are highly significant. (4) has a high F-value of 83.5, and adjusted R-squared value that suggests that 26.8% of the rise in divorce can be attributed to the decline in labor engaging in agricultural activities. In addition, a fall in 12% in agricultural labor causes a 1% point increase in the divorce rate. Columns (6) and (7) in table 4 both have sufficiently high F-values ranging from 10.9 to 14.9, and according to the analysis, decline in SOE output and growth in GDP accounts for 5.8% and 4.2% of the rise in divorce respectively. However, the positive estimated coefficient in (5) does not comply by expectations, which is interesting to note. Meanwhile, Column (6) –(8) shows that if the proportion of total industrial output that is from SOEs falls by approximately 5% to 5.7%, then the divorce rate would increase by 1% point.

Equation (8) combines all domestic reform variants together, but the results produced are not significant as seen in table 4. Therefore, while individual regressions produce useful figures, the grouped regression is unable to provide substantial information about the effects of all the variants involved. Possible explanations include multicollinearity and an inappropriate linear model.

The effect of foreign trade appears to not be significant in affect divorce as seen in the results in (9) to (11). It is impossible to say then whether foreign trade is at all a good variable to use against divorce, or whether the relationship is non-linear. Meanwhile
for the combined regression taking all variants into consideration, we can see once more that the inclusion of dummy variables for time and geographical difference gives higher adjusted R-square values (from 29.1% to 37.9%). In (11) only the estimated coefficient for agriculture is highly significant and is close to the result in (4). For all other variants their estimated coefficient values were in most cases far from that when the variants were regressed separately, and even had different signs in a few cases. One has to wonder about the effects of multicollinearity in these situations. Nonetheless, it cannot be proven with these results that there is a significant linear multi-variant relationship between divorce and all the explanatory variables used, with or without the dummy variables.

CHAPTER FIVE: CONCLUSIONS AND PROJECTIONS

SECTION A: Summary of Chapters

This paper has investigated the trends in contemporary female first marriage configuration, and has attempted to discover what factors have contributed to them. In particular, it looks at three observations: first that the average age of female first marriage is decline (or that the late marriage rate is increasing); second, that while the unmarried rate shows signs of gradually falling, the unmarried rate amongst women 30 years and older is rising; and third, that the divorce rate is growing.

It has examined different theoretical and estimation specifications of how factors at the individual, domestic, foreign and international level affect female first marriage decisions. It also analyzed how the changes in these factors have changed indicators of female first marriage decisions across an eighteen-year period from 1980 to 1998 for sixteen provinces and one SEZ in China.

Chapter Two outlined the existing microeconomic theories behind the motivations for marriage based on Becker’s Theory of Marriage. It also linked that theory with current observations, historical and cultural situations in China as supported by other studies. In addition, an ethnological perspective was provided through an excerpt of an interview. However, the issue of marriage is an extremely complex one that cannot be fully rationalized simply in economic terms. Therefore, while such literature review is useful, it also undervalues the importance of less rational and more emotional considerations such as love and companionship.
Chapter Three provides a look into the three key trends the paper intends to discuss. It first focuses on describing observations made based on yearly statistical data across China, so as to give a clearer picture of the female first marriage situation. Then, Chapter Three moves on to provide some possible explanations for such trends in Section B. The list of possible determinants is grouped into factors directly linked to individual characteristics, domestic policies in China, foreign influences and social phenomena. While the discussion in Section B is rather extensive, it accounts for the more direct reasons and factors that were more important based on my interaction with the experts and research.

Given the possible determinants mentioned in Chapter Three, a data set was collected that combined information on variants that reflected in different ways the more quantitative factors. Chapter Four explained the methodology in performing the necessary data analysis, the parameter estimates and described the data used in Section A, B and C respectively. The data set provided information about late marriage rate, the unmarried rate, divorce rate, opportunities to secondary and post-secondary education, labor in agriculture and in State Owned Enterprises (SOEs), SOE industrial output, gross domestic product (GDP) and foreign trade.

Section D presented the results from the estimations of various specifications of the model described in Section A. It was found that the addition of dummy variables on time periods and geographical regions enhanced the explanatory power of the variables in the complete multi-variable regression. In explaining the rising late marriage age, secondary education is the most significant determinant of the variables used. Meanwhile, for the unmarried rate and rising divorce rate, agricultural labor is the most significant and powerful factor. In the multi-variable regressions, it also has to be noted that the effect of multicollinearity may be present, which could result in inaccuracies in measuring the contribution of each of the explanatory variables.

SECTION B:
Further Study and Improvements

Several changes and improvements can be made should there be extensions to this paper. On the side of data analysis, the following changes could be made:
First, an improved data set can be used. Data that included the marriage status of females at various age groups would have been more useful in estimating the non-marriage rate and how age differentials affect it. Moreover, more information that directly linked education level of females with their marriage status will very likely produce more significant results. Some of these suggestions are possible, but once again, it is important to remain realistic about data availability and reliability for a country as vast as China. Second, dummy variables on years and provinces more specifically compared to time periods and geographical regions should be used. This allows for more accuracy in determining specific yearly and provincial differences. Third, performing the regressions and estimations with more sophisticated software such as SAS could have avoided the limitations of only being able to have sixteen ‘independent variables’, and could have better accounted for dummy variables and perhaps more quantitative explanatory variables. Lastly, alternative models should be explored to decide which model the results fit best with.

Apart from the data analysis improvements, further ways to improve this paper on the more qualitative manner is to look at marriage from a more balanced perspective rather than one rooted in economic reasoning. Marriage is ultimately a social act that deserves more social study and understanding. While this paper does discuss some ideological, historical and cultural circumstances China faces that contribute to the trends, such circumstances by their very nature are almost impossible to measure and substantiate. Nonetheless, they are important determinants that future studies could possibly explore.

SECTION C: Concluding Remarks

Therefore, this paper has worked towards offering some possibilities as to which and how much economic, political, historical and social developments experienced by China in the last two decades have affect females first marriage decisions. I recognize some of the shortcomings of the approach taken in producing this paper and the various limitations and assumptions this paper makes.

Another important note is that some determinants mentioned in the paper could have affected the dependent variable in either direction. It is often difficult to distinguish
how much and how directly these effects are. For example, the implementation of the 1980 marriage law was aimed at promoting later marriages. On the other hand, because people were afraid that the marriage age would soon be pushed higher, they actually rushed to marry early. The fact that the average marriage age fell between 1980 and 1990 may be indicative that the latter outweighed the former, but the rise of the average age of marriage since 1990 suggests that the earlier frenzy might have died out and a combination of additional forces such as the improved education opportunities for women may have led to the subsequent rise. Therefore, while data analysis is important, it can only provide estimates of their effects, and even then the information used for analysis is limited due to the often non-quantitative nature of the subject.

This paper does not aim to present any ground-breaking theory, but simply offers a list of possible explanations for a few observations made. In testing out some of the explanations, it was found that rising opportunities for females to receive education had a significant effect on the rising late marriage age. Also, the falling percentage of the total working population engaged in agricultural activity appears to be the strongest factor that causes the rising of non-married and divorce rates.

We can expect that the trends in contemporary female first marriage decisions will continue on the track they are currently on provided that there will not be any significant drastic reform or policy implementation whether domestically or internationally that would affect China’s female first marriage decisions.
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