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Master in General Track

Global Talent Mobility across China: Analysis of Chinese Multinational Companies

Master's Thesis by the 2nd year student

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АННОТАЦИЯ

Автор	Моюнь Хао
Название магистерской диссертации	Глобальная мобильность талантов в Китае: обзор китайских транснациональных компаний
Факультет	Высшая Школа Менеджмента
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Научный руководитель	кандидат экономических наук, доцент М.О. Латуха
Описание цели, задач и основных результатов	Глобальная мобильность талантов является актуальной проблемой в современном мире из-за ориентированного на знания экономического развития. Эта статья направлена на выявление того: каковы тенденции глобальной мобильности талантов в китайских многонациональных компаниях, каковы факторы отталкивания, приводящие к потере талантов, и каковы факторы притяжения, привлекающие зарубежные таланты к китайским МНК. Используя анкету с шагом оценивания по 7-балльной шкале и используя образец t-теста, мы выяснили, что «компенсация, условия жизни, возможности продвижения и рабочая среда» являются

	значительными факторами отталкивания, в то время как «инвестиции в НИОКР, государственное экономическое развитие и государственная политика» являются значимыми факторами притяжения , Полученные результаты будут дополнять исследовательский пробел исследования факторов с обоих направлений (отталкивание и притяжение) в теории глобальной мобильности талантов в китайских МНК. Исходя из этого можно сделать вывод, что данная работа носит кумулятивный характер, так как представляет различные предложения для компаний.
Ключевые слова	Глобальная мобильность талантов, китайский МНК, факторы отталкивания, факторы притяжения, тенденции

ABSTRACT

Master Student's Name	Moyun Hao
Master Thesis Title	Global Talent Mobility Across China: Analysis of Chinese Multinational Companies
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Academic Advisor's Name	Candidate of Economics, Associate Professor M.O. Latukha
Description of the goal, tasks and main results	Global talent mobility becomes a hot issue because of the knowledge-oriented ecomonic development around the world. This paper is aimed at discovering what are the trends of global talent mobility in Chinese multinational companies, what are the repulsion factors leading talent loss and what are the attraction factors attracting oversea talents back to Chinese MNCs. Using 7-point scale questionnaire and one sample t test, we figured out "compensation, living condition, promotion opportunity and work environment" are the significant repulsion factors, while "R&D investment, state ecomonic development and state policies" are the significant attraction factors. The findings will fill up the research

	gap of limited research on factors from both direction(repulsion and attraction) of global talent mobility in Chinese MNCs. According to the findings, this paper provides various suggestions for companies.
Keywords	Global talent mobility, trends, repulsion factors, attraction factors, Chinese MNCs

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Moyun Hao

Content

Introduction

As we all know, nowadays the ecomonoc development is knowledge oriented, therefore highly skilled employees play a central and starring role in companies' development. Talented individuals make exceptional direct contributions to the human development in the world, which including not only scientific innovations and discoveries in academic area, but also economic growth to enterprises and countries all over the world.(World Bank Group, 2015) The competition between enterprises, even between countries is equal to the competition of talented people in nowadays knowledge-oriented economic developing background.

This thesis is aiming to find out what factors influencing global talent mobility in Chinese multinational companies and what are the trends of global talent mobility in Chinese multinational companies currently. One sample t test was used to analyze the trends and factors of Likert scales questionnaires of 50 HRs of Chinese MNCs.

There are mainly four chapters in this thesis:

In the first chapter, we discussed that the global talent mobility is the mobility of high-skilled individuals, which is different from labour migration (migration of both high and low-skilled workers). (Sari Pekkala Kerr, William Kerr, Çağlar Özden, Christopher Parsons, 2015) The high-skilled immigrants are more likely to move to developed countries, and "brain drain, brain gain and brain circulaion" are three phenomenons of global talent mobility.

In the second chapter, we emphasized that in emerging markets, talents are more likely to move to developed countries. The lack of talents in the world, the weak sense of talent competition, the neglect of talents, suitability of jobs, the lack of talent capacity lead to talent losses from emerging markets; while the strengthening of economic globalization, policies and R&D investments help emerging countries attracting overseas talents.

In the third chapter, we discussed global talent mobility in China. We summarized the current trends as following: The brain drain is still existing and the returnees are increasing in China. Moreover, we investigated that the popular repulsion and attraction factors discussed in the relevant researches about Chinese global talent mobility in recent years are: “living condition, compensations, working environments, promotion opportunity, globalization”; and “state economic development, state policies, R&D investment”.

Then in the the last chapter we used the one sample t test analyzing factors and trends. After analysis of sample, we got the conclusion that “living conditions”, “compensations”, “working environments” and “promotion opportunity” are the repulsion factors leading talent losses from Chinese MNCs to foreign countries. However, globalization is insignificantly influences the global talent mobility. “state economic development”, “state policies” and “R&D investment” are attraction factors attracting overseas talents in Chinese multinational companies. Moreover, we emphasized repulsion factors donimate among all the influential factors, the number of repulsion factors is larger than attraction factors.

The current trends in Chinese MNCs are as following: The amount of brain drain is larger than the amount of brain circulation in Chinese multinational companies. The male employees are more likely to resign from Chinese MNCs and find job in foreign countries rather than female employees. All these trends are strongly supported by the repulsion factors which leads talents overseas from Chinese MNCs.

What’s more, we found that repulsion factors are more organizational oriented, and attraction factors are related to external situations, therefore, it is the Chinese multinational companies’ duty to take managerial measures to retain talented employees.

Finally, we suggested the Chinese MNCs provides higher basic wages, more compensations

and increase the diversity of compensation; adopt the promotion system according to the KPI; adopt flexible working schedule, such as “flexitime”, provide larger personal space or entertainment activities; provide various allowance, such as medical subsidies, housing allowances; maintain sustained and steady growth of R&D investment, as well as increase the research projects and research centers or labs.

Chapter 1. Global talent mobility

Mobility is often regarded as one of the basic characteristics of the 21st century because of the strengthening of globalization around the world. British sociologist John Urry (2000) in his article "Sociology beyond the Societies. Mobilities for the twenty-first century" argued a new study of socioloy named "the study of mobility" to analyze the phenomenons, trends, reasons and effects of the mobility of human in aspects of not only sociology but also economy. After John, the author Colin et al. in their book emphasized that "People, money, capital, information, ideas and images are seen to 'flow' along various 'scapes' which are organized through complex interlocking networks located both within and across different societies.1" (Colin, 2004). The topic of our thesis----talent mobility is a phenomenon of labour migration, which means human capital leaving the home countries, and changing the current environment, not only social or geographic, but also cultural and natural environment. Therefore, it is necessary to figure out the differences between "labour migration" and "talent mobility" before analyzing "global talent mobility" in the following context.

1.1. Labour migration

Labor migrations is a complex phenomenon in economic research area. "Labor migration is a subject that includes interdisciplinary approaches, which started be popular from the second world war till last century." (Brettel, Hollified, 2008).

The general trends of contemporary migrations are globalization, acceleration, differentiation, feminization, and politicization (Castles, Miller, 2003). The frist significant trend is globalization, it means that more and more countries are involved into the labour migration. The second trend is acceleration, it indicates that the international labour migrations are

1 Tourism, mobility, and second homes: between elite landscape and common ground. Colin Michael Hall, Dieter K. Müller. 2004 p98

increasing year by year. The thirds trend is differentiation, it means that there is not only single type of labour migrations around the world, for example, permanent or temporary, self-initiated for seeking better living conditions and higher financial incomes or be forced by political reasons etc. The fourth trend is feminization, it describes it is obvious that the amount of famales is increasing in any type of labour migrations. And the last trend is politicization, it indicates that the labour migration is not only influenced by the political reasons, but also its consequence increasingly affects back on the states politics (Castles, Miller, 2003).

The first wave of labour migration started by the Industrial Revolution and colonialism in the 17th and 18th centuries, the direstion of the first time migration is from Europe to Africa and Asia, and later to America and Australia, at the same time, a lot of Africans were enslaved and forced to work in Europe as well as America.(Stuen et al. 2012) Therefore, because of the development of this first labour migration flow, Africa, England, Germany, France, European countries became the origin countries of labour migration n the nineteenth century.

Before the second wave of labour migration, it was intermitted by the First World War, economic crisis, and xenophobia at that time. The second booming labour migration caused by the rebuilding of developed countries after the Second World War, it required drawing workers from developing countries, and finally the oil crisis between 1973–1974 end this labour migration flow.(Mario&Dominique, 2011)

The oil crisis drew the new characteristics of labout migrations. Because of the limitation of foreign labour recruitment made by Western European governments to protect domestic workers' benefits, the number of illegal migrants increased, especially from the developing countries to the developed ones. Oil countries began recruiting workers from other countries, and Southern European countries became the receiving countries from sending countrirs.(Bijwaard et al.,

2014)

The mobility of highly skilled workers as a new phenomenon during the labour migration process, increased from the end of 19th century, after the oil crisis. “There is a trend towards polarization: highly skilled individuals are welcomed to enter, they are regarded as the carrier of knowledge and skills, while low-skilled migrants are always detected by developed countries, but large amount of them enter through family reunion or illegally” (Castles, Miller, 2003).

1.2.Global talent mobility

1.2.1. Definition of “Talent” and “Global talent mobility”

According to the Oxford dictionary, talent refers to the goup of people who have the special, unique ability or skills. What’s more, many authors argued various definition of “talent” from different perspectives.

Definition of talent is considered of strategy of companies, the competitiveness of enterprises, and other elements of management(Papademetriou et al., 2013). As Ouyang (2007) argued in his article, the commen definition of talent can not be summarized as the same one in all languages. The meaning of talent depends on the language of the organization. For example, Morgan (2010) emphasized “talent” is the group of people who have high skills to achieve huge changes in functions of the enterprises. Gao Na (2014) describes the talent of the inner things, support their own things, do not need someone else's appreciation. Talent is a unique organization that is influenced by factors such as industry, whose nature, individual, and meaning at the group level may change over time (Chartered Institute Personnel and Development Association (CIPD), 2007). McKinsey defined “talent” as as “bright young people” in their report “War for Talent” in 1998, later in 2004, McKinsey add another descriptive word with “brightest”, that is “the best”(Mckinsey, 2004). Egerova, D. (2013) emphasized talent is the

person who has higher skills than general employees and is more likely to get promotion in the organizations. Kong D.Y.(2013) described “talent” as "a employee who is the 10% top among all the employees". CIPD definited talent as following: they make the companies competitive and developed by their excellent performance in the organizations(CIPD, 2007).

From the definition of these talents can be concluded that represents the organization's best talent, and to achieve its strategic objectives of the greatest contribution. The aboved definition of talent is used in the firms and organizations. What’s more, the article The Reason Research for Transnational Mobility of Human Capital Under the Background of Economical Globalization argued that, according to Statistic Abstract of United States, the definition of talent, in the broad sence, refers to professonal, technical and kindred workers around the world.

After figuring out the definition of talent, it is necessary to consider what is the global talent mobility across the world. Substantial attention has been paid figure out the distribution of talents and what factors influence global talent mobility around the world. Observed global talent mobility is the result of a complex tangle of global migration mobility of high-skilled individuals who self-initiated seeking best options cross countries. (Sari Pekkala Kerr, William Kerr, Çağlar Özden, Christopher Parsons, 2015; Gao Na, 2014; Tu, L.X., 2010) As many researchers metioned in their studies, the globalization is one of the primary background that pushes the process of global talent mobility. The globalization, especially the economic globalization promotes the process of talent mobility. In this process, the mobility of high-skilled employees becomes critical to enhancing productivity both in countries and organizations.

Most mobilities from developing countries are low-skilled individuals, but the mobility of high-skilled workers is growing, which is the characteristic of talent mobility. Because of the shortage of various resources and conditions in the home countries, thousands of doctors,

engineers, professors and skilled workers from less developed regions self-initiated work in developed countries, where they could get better benefits. Aiming to win in the knowledge competition battle around the world, many developed countries provide slack migration policies direct at worldwide talents, especially from the less developed regions, For example, Germany provided highest proportion of skilled immigrants from the amout of international students. Technical immigration quota in Germany is 123 thousand people, it occupied 49.2% of international students in 2015, and the amount of skilled immigrants of Newzeland, Australia, Canada and the U.S. make up significant share (39.7%, 24.3%, 23.6%, 13.7%) of the amount of international students in 2015(Jean-Baptiste Meyer, 2010). This is a helpful solution for skilled individuals who are willing to find jobs in other developed countries to gain better salaries and living conditions, but it leads to a shortage of professionals at home countries. However, if the migrants are willing to come back to home countries, they will bring the new skills and experience even than departure. Castles figured out that not all of the talents mobilities are successful, many highly-skilled migrants in highly developed countries fail to get skilled jobs, therefore, their mobility is both a loss to their home country and a personal disaster(Castles, Miller, 2003).

1.2.2. Trends of global talent mobility

The global talent mobility has been increasingly asymmetric and skewed because of the unbalance development between countries. It is obvious that the trend of global talent mobility is from developing countries to developed countries.

Considering both low and high-skilled migrations, there are approximately 3% population living in a foreign country, and this share has been roughly constant since 1960 (Ozden et al.

2015). From the aspect of high-skilled mobility, 28 million of talents move to OECD countries in 2010, show 130% increase since 1990(Wei Lin et al., 2013).

Another characteristic should be considered is the mobility of talents is more frequent than low-skilled migrations. OECD countries received world's 2/3 talent migrants till 2010, while the growth rate for low-skilled migrants in 20 years till 2010 was only 40%(OECD Factbook 2013; Auriol et al. 2013).

Another characteristic of global talent mobility is the skewed distribution of the receiving countries. OECD countries attract most of talent migrants from non-OECD countries, what's more, the United States, the United Kingdom, Canada and Australia occupied nearly 70% high-skilled migrants in 2010(Ozden et al. 2016). The amount o talent mobility from non-OECD countries to OECD rose 185% to 17.6 million, while considering the talent mobility inside the OECD, there is also a high increase of 68 percent to 10.2 million from 1990 to 2010(Bijwaard, 2014).

Because of limited educational capacities and financial conditions, the talents of sending countries have to immigrate to other countries. The most serious situation of talent loss are in these countries, which have experienced particularly high emigration rates of high-skilled individual to developed countries in 2010: Guyana (93%), Trinidad and Tobago (68%), Barbados (66%), Tonga (53%), and Zimbabwe (44%), they are typicial small low-income island states or countries(Tung, 2011). The phenomenon of mobility of high-skilled talents away from low-income home countries to high-income countries has been discussed as "brain drain"—a topic to which we will return when considering categories of global talent mobility.

The consequence of the global talent mobility based on above trends may be the concentration of high-skilled individuals in the receiving developed countries in particular

occupations. For example, 57% scientiests living in Switzerland are immigrants, 45% in Australia, and 38% in the United States (Stephan Paula, 2010). In the United States, 27% physicians and surgeons and more than 35% medical doctors were immigrants in 2010. (Cruz-Castro et al. 2010)

1.2.3. Phenomenons of global talent mobility

Based on the study above, which is about definition and trends of global talent mobility, a number of researchers categorized "global talent mobility" into several phenomenons.

（1）Brain drain

The influence of sending talent people abroad is one of the hot topics in the study of talent mobility, this phenomenon is called brain drain.(Free Merriam, 2010) The mobility of highly skilled talents abroad has been seen as a negative phenomenon especially for developing country. Since the 1950s this phenomenon has been studied by a lot of researchers in economics, sociological, anthropological, pedagogical areas, and the researchers gave a theoretical name to it as "brain drain". The concept was first put forward by the British Royal Society to demonstrate the flow of scientists and technologists moving from Europe to North America after the World War(Cervantes, Mario; Guellec, Dominique,2002) This concept has been defined and concluted that "brain drain" refers to a country's net loss of talents (Grubel and Scott, 1966). In the 60th and 70th, the phenomenon raised a lot of attention. However, the influence of this phenomenon on the country's growth and economy has not been thoroughly investigated. It was a time of explosion of input and immeasurable supplies of talents. Haque and Khan (1997) in their article summarized the evidence and suggested that the problem behind this phenomenon may not be unimportant. Given the relatively little source of skilled educated people in these countries, even non-extraordinary numbers appear to have consequences. It's commonly agreed that an

externality raised from the relocation of educated human capital was very hard to stimulate. The world economy would be improved by the moving flows of talent human capital.

The concept "brain drain" suggested that the motivation of capital flow of educated and skilled human resources is a practice of misuse of poor countries by rich countries. Some new concepts have become popular in the study field of talent, "brain waste" was one of them, this concept terms the phenomenon when skilled and educated migrants earn less than the natives of same level of education or skills, or the phenomenon that work duties of the talent migrants are below their qualifications in the migrated countries. There is "an extreme case of brain waste, whereby an increase in education has no impact on income earned in the destination country" (Agrawal et al. 2011).

Brain drain trends are more extensive than previously, in 90th, the migration of skilled workers to OECD countries increased 70% from 1990 to 2000, compared with a total growth of 28%(Wolburg, M. 2010). As said by a groundbreaking study on the connection between education level and mobility in OECD countries, the portion of migrants with lower skills decreased from 1990s to 2000s, while the portion of migrants with higher education increased largely(Weinberg Bruce, 2011).

(2) Brain gain (Reverse of brain drain)

The concept "brain gain" refers to the "beneficial brain drain" (Ozden, 2016), assumed as "the development of education in the sending country as a result of the higher salaries of educated migrants or as a "return of human capital and all complementary investment from rich to poor countries"(Kapur et al. 2011). Brain gain can be also seen as the opposite of "brain drain" referring to the benefits to the receiving countries (Martin, Abella, Kuptsch, 2006). Tung (2008) argues that there has been a propensity to focusing on the phenomenon "brain gain", however, its

contrary situation “brain drain” has been long neglected.

(3) Brain Circulation

Brain circulation exemplifies a new situation: the international talents flows and exchanges (Blitz, 2005; Teferra, 2005). Blitz (2005) argued that considering the statement mentioned by the scientist, it may be emphasized that the brain circulation is based on the skilled labor force that claims to be characterized as a knowledge carrier so that knowledge resources are shared across states(Blitz, 2005). Brain circulation represents an alternative model of brain drain, while highly educated and skilled talents move from one countries to another countries in the persue of better working conditions and opportunities, thus, brain circulation can be defined as a cross-country skilled worker's circulatory movement. When educated and skilled labor force flows from one country to another, it can be considered as a loss of intellectual capital to the sending countries. Authors say the process of skilled migrant workers as the acquisition of intellectual capital to host the country receiving skilled workers.

1.3. Theories of factors causing global talent mobility

The most important of current theories explaining the reasons of global talent mobility are: the neoclassical economics theory, push-pull theory.

The neoclassical economics

There are two theories in the neoclassical economics: one is macro-economic theory, another is micro-economic theory, macro-economic theory demonstrates the talent mobility development with the pace of economic development(Ranis & Fei, 1961; Harris & Todaro, 1970; Todaro, 1976).

Because of the difference in labor-to-capital ratios in different countries, wage differentials is the main reason that lead talents to move from low-wage countries to higher-wage countries in

seek of maximizing personal income. The shift leads to a reduction in the wage gap, eventually leading to a balanced surplus wage differential that only reflects the movement of material and non-material costs (Massey et al., 1993). In this model, which is fully focused on the labor market, wage differentials are the main explanatory variables based on observed wage levels and wage differences in the destination.

The neoclassical microeconomic theory also focuses on the talent mobility, but it is assumed that the individual makes a reasonable cost-benefit calculation not only when make the decision of whether to immigrate, but also the destination countries to migrate. Despite the benefits migration can reap, there are also costs of such migration - travel expecse, the cost when finding jobs, the cost of adapting into a new country (such as language study fee, the cost of making new friends, etc.), and the psychological costs of leaving the place used to leave, leaving family and friends (eg Sjaastad , 1962; Todaro, 1976, 1989; Bo, 1993). The individuals' characteristics will result in different costs-benefits of deciding to move into another country. As a general rule, the greater the gap between countries in terms of expected returns, the greater the size of the mobility of talent.

Push-pull theory

One of the well-known theoreties in the study field of talent mobility is the "push-pull model", which explains the reasons for the talent mobility. The push-pull model consists a series of negative determinants or so-called "push factors" that drive people move away from their home countries, and positive determinants or so-called "pull factors" to attract talents move into. The push factors usually relate to the aspects of economy, social problems and political dilemmas, the pull factors usually includes the comparative advantage in those aspects in the destination countries. Push and pull factors will help talents determine the size and direction of

the mobility (Portes Borocz, 1989). A basic assumption is that the more disadvantaged a place is, the more likely it is to produce outward mobility.

There are several scholars studies about the push-pull effect on global talent mobility to find what caused brain drain and brain circulation. Altbach(2004) used the push and pull model to explain the factors of talent mobility from less developed countries to more developed countries. In the scholar's research, the negative or push factors of talent mobility are lack of working autonomy, promotion of positions, limited career development opportunity, and for the positive or pull factors of talent mobility is about high salary, better working conditions, career opportunity. Other scholars approved that the possible push factors of talent mobility are wage, living conditions, professional realization and improvement, ecological conditions, the pull factors attracting talent are high wages, labour conditions and equipment, living conditions, demand for experts acquired, country's policies. (Aušra Kazlauskiene˙, Leonardas Rinkevičius, 2006)

Chapter 2. Global talent mobility in emerging markets

2.1. The trends of talent mobility in emerging markets

In the traditional impression of the people, the context of global talent mobility is always from the emerging market flow into the developed economy, but the global workplace social networking platform LinkedIn through the study of recent three years of global talent flow data found that the flow of talent between emerging markets and developed markets has increasingly balanced. The data shows that the total amount of people move from emerging markets into the developed market in recent 3 years are about 520,000, at the same time, the talent mobility from the developed market to emerging markets is also reach to 490,000（Steven Herbert，2015）.

All these talents are from the industry of energy, finance and construction, due to all these industry have strong market demand and natural resource endowment in emerging markets. The construction and energy industries have a strong demand for talent, especially under the influence of "Emerging markets, represented by the BRICs, have shown strong global demand for energy trade, overseas engineering and financial cooperation (Annual BRICS conference, 2015). On the other hand, developed countries are also developing the same demand for emerging markets.

Although many traditional industries shown a "flattened" trend of talent mobility, but the Internet as the representative of the high-tech industries, it makes the ratio of talent mobility from emerging markets into the developed markets are 2 times (Brunke, B., 2012).

2.2. Influential factors of global talent mobility

2.2.1. The repulsion factors causing talent loss in emerging markets

The lack of scientific and technological talent in the developed countries

The phenomenon of lack of 675,000 scientists and engineers still existed in the United

States at the year of 2006(Eric R Weinstein, 2017). Japan Science and Technology Agency predicted: In the next 20 years, the need to introduce engineers from abroad more than 224,000 scientific and technical personnels in France; in the next 20 years, the computer technical staff in Germany lack more than 90,000.(Auriol, L., Misu, M., & Freeman, R. A., 2013) Therefore, countries around the world, especially the developed countries, widely employed, through a variety of preferential policies to absorb high-tech talent in developing countries. Resulting in a large number of brain drain in developing countries.

The sense of talent competition is weak in developing countries

In the developing countries, the leaders of government and enterprises and institutions tend to value the actual economic benefits, pay most of their attention on investment and construction, while ignoring the most significant object----scientific and technological talents, in scientific and technological innovation talents create great productivity. Resulting in scientific and technological talent full of ambition, but nowhere to play.

Neglect of R&D investment

The phenomenon that government's neglect of talent, also lead to the dissatisfaction of scientific research personnels, the national and corporate research investment is too less, resulting in scientific research and equipment facilities obsolete, many scientific research projects can not be carried out, scientific research personnel income is too low; at the same time, domestic research positions are not enough, so that a large number of young researchers employment can not find an appropriate job, forced to go abroad(OECD, 2011).

The lack of job opportunity

A large number of people can not find their right place in the developing countries after graduating from college graduates with non-learning phenomenon is very common, so that they

feel disheartened. However, foreign countries have a vast space for their development, resulting in a large number of professionals outflow(Eric R Weinstein, 2017).

2.2.2. Attraction factors attracting talent back to developing countries

Firstly, increasing economic development and political stability are the reason attracting overseas talents back to the sending countris. From the experience of the Taiwan region, there were 80,000 college graduates studying abroad from 1950 to 1980(Weinberg, 2011). However, with the region improvement of Taiwan and increase of their economic development level, the decisive role of science and technology in economic development has become increasingly obvious. Since then, the number of students returning to the island began to increase. Between 1980 to 1989, there were 14,882 students returned Taiwan from overseas, while the number increased from 30,198 in the year of 1990-1995, they accounted for 44% and 55% of the number of postgraduates and doctoral students who graduated from the institutions of higher learning in Taiwan in the same period respectively(Shi Zhilei, 2011). The same situation also occurred in mainland of China, Chinese GDP growth sharply after the year of 1998, after two years, the number of talents who worked overseas went back to China increased sharply it because that the Chinese economy developed at a high speed at that time, it shown a great attraction to the talent who worked overseas, all these phenomenon show a good development prospect to the talent, of course, also provides a lot of opportunities to get rich, to attract them to invest in business(Dennis Tao Yang, 2010). In addition, political stability is also an important guarantee for overseas talent return. Now China's political stability, academic atmosphere is more free, which also a very reason for the return of talent to create a good environment(Tarun Khanna, 2005).

Secondly, the change of talented labor demand caused by the transformation of developing

countries' economic and industrial structure is the "pullback of intellectual return." The government proposed that the transformation of their industrial structure should focus on upgrading the industrial level and technical level, that is, in some important industries as soon as possible to master the core technology and improve the system Integration capabilities, the formation of a number of independent intellectual property rights with the technology, products and standards, which show a high demand for developing countries' talent (William W. Fisher,2013).

Moreover, the strengthening of the trend of economic globalization has also accelerated the "intellectual return" of developing countries. From the history of the world economy experienced we can see that several times the flow of factors in the situation, we can find that human capital is always consistent with the physical capital flow direction(Pol Antras, 2009). Some developing countries such as India's great achievements in economic construction over the past few years attracted the attention of many talents. These developing countries' foreign direct investment trend of rising year after year at the year of 1998, at this period, there are also huge number of overseas talent began to gradually return to the developing countries. we can find the reason of this phenomenon from the nature of foreign investment, foreign direct investment in the field of more concentrated in the manufacturing, services and other industries that require a large number of highly skilled personnel. The United Nations Conference on Trade and Development Secretary Supachai also said that the United Nations Conference on Trade and Development (UNCTAD) recently conducted a survey of the world's largest R & D companies, showing that 69% of multinational companies expect foreign R & D build in some developing countries(Bound, John, 2015). The most advanced science and technology learned by our talented people studying abroad, and the management skills they understand are all needed by

these industries and departments, they can be better configured. It can be seen that it is possible for all these talent to find an appropriate job when they back to developing countries from overseas.

Chapter 3. Relevant researches about global talent mobility in China

With the worldwide openness and developing situation campared with developed countries, there has been a phenomenon in Chinese global talent mobility, talents are willing to work in Western countries—particularly the United States, Canada and Australia, this large group of talent consists of professionals, experts and high skilled workers with a middle-class background, who are the backbone for the development of China(Lam, Willy, 2010). But some scholars argued that at the same time, along with the development of China's economy and society, the number of migrants and returnees back to China is increasing(Dennis Tao Yang, 2010).

3.1. Current trends of global talent mobility in China

The brain drain situation still exists in China

After the financial crisis continued to decline, the number of international immigrants is already showing a significant growth trend, now has returned to the high level before the financial crisis, according to the "2016 International Migration Outlook" report of OECD. The report found that the number of permanent immigrants entering OECD countries in 2015 totaled 4.8 million, an increase of 10% over the previous year, breaking the 2007 record. In 2014 this figure was 4.3 million, it's an increase of 4% over 2013(Omar A., 2017).

China is still the largest source of high-skilled immigrants in terms of the ranking of immigrant countries in 2014(OECD). The top five origin countries of migration in 2014 were China, Romania, Poland, India and Philippines, according to the statistics of OECD, the data also covers the number of short stay. Chen Yanhong(2016) in her research The characteristics of global talent mobility of China argued that in 2014, the number of Chinese immigrants overseas reached 555,000, a slight increase of 1.4% over 2013, maintains the status of the largest source country of immigrants. But in fact, the number of Chinese immigrants in 2014 accounted for a

decrease in global migration compared with 2013, accounting for 9.3%.(Chen Yanhong, 2016) Thus, the proportion of Chinese immigrants in the global population declined slightly, and the recent surge in the number of immigrants worldwide was affected by the influx of refugees.

The number of oversea students from China is the largest amount around the world. In 2013, nearly 3 million international students entered OECD countries, 23% of which came from China(Gao Na, 2014). According to the investigation of Gao Na (2014), the top three destinations favored by international students are the United States (about 800,000 international students), the UK (about 420,000 international students), and Australia (about 260,000 international students). In the list of origin countries of oversea students of OECD countries, China contributed 643,000 students, far more than the second-ranked India. From India there are only 16.3 million students, about a quarter of China, then followed by Germany (11.5 million), South Korea (106,000), France (72,000), Arab (65,000), Vietnam (51,000), US (49,000), Italy (46,000), and Malaysia (44,000)(Gao Na, 2014).

The number of returnees is sustained increasing in China

With the economic development and the globalization degree of China, there are a lot of oversea talents aiming to go back to China, wich called the brain circulation for China. In 2012, nearly 1 million Chinese overseas students returned to China through the preferential policies provided by government, such as the duty free car, registered permanent residence in China, including 20,000 highly qualitied overseas professionalsi(Gao Ziping, 2012).

According to the Ministry of Education statistics of China, before 2000, the return rate of Chinese (at their own expense) overseas students was less than 5%, but after 2000, the proportion of returnees steadily increased, the large-scale "returnees" wave is continued after 2008, the current China's returnees returned more than 30%(Zhou&Sun, 2012).

The influence of global talent mobility on Chinese MNEs

The brain drain from China caused talent loss in Chinese MNEs. The blue book named *The Annual Report on Chinese International Migration (2015)* noted that there were 20,245 talents in the companies who received permanent residence rights from mainland China through vocational skills in 2013, accounting for 28.2% of the total number of permanent residency positions in 2013, caused an increase of 2041 talents over the previous year , and the outflow talents number increased by 4.9% than in 2012 (23.3% in 2012)(Zheng Yan, 2013). A survey released by the Chinese Academy of Sciences shows that many personnel in Chinese science and technology sectors in the companies, especially in the fields of physics, mathematics and computer sciences, have the high desire to work in the developed countries(Wei Lin, 2013).

3.2. The factors influencing on global talent mobility

As we discussed before, the global mobility has two directions: one is outflow from China to foreign countries, the other one is inflow from foreign countries to China. Based on this situation, there will be repulsion factors leading to talent loss to foreign countries from Chinese companies and the attraction factors attracting talent back to Chinese companies. Summarized some researches about talent mobility in China, we get the main factors may influencing talent mobility from China.

Decades ago, due to the increase of the related statistical data, research on global talent mobility has developed from theoretical research to the empirical analysis, mainly studies the relationship between talent mobility and economic development at the beginning, in recent years, researches pay more attention on influencing factors and influential index models of talent mobility in China.

At present, the related researches about empirical analysis of factors affecting talent

mobility in China is not too much, most of the existing literature is based on the single direction of Chinese talent mobility(talent loss or attraction), such as the brain drain factors, or the brain circulation factors. And there are also amount of articles do the empirical analysis from a global perspective to investigate influential factors, generally compare several developing countries with China. Most of empirical researches about influencing factors of talent mobility analyze just the negative(repulsion) or positive (attraction) factors influencing global talent mobility(FK Afridi, W Afridi, 2016).

3.2.1. Repulsion factors leading talent loss overseas from China

(1) Financial factors

Most of the researchers stressed that the financial factor is the most significant reason for global talent mobility in developing countries.(Clemens, Michael, 2008) In the researches of global talent mobility of China, the financial factors refer to compensation issues in specific.(Shi Zhilei, 2011; Wei Lin, 2013;Wu Xuean, 2014; Gao Na, 2014) Compensation consists basic salary, various benefits, such as health insurances, dividends, various allowance, like housing, travel, meal; and the non-monetary components, such as vacation. (Collings, D.G. 2014)

Collings (2014) in his article investigate that the existing gaps in wage levels between countries is a traditionally repulsion factor of international talent mobility. American scholar Armknecht and Early (1972), in analyzing the resignation rate of US manufacturing employees, found that the most important factor in determining all the factors that employees voluntarily leave the firm is the relative wage level. The scholar Shi Zhilei (2011) releaved that China's economy is not developed now, although the economic development of China is increasing in recent years, the income level of talent with high skills in Chinese MNEs is lower than abroad,

therefore, the wage gap for the talent is still the first influencing factor of global talent mobility in firm-specific level. What's more, Wei Lin and Xiangqian Zhang (2013) argue that salary satisfaction has the extremely negative effect on global talent mobility in Chinese companies in their research *Factors affecting the flow of talents: and empirical analysis on Chinese Enterprises*. It means that salary is the key reason causing the high skilled employees leaving Chinese companies to find jobs in foreign countries. Based on the general situation of economy in China, the wage standards of Chinese MNEs have less competitive advantages than the foreign companies, thus, the foreign enterprises attract talent by "high salary" strategy, which caused the talent loss from Chinese MNEs(Wei Lin, 2013).

Some other researchers also discussed the significant role of lack of diversity of compensation and lack of compensation gap between talented employees and in Chinese MNEs and it has already been studied as one of the influencing item of global talent mobility for the Chinese MNEs. Wu Xuean (2014) argued that compensation includes various benefits and perquisites, long-term and short-term incentives. Besides, authors mentioned that, there are several factors which may influence the compensation standard: organizational culture, hierarchical level of employees and performance, local consumption level. Gao Na (2013) argued that there are still other elements should be considered, such as the egalitarianism phenomenon in China.

(2) Promotion opportunity

The enterprise provides opportunities for personal and professional growth is an important factor for preventing talent loss in Chinese companies (Takahashi et al. 2010). The talent loss reason for knowledge workers are related to their career development opportunity, in specific, the opportunity of promotion(Horwitz et al., 2003; Rolfe, 2005).

Wei Lin and Xiangqian Zhang (2013) argued in their research that lack of promotion opportunity is one of the factors influencing outflow of high skilled workers from Chinese MNCs to foreign countries. Enterprises must focus on knowledge talented person's career, show them the standards of promotion planned by the companies, convience employees that they will have bright prospects of their career as long as perform better.(Tu, 2010)

Some specific issues related to promotion opportunity in China

The most influential issue in China raleted to promotion in career life is Guanxi. In the workplace, guanxi is somewhat like 'sucking up to the boss,' and it's usual to see figures elevated beyond their level of competence due to favorable relationships with their bosses. (Alvin M. Chan, 2012) Hu argued that the promotion opportunity in Chinese companies is decided by the recommendation of managers, and the standards for the recommendation system is employees' grades of performance, attendance and other indicators strongly influenced by Guanxi(Chu Xiaoping, 2002). Zhou Lingxiao did an research on how important the Guanxi is in Chinese companies, he got a result that 59.31% of the stuff have special relationship with companies' owner. They are relatives, friends or classmates of companies' owner or acquaintances of companies' owner. 89.74% of the CFOs are acquaintances of managers or CEOs in Chinese private companies. Only some employees from technical positions were selected from the social recruitment(Zhou Lingxiao,2006). Athough talent is always stressed in the company in China, but nowadays the promotion system in Chinese companies is strongly influenced by the "cadre examination system", which was established in the 1980s. This system counts the appointee's guanxi to his superior very well and considers the ability and virtue as the secondary importance(Kong & Zhang, 2013). Because of the Guanxi in enterprises in China, there is a highly centralization of managers with common interests(Chu Xiaoping, 2002). The

information flow from top to bottom, the lack of feedback from employees, and ignoring the staff's individual needs, all of these situation leads to the employees wasted a lot of time to overcome and adjustment the problems, resulting in unsatisfactoriness not only in promotion system but also in working, even frequent outflow of the Chinese company to western countries(Zhou Lingxiao, 2006).

(3) Working environment

The work environment factor generally invovle surrounding conditions, such as equipments and facilitiy; flexible working schedules, and the interactions with peers, subordinates, and managers.(Collings, 2014) Ouyang investigated the influence of work environment on brain drain in Chinese companies, and he emphasized enterprises should create a good working condition to protect talented employees to work smoothly and efficiently, including a safe and confortable working environment, adequate resources and a harmonious work atmosphere(Ouyang, 2007). Ni Pengfei (2010) obtained results to support the importance of positive working environments in retaining talented employees. An environment conducive to employee retention is one where the working experience is a pleasant one, the resources are adequate and there is some degree of flexibility. HR managers can influence the working environment by ensuring that professional groups have access to sufficient resources and that flexibility within the organisation is reciprocal.

According to Liu and Fan, the narrow personal working space and no entertainment time is an specific reason in Chinese companies that makes high skilled employees to move to developed countries. In the article, 57% respondents employees of 106 Chinese multinational companies said that the small work space greatly affected productivity and satisfaction, 34% employees showed their dissatisfaction with the entertainment activities(Liu&Fan, 2005).

As an phenomenon of work environment, flexibility of working schedual is always critisized by employees in articles of global talent mobility in China(Liu&Peng, 2015). Armstrong et al. (2007) argued the importance of working flexibility for the retention of employees and Hausknecht et al. (2009) regarded flexible work arrangements as one of factors influencing brain drain. Wei Lin and Xiangqian Zhang (2013) approved that flexible work has negative or push influence on talent mobility in China. As reported 82% Chinese companies adopt traditional work arrangements that require employees to work a standard 9 a.m. to 5 p.m.(Wang Qi et al. 2015) In the article of Lai Desheng, the average working time in China is longer than 40 hours per week(the standard working hours in China), and 55.5% managers work more than 48 hours, while only 27.4% commen staff work more than 48 hours per week.(Lai Desheng et al., 2015)

(4) Living conditions

Living condition is one of the important factors causing brain drain from China. Most of the researches regarded the natural environment(pollutions), living cost, and medical level as the items discussed under the "living conditions factor" in China.(Shi Zhilei et al, 2011) Ni Pengfei used model to analyze the living environmental index of 58 countries, the author got reslut that China is just ranked at the 46th position, while Switzerland, Norway and the United States are ranked at the first three positions. Finally he emphasized that the bad living condition is one of crucial reasons leading the brain drain in China. (Ni Pengfei, 2010)

In recent years, environmental migration is becoming a popular issue discussed by researchers, because of the worsening of air pollution in China. Zhou and Sun argued that the environmental migration occupied large percentage of reasons causing high skilled immigrants in China, rather than eco-migration and climate migration.(Zhou H.&Sun Y., 2012) According to

a new report from the Asian Development Bank, there were about 83.4 thousand people in China who migrated because of worsening environment in 2011-2012.(Zheng Yan, 2013)

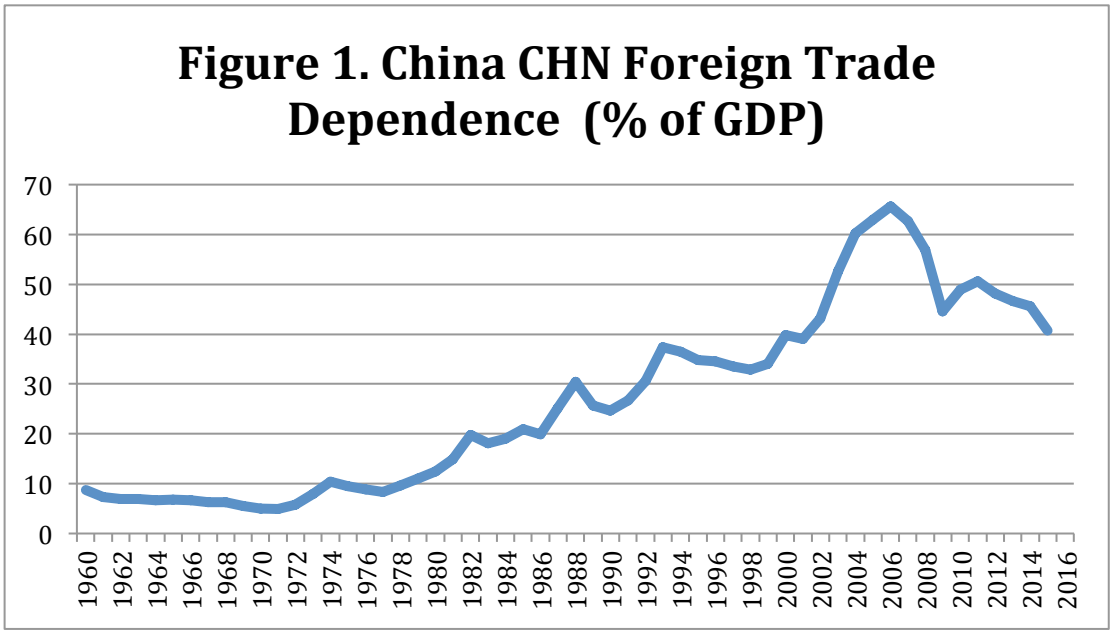
One of the specialist living condition issue in China is air condition, the fog and haze. Air condition is becoming more and more troubled problem in China in recent years. The investigation of Center of China and Globalization(CCG) showed that 70% high-skilled immigrants agreed that the worsening air condition and insufficient medical resources is an important push factor, which made them decide to immigrate to developed countries. Hurun research institute survey released in January 2014, 64% of China's rich people（have more than $1.6 million） have the plan to immigrate to developed countries with better air quality, and the United States, Australia and Canada are the preferred options.(Wu Xuean, 2014)

The shortage of medical resources is also a serious living condition, which talented employees faced in China. WHO clearly put forward, in 2010 the total medical expense of low-income countries should reach 5% ~ 7% of GDP, while China was just reached the 5%, which means that investment in health in China is really insufficient.（Ni Pengfei, 2010）

Moreover, high housing price has been an important factor in reducing the quality of people's living conditions in recent years in China. Kong and Bian establishes the risk early warning index system of talents drain in Chinese high－tech enterprise based on three aspects of individual，organization，and environment，and uses AHP method and the entropy weight method to evaluate the risk index. The authors emphasized the high housing price as an item under the environment factor has great influence on brain drain in Chinese high-tech enterprises(KONG&BIAN, 2014). The housing price in first-tier cities of China(Shanghai, Beijing, Shenzhen, Guanzhou) rase nealy 89% from 2014 to 2016, even just during 2016, price incresed about 45% in these main cities.(Dong Xin, 2016)

(5) Globalization in China

Globalization and the entry to WTO has increased the degree of openness of China and reduced the barriers of transnational mobility of talent. Economic globalization has deepened the degree of interdependence and mutual penetration of the countries in the world. The integration of goods, services, capital, technology and markets between developed and developing countries is highly integrated. The barriers to transmission are diminishing and interactivity is strengthening. China has a high level of foreign trade dependence along the "reform and opening-up" strategy, reached 40.672% in 2015 (World Bank national accounts data, and OECD National Accounts data), which also leading to the high level of talent mobility cross countries.



Cultural exchanges, technical cooperation, even talent mobility is more convenient than ever, and more frequent. The globalization of China promoted the outflow of Chinese talent to developed countries to find better jobs, which caused the brain drain of China(Liu B. & L. Peng, 2015).

3.2.2. Attraction factors attracting overseas talents to Chinese MNCs

(1) The R&D investment

Most of the researches about global talent mobility emphasized the importance of R&D investment during the brain circulation process in China.(Hao Yanli, 2017; Gao Ziping, 2012) Generally the influential R&D factors involve the investment of government and the expense of Chinese companies themselves.

Hao Yanli (2017) approved that R&D investment of Chiese companies attracts oversea talent back to work in Chinese enterprises. A survey shows that Chinese enterprises R & D investment growth rate ranks first in the world. The European Commission publishes the "World Top 2500 R & D investors in 2016", with 9 Chinese enterprises entering the global R & D investment in the top 100. The survey included R & D investment of 2,500 companies, including 438 in China.(Hao Yanli, 2017)

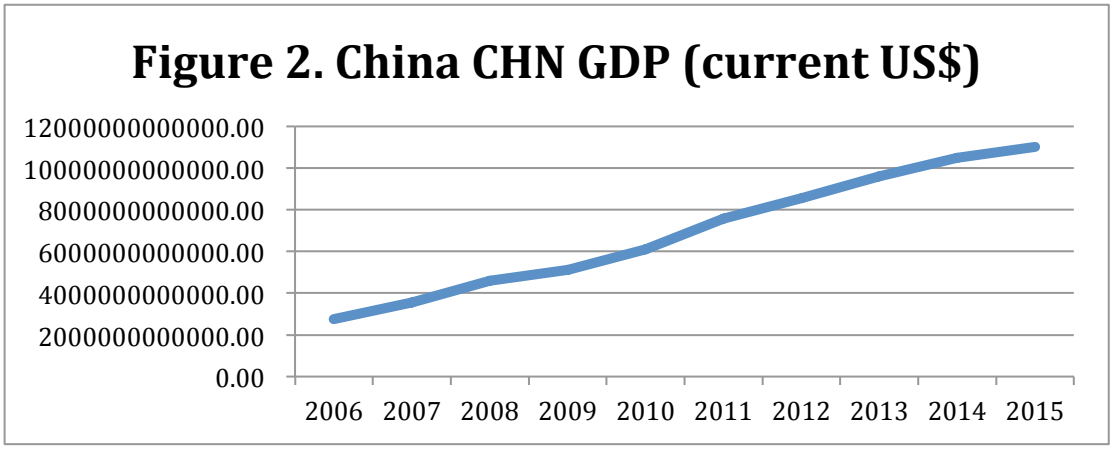
Gao Ziping (2012) argued that R&D investment is one of the main reasons of global talent mobility, for example, the R&D investment in EU sustainable decreased in recent years, caused the talents from EU and other developed countries to the United States.(Gao Ziping, 2012). National Bureau of Statistics of China released that since the 18th National Congress, China's R & D investment has increased significantly, the original innovation capacity has been improved, scientific and technological output fruitful, enterprise innovation vitality competing burst, scientific and technological innovation for the economy.

China's R & D investment came into a new level, according to preliminary statistics, the total investment in research and development in 2015 was 1.4 trillion RMB, shows an increase of 38.1% over 2012, an average annual growth of 11.4%; according to the exchange rate, China's R & D expenses after 2010 are more than Germany, in 2013 are more than Japan.(Ed Bernstein, 2016) At present, China has become second largest R & D investment into the country only behind America. China's R & D expenditure rate in 2015 (R & D expenditure to GDP ratio) was

2.10%, 0.17 percentage points higher than in 2012, has reached the level of middle developed countries, ranking the forefront of developing countries. Some scholars argued that the huge investment of R&D of government leads an increasing number of talents return to China, and mainten the current talents in MNEs, prevent talent loss from Chinese companies to other countries. (Zhou Qin, 2012; Zhou Feng, 2010)

(2) States economic development

Most of the researchers stressed that the economic development is the most significant reason to attract overseas talents to developing countries. Economic development of China in recent years is sustainable, and the GDP of China is increasing with a high percentage than most of the other countries in the world, espacially after the economic depression of 2008. This situation caused a large amount of talent working or studying abroad are more willing to go back to China to find jobs(Gao Na, 2014).



Source: The research on the international talent mobility in China under economic globalization

(3) States politicies of talents attraction

The country policies play an important role in attracting talent return back to achieve brain gain and brain circulation. Therefore, with the advent of the era of knowledge economy, countries pay more and more attention to talent, in order to compete for talent----the most

important resource, countries have increased the attractiveness of talent with advanced international experiences. Wei Lin (2013) argued that talent competition is the theme of fundamental competition in the future around the world. Therefore, the formulation of policies to attract talent, is conducive to increase the talented returnees and promote brain circulation in China. Wei and Zhang (2013) argued that talent is an important productive force, is the core of comprehensive national strength, thus there's the requirement for China to make policies to eliminate the barriers of brain gain and brain circulation.

Many years before, government worried about the talent loss in China, therefore, in 1992 Chinese government began to attract overseas talents come back. To achieve this, government adopt a policy named "diaspora option" in order to let overseas talents contribute to China's economic development. This policy allowed educational migrants, who prefer to stay overseas, participate in the economic and scientific development without coming back to China(Zweig, Fung, Han, 2008).

In recent years, in response to the world "talent war", China has developed a more active international talent attraction plan. China initiated "the Recruitment Program of Global Experts" (known as "the Thousand Talents Plan") since the end of 2008, and this plan will spend 5 to 10 years, in accordance with the national development strategy objectives and requirements, in the national key innovation projects and multinational enterprises. Under this program, a sum of 500,000 RMB shall be granted by the governmental budget to every talent, and research subsidies, varying from 1 million to 3 million RMB, shall be allocated for these talents. What's more, working conditions and living welfare shall be offered according to everyone's special situation(Zheng Yan, 2013).

In 2011 and on this basis, launched the "private thousands of people plan", focusing on

attracting non-Chinese foreign experts. Talents shall enjoy the preferential policies of it in terms of exit and entrance, residence, medical care, insurance, housing, tax, salary, 1 million RMB individual subsidies and 3-5 million RMB research subsidies in basic science research(Zheng Yan, 2013).

In addition, at the end of 2012 China issued a "foreigners in China permanent residence to enjoy the relevant treatment approach", which highlighted the specific rights and obligations the holders of China's "green card" of foreigners can enjoy.

3.3. Research gap and research questions

According to the relevant researches about talent mobility, we found that some of the scholars studied about the factors influencing outflow of talent mobility from China, some of them studied the factors of inflow of talent mobility to China. There's lack of research concentrating on the factors influencing global talent mobility from both direction (outflow and inflow) in Chinese MNCs. What are the important repulsion factors and what are the attraction factors?

The research questions of this thesis are:

(1) What are the factors influencing global talent mobility in Chinese MNCs?

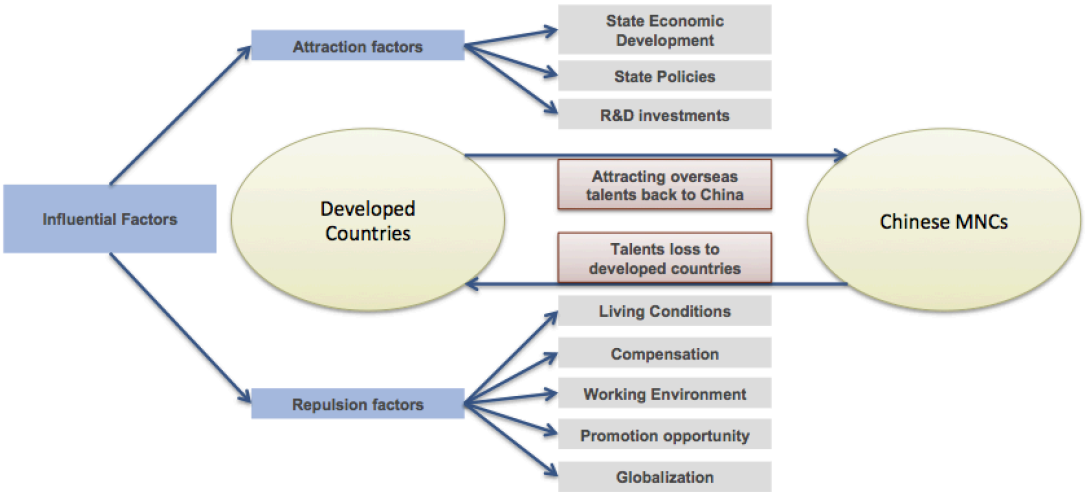
This question consist two phenomenons of global talent mobility, which accurs in Chinese MNCs: (1) The repulsion factors leading to outflow of global talent mobility(brain drain) in Chinese MNCs to foreign countries. (2) The attraction factors influencing inflow of global talent mobility in Chinese MNCs from foreign countries.

(2) What are the trends of global talent mobility in Chinese MNCs?

3.4. Framework

All the potential influential factors we summarized from previous researches are as

following:



According to the literature review of global talent mobility in China, we summarized all the 8 potential influential factors, we supposed these factors can be categorized into repulsion and attraction factors which will influence on Chinese multinational companies. By using the one sample t test, to figure out which factors lead to talent loss(repulsion factors), which factors attract overseas talents back to Chinese multinational companies(attraction factors), which factors are insignificant influential factors.

Chapter 4. Empirical analysis

4.1. Methodology

4.1.1. Empirical object selection:

Empirical object of this study is the Chinese HRs of MNCs, who know the global talent mobility situation clearly than anyone in the Chinese multinational company. What's more, it is not possible to find the talented employees, who have already resigned from Chinese multinational companies and now work in the foreign countries randomly, because it's difficult to select targeted countires, where the talents work in; and you can not insure from what kind of Chinese multinational companies they resigned. The questionnaires will be sent to 50 HRs of Chinese mulinational companies randomly.

The way for this study to connect HRs of Chinese MNCs: Relevant agency provides paid services to help to connect with HRs of MNCs, and collect the data. Wenjuanxing is an online questionnaire agency. The function mainly include online questionnaire survey, assessment and voting platform. They can not only help clients send the questionnaire to the target group but also help clients design questionnaire, collecting data, analysis data. Wenjuangxing have cooperate with more than 90% of Chinese university, multinationals and research institutions. They can contact to specific target respondents according to client's requirement. It is a convenience way for us to find adequate number and quality of client in a short time.

All of the repulsion and attraction factors as well as the potential trends of global talent mobility were selected from relevant literature review to explore which of the factors are influencing the global talent mobility in Chinese multinational companies currently, and what are the trends of global talent mobility now. All of the 50 sample questionnaires were collected successfully, and constituting 100% response rate.

Of the sample, 32% HRs were from information, sofrware companies, 22% HRs were from energy companies, 14% were from financial companies, 12% were from transportaion, storage, post industy, 8% from construction industry, 4% from manufacturing industry, 4% from real-estate industry and 4% HRs were from scientific research and technical service companies.

Table 1. Industry Distribution of the sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	2	4.0	4.0	4.0
	Energy	11	22.0	22.0	26.0
	Construction	4	8.0	8.0	34.0
	Transportation, storage, Post	6	12.0	12.0	46.0
	Information, software	16	32.0	32.0	78.0
	Financial	7	14.0	14.0	92.0
	Real-estate	2	4.0	4.0	96.0
	Scientific research and technical service	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

About the size of the Chinese multinational companies in our sample, 58% companies' size according to the number of employees are 1000-5000, 36% companies own 5000-10000 employees, and only 6% companies own less than 1000 employees.

Table 2. Company Size Distribution of sample(Number of Employees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	＜1000	3	6.0	6.0	6.0
	1000-5000	29	58.0	58.0	64.0
	5000-10000	18	36.0	36.0	100.0
	Total	50	100.0	100.0	

Of the location distribution of the sample, 46% Chinese multinational companies'

headquarters were located in the first-tier cities(Beijing, Shanghai, Guangzhou, Shenzhen), 48% were in the capital of proviences, and only 6% were located in the general cities in China.

Table 3. Location Distribution of the sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	First-tier cities	23	46.0	46.0	46.0
	Provience capital	24	48.0	48.0	94.0
	Other	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

4.1.2. Research design (methods)

We are going to use a questionnaire including repulsion, attraction factors and potential trends of global talent mobility for Chinese multinational companies. In this research we are going to use the Likert scale questionnaire to collect respondents' answers, espacially use the 7-point scale:

For the repulsion and attraction factors, we designed 7-point scale as following: Strongly attraction overseas 7, attraction overseas - 6, attraction overseas somewhat - 5, Undecided - 4, attraction to China somewhat - 3, attraction to China - 2 and strongly attraction to China - 1.

For the "potential trends" block, we designed 7-point scale as following: Strongly agree-7, agree - 6, agree somewhat - 5, biopolar - 4, disagree somewhat - 3, disagree - 2 and strongly disagree- 1.

Questionnaire consists of several parts, among them, one is profile for basic information; there are two blocks are the influencing factors of global talent mobility in companies----repulsion, attraction factors; the last block is trends of global talent mobility in Chinese MNCs. All of the repulsion, attraction factors as well as the potential trends of global

talent mobility were selected from relevant literature review.

(1) The "Repulsion factors leading talent loss overseas" Block

Five factors are designed in this block, they are "compensation factors", "promotion opportunity factors", "work environment factors" and " living condition factors" and "globalization", which may lead to the talent loss from Chinese multinational companies to foreign countries.

Under each factor, there are 3 statements. Therefore in this block, there will be 12 statements, which are need to be scored by respondents.

(2) The "Attraction factors" Block

Three factors are designed in this block, they are "state economic development", "relevant policies attracting talents" and "R&D investment", which may attract overseas talents back to Chinese multinational companies. Under each factor, there are 2 or 4 statements. Therefore in this block, there will be 8 statements, which are need to be scored by respondents.

(3) The trends of global talent mobility in Chinese multinational companies

There are totally 3 designed trends, which may be occurred in Chinese multinational companies. First is "The amount of talent loss is larger than the amount of oversea talent attraction in Chinese multinational companies.", second trend refers to "The amount of talent loss of males is larger than the amount of female brain drain in Chinese multinational companies.", the last one is "The married talented employees are more likely to resign from our company and find job in foreign countries rather than unmarried talented employees".

After the collection of data, it's nessessary to do some analysis by SPSS 16.0 to certify that: (1) Whether "Living Condition", "Compensation", "Working Environment", "Promotion Opportunity" and "Globalization" are the repulsion factors leading to brain drain from Chinese

MNCs to foreign countries? (2) Are the "State Economy", "Attracting Policies" and " R&D investment"the positive or attraction factors attracting overseas talents? (3) Which of trends listed in the questionnaires are approved by respondents?

One sample t-test

For the data analysis we got inspiration from the article of "An Analysis of Factors Preventing and Reversing Brain Drain Phenomenon in Khyber Pakhtunkhuwa: Evidence from Education Sector"(FK Afridi, W Afridi, 2016), the article " Factors Driving Brain Drain in Pakistan: An Exploratory View"(Muhammad et al, 2012), and the article "The accounting brain drain"(Ryan Pengelly et al, 2008). All of the three articles used the one sample t-test to find what kind of factors have influence on global talent mobility based on the data of Likert scale scores. This analysis method is taken by us to explore which are the influential repulsion factors of talent loss, which are the influential attraction factors and what are the trends of global talent mobility in Chinese multinational companies currently.

In order to figure out the influential factors, we used the one sample t test to compare the mean of each repulsion factors(living condition, compensation, globalization, work environment and promotion opportunity), the mean of each attraction factors(state ecomonic development, state policies and R&D investment), the mean of 3 trends variables separately with the hypothesised test value—4, which represents the midpoint on the biopolar 1-7 response Likert scale. Then we got the answer whether they are significantly different from the "4" test value, and the test were done at 95% confidence level.

4.2. Findings and discussion

Questionnaire reliability

Before the data analysis, Cronbach's alpha are used to test the reliability of the

questionnaire. Generally, the range of cronbach's alpha are divided into several parts show different rate of reliability respectively: When 0.5 ＞ α，the internal consistency of data are unacceptable. When 0.6 ＞α≥0.5，the internal consistency of data are poor. When 0.7 ＞α≥0.6，the internal consistency of data are questionable. When 0.8 ＞α≥0.7, the internal consistency of data are acceptable. When 0.9 ＞α≥0.8, the internal consistency of data are good. When α≥0.9, the internal consistency of data are excellent. The chart below show the results of reliability test:

Table 5. The reliability test of questionnaires

Effect on talent mobility	**Variables (factors)**	**Number of items**	**Cronbach's alpha**
Repulsion (negative)	Living Condition	3	0.866
Repulsion (negative)	Compensation	3	0.868
Repulsion (negative)	Promotion Opportunity	3	0.910
Repulsion (negative)	Work Environment	3	0.864
Repulsion (negative)	Globalization	3	0.824
Effect on talent mobility	**Variables (factors)**	**Number of items**	**Cronbach's alpha**
Attraction (positive)	State economic development	2	0.725
Attraction (positive)	Policies of Attraction	2	0.766
Attraction (positive)	R&D Investment	4	0.887
Trends of global talent mobility	**Variables**	**Number of items**	**Cronbach's alpha**
Trends	Trends of global talent mobility	3	0.851

We can get the conclusion from the chart: the reliability test of "Promotion opportunity" results in Cronbach's alpha 0.91 (excellent internal consistence). The "Living condition, compensation, the trends of global talent mobility, R&D investment, work environment, globalization" run through the reliability test resulted in good internal consistence. The reliability test of "States Economic Development, Policy Attraction" results in Cronbach's alpha in acceptable internal consistence.

4.2.1. Findings of the factors in Chinese MNCs

Table 6. One-Sample Statistics of Repulsion Factors

	N	Mean	Std. Deviation	Std. Error Mean
LivingConditions	50	4.5467	1.62849	.23030
Globalization of China	50	4.3200	1.41735	.20044
Compensations	50	4.5867	1.77991	.25172
PromotionOpportunity	50	4.7000	1.91219	.27042
WorkEnvironments	50	4.8067	1.72627	.24413

Table 7. One-Sample Test of Repulsion Factors

	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
LivingConditions	2.374	49	.022	.54667	.0839	1.0095
Globalization of China	1.596	49	.117	.32000	-.0828	.7228
Compensations	2.331	49	.024	.58667	.0808	1.0925
WorkEnvironments	3.304	49	.002	.80667	.3161	1.2973
PromotionOpportunity	2.589	49	.013	.70000	.1566	1.2434

Finding 1: Repulsion factors causing talents overseas from Chinese MNCs

Only “living conditions” “compensation” “promotion opportunity” and “work environment” repulsion factors show the signigicance, but “globalization” factor is insignificantly repulsion talent overseas from Chinese MNCs. Moreover, the “work environment” is the most significant factor causing talent loss overseas from Chinese MNCs, not the tranditional key factor----“compensation”.

Table 7 computes the significance of repulsion factors causing talent loss which we

summarized from literature review. The one sample t test used 4 as the tested value. If the significance (p value) of the factor is > 0.05, then we got result that this factor is insignificant to push talent from Chinese MNCs. If the significance (p value) of the factor is < 0.05, and the mean difference > 0, then we got result that this factor significantly shows the repulsion effect in Chinese MNCs to lead talent loss to foreign countries.

For "living conditions" factor, the significance is 0.022, which means the p value < 0.05, thus we can reject the null hypothesis: "living conditions" mean is equal to the hypothesized test value 4. Then we can state that there is a significant defference between mean of "living conditions" and midpoint of 7 points Likert scale—4. The mean difference between living conditions and test value is 0.547 > 0, it is positive, we got conclusion that the mean of living conditions is about 0.547 higher than 4, which means that HRs of Chinese MNCs agreed that living condition is a push factor leading talents leaving from Chinese multinational companies. Thus, we got conclusion that living condition as a repulsion factor leads to talent loss from Chinese MNCs to foreign countries.

For "compensation" factor, the significance is 0.024, which means the p value < 0.05, thus we can reject the null hypothesis that "compensation" mean is equal to the hypothesized test value 4. The mean difference between mean of compensation and test value is 0.587, since this mean difference > 0, it is positive, we got conclusion that the mean of compensation is about 0.587 higher than 4, which means that HRs of Chinese MNCs agreed that compensation is a repulsion factor leading to talent loss overseas from Chinese multinational companies. Thus, we got the conclusion that compensation is a significant repulsion factor leads to talent loss from Chinese MNCs to foreign countries.

For "work environment" factor, from the significance we could know that p value is 0.002,

smaller than 0.05 , thus we can state that there is a significant defference between mean of "work environment" and midpoint 4. The mean difference between mean of work environment and test value is 0.807, since this mean difference > 0, it is positive, we got conclusion that the mean of work environment is about 0.807 higher than 4. Thus, we got conclusion that work environment as a repulsion factor leads to outflows of Chinese talents from Chinese MNCs to foreign countries.

For "promotion opportunity" factor, from the significance we could know that p value is 0.013, thus we can state that "promotion opportunity" has significant influence on global talent mobility. The mean difference between promotion opportunity and test value is 0.7, since this mean difference > 0, it is positive. Thus, we got conclusion that promotion opportunity as a repulsion factor significantly leads to outflows of Chinese talents from Chinese MNCs to foreign countries.

For "globalization" factor, from the significance we could know that p value is 0.117 > 0.05, thus we can state that "globalization" has no significant influence on global talent mobility.

Finding 2. Attraction Factors of attracting talents to Chinese MNCs

Table 8. One-Sample Statistics of Attraction Factors

	N	Mean	Std. Deviation	Std. Error Mean
StateEconomicDevelopment	50	2.8600	1.58771	.22454
StatePolicies	50	3.4800	1.76404	.24947
RDinvestments	50	3.0400	1.58143	.22365

Table 9. One-Sample Test of Attraction Factors

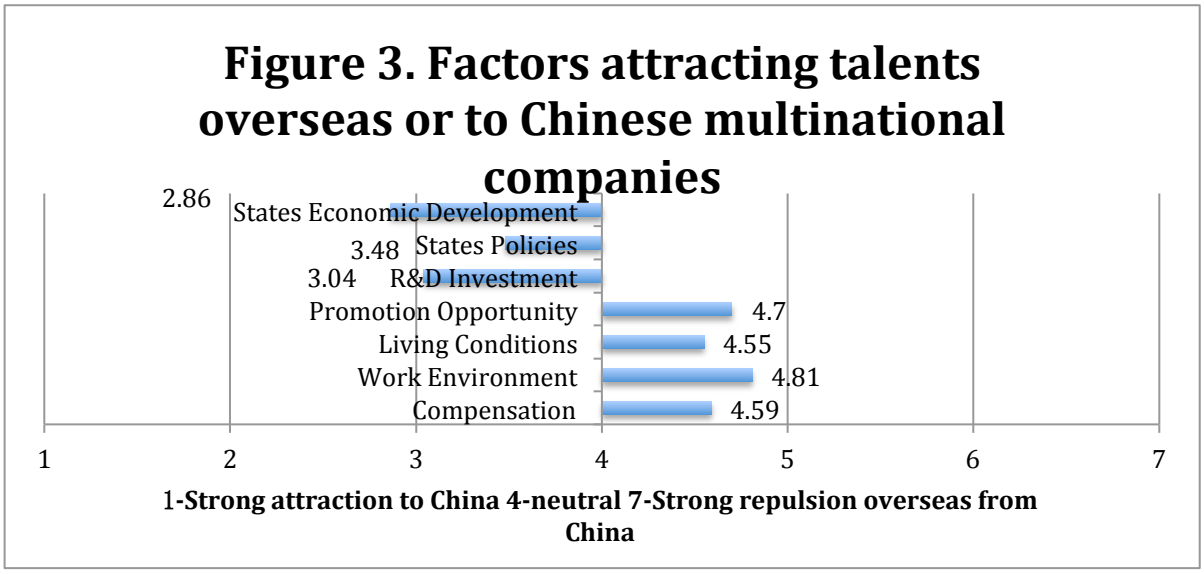
	Test Value = 4

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
StateEconomicDevelopment	-5.077	49	.000	-1.14000	-.6888	-1.5912
State Policies	-2.084	49	.042	-.52000	-.0187	-1.0213
R&D Investment	-4.292	49	.000	-.96000	-.5106	-1.4094

As we see from Table above, from the significance of "state economic development" we could know that p value is < 0.001, thus we can reject the null hypothesis that "state economic development" mean is equal to the hypothesized test value 4. Then we can state that there is a significant defference between mean of "state economic development" and midpoint of Likert scale—4. The mean difference between state economic development and test value is -1.14, since this mean difference < 0, it is negative, we got conclusion that the mean of state economic development is about 1.14 lower than 4, which means that HRs of Chinese MNCs agreed that state economic development is an attraction factor attracting overseas talents to Chinese multinational companies. Thus, we got conclusion that state economic development as an attraction factor attracting overseas talents back to Chinese MNCs.

For "States Policies", significance p value is 0.042, which is < 0.05, , thus we can reject the null hypothesis that "state policies" mean is equal to the hypothesized test value 4. Then we can state that there is a significant defference between state policies and midpoint of Likert scale—4. The mean difference between state policies and test value is -0.52, since this mean difference < 0, it is negative, we got conclusion that the mean of state policies is about 0.52 higher than 4, which means that HRs of Chinese MNCs agreed that state policies is a attraction factor attracting overseas talents in Chinese multinational companies. Thus, we got conclusion that state policies as a attraction factor attracting overseas talents back to Chinese MNCs.

For “R&D investment”, significance p value is< 0.001, thus we can reject the null hypothesis that “R&D investment” mean is equal to the hypothesized test value 4. Then we can state that there is a significant defference between mean of R&D investment and midpoint of Likert scale—4. The mean difference between R&D investment and test value is -0.96, since this mean difference < 0, it is negative, we got conclusion that R&D investment as an attraction factor attracting overseas talents back to Chinese MNCs.



In conclusion, living condition, promotion opportunity, work environment and compensation are the significant repulsion factors leading talent loss overseas, which are corresponded with the repulsion factors from literature review. The states economic development, states policies and R&D investment are confirmed as repulsion factors based on the argument of literature. The controversial part is “globalization” is insignificant repulsion factor, which is different from the literature.

Finding 3. Trends of global talent mobility in Chinese multinational companies

Potential trends of global talent mobility, which we want to test in Chinese MNCs :

T1: “The amount of talent loss is larger than the amount of oversea talents gain in Chinese

multinational companies."

T2: "The amount of talent loss of males is larger than the amount of female talent loss in Chinese multinational companies."

T3: "The married employees are more likely to resign from our company and find job in foreign countries rather than unmarried employees".

Table 10. One-Sample Statistics of trends of global talent mobility

	N	Mean	Std. Deviation	Std. Error Mean
T1	50	5.0400	2.04999	.28991
T2	50	4.8400	1.85560	.26242
T3	50	4.4000	1.72615	.24411

Table 11. One-Sample Test of trends of global talent mobility

	Test Value = 4					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
T1	3.587	49	.001	1.04000	.4574	1.6226
T2	3.201	49	.002	.84000	.3126	1.3674
T3	1.639	49	.108	.40000	-.0906	.8906

For the trends of global talent mobility in Chinese multinational companies, we set 3 questions to ask HRs to answer, because these 3 trends are the most popular and significant in China currently. First trend (T1) is "The amount of brain drain is larger than the amount of overseas talent gain in Chinese multinational companies.", the second trend (T2) is "The male employees are more likely to resign from Chinese MNCs and find job in foreign countries rather than female employees.", and T3 refers to "The married employees are more likely to resign

from our company and find job in foreign countries rather than unmarried employees."

As we see from Table above, for Trend 1, from the significance we could know that p value is 0.001, thus we can reject the null hypothesis that "T1" mean is equal to the hypothesized test value 4. Then we can state that there is a significant defference between mean of "T1" and midpoint of Likert scale—4(We used 7 point Likert scale: 1—strongly disagree, 7—strongly agree).

The mean difference between T1 and test value is 1.04, since this mean difference > 0, it is positive, we got conclusion that the mean of T1 is about 1.04 higher than 4, which means that HRs of Chinese MNCs agreed that the amount of brain drain is larger than the amount of brain circulation in Chinese multinational companies. Thus, we got conclusion that the amount of brain drain is larger than the amount of oversea talents attraction in Chinese multinational companies.

To analyze Trend 2, from the significance we could know that p value is 0.002, thus we can reject the null hypothesis that "T2" mean is equal to the hypothesized test value 4. Then we can state that there is a significant defference between mean of "T2" and midpoint of Likert scale—4(We used 7 point Likert scale: 1—strongly disagree, 7—strongly agree).

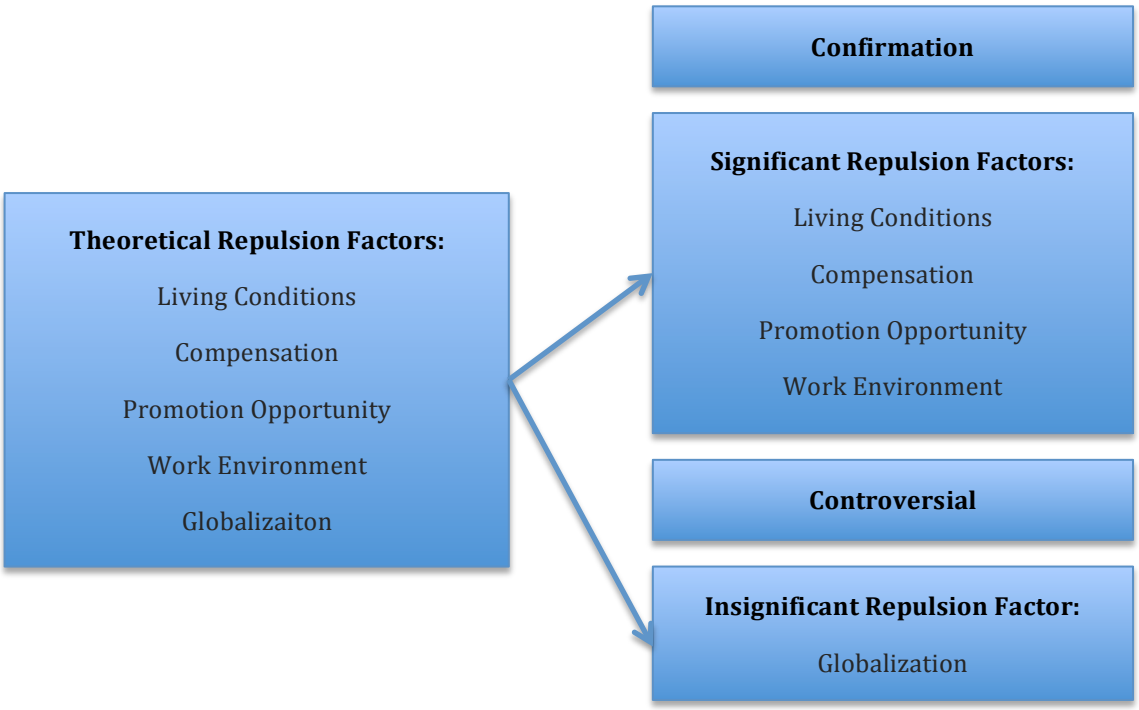
The mean difference between T2 and test value is 10.84, since this mean difference > 0, it is positive, we got conclusion that the mean of T1 is about 0.84 higher than 4, which means that HRs of Chinese MNCs agreed that the amount of brain drain of males is larger than the amount of female brain drain in Chinese multinational companies. Thus, we got conclusion that the amount of brain drain of males is larger than the amount of female brain drain in Chinese multinational companies.

To analyze Trend 3, from the significance we could know that p value is 0.108, which

is >0.05, thus we can accept the null hypothesis that "T3" mean is equal to the hypothesized test value 4. Then we can state that there is NO significant difference between mean of "T3" and midpoint of Likert scale—4. It means that HRs of Chinese MNCs agreed that marital status have no influence on global talent mobility trends.

Therefore, we got the conclusion that the trends of global talent mobility in Chinese multinational companies are: the amount of brain drain is larger than the amount of brain circulation in Chinese multinational companies; the male employees are more likely to resign from Chinese MNCs and find job in foreign countries rather than female employees.

Discussion 1. Only "living conditions" "compensation" "promotion opportunity" and "work environment" theoretical repulsion factors show the significance to lead talent work overseas, and "work environment" is the most significant factor causing talent loss overseas from Chinese MNCs, however, "globalization" factor is insignificantly leading talent overseas from Chinese MNCs.



According to the theoretical factors of talent loss from Chinese MNCs overseas, which we discussed in the literature review of China, we summarized that there are 5 factors "compensation, living condition, working environment and promotion opportunity, and globalizaiton" significantly lead to the talent loss overseas from China.

However, after we certified by related t test, we confirmed that only 4 factors "compensation, living condition, working environment and promotion opportunity," significantly lead to the talent loss overseas from Chinese multionational companies, and "work environment" is the most significant factor causing talent loss overseas from Chinese MNCs. Moreover, we found that the controversial factor is "globalization", because we tested that "globalization" is insignificant push factor for Chinese MNCs.

"Work environment" is the most significant factor leading to talent loss in Chinese multinational companies

Different from the argument that "compensation" is the most significant influential factor causing talent loss overseas(Wei Lin, 2013; Wu Xuean, 2014), the t test result of our study stressed that "work environment" is the most influential factor, which p value is 0.002, mean is 4.81, far significant than "compensation" mean, which is only 4.59.

The work environment factor generally invovle surrounding conditions, such as equipments and facilitiy; flexible working schedules, and the interactions with peers, subordinates, and managers.(Collings, 2014) Many scholars have stressed that the satisfaction of work envrionment can not only increase productiviy, creativity, but also reduce lawsuits.(Wu Xuean, 2014) Thus, in this era of talent competition, dissatisfaction of work environment is one of critical factors leading to brain drain in Chinese companies. Many researches releaved that the

shortage of working environment is a key reason to lead to brain drain in China. There are some Chinese special characteristic which are very important to be considered about work environment.

First is the narrow personal working space. 57% respondents employees of 106 Chinese multinational companies said that the small work space greatly affected productivity and satisfaction, 34% employees showed their dissatisfaction with the entertainment activities(Liu Y. and W. Fan, 2005). In Chinese companies the employees' individual working environment is lack of working space and even personalized layout. According to the Chinese enterprise staff report 2013，released by the Chinese academy of social sciences, the average individual working space of Chinese employees is about 2.7 to 3.3 square meters, which is really not enough. This does not meet the basic requirement, in offices, 4.65 square metres should be the minimum amount of floor space allowed for every person employed in any room in any companies.(BCO, Occupier density study, 2013)

Another significant characteristic is that generally Chinese employees are not allowed to relax and have entertainment activities during the daily work time in multinational companies.(Lai Desheng, 2015) According to the tranditional Chinese concept "No credit also has elbow grease", Chinese managers prefer to control and monitor the work process of employees, prefer to see the performance of employees during the every day work time rather than the results of employees. Thus, most of the employees are lack of relaxation and entertainment in Chinese muitinational enterprises.

In 2015, the generation born in the 80s entered the middle management level, even entered the top level of management, and the new force—the post-90s stared enter the labor market and began to become mainstream in Chinese companies. Different from the post 1960s, generation

Y(generation born after 1985) despise the traditional values of compliance, hard work and collectivism. Due to the impact of modernization, especially information and internet revolution, as well as the impact of One-Child policy, talented employees of post-80s who are more individualistic and ask for flexible working schedule and entertainment activities than the previous generation.

The last characteristic is that in China, there is lack of flexible working schedule. Due to the serious traffic congestion and the need to look after the older parents and children，Chinese employees prefer the flexible work schedual to balance work and life. Because of the One-Child policy, nowadays in China the married post-80s' family have 4 older parents and at least 1 child. According to data of state statistics bureau people republic of China, the proportion of only-child population of generation born after 1990 reached to 60.45% (male) and 67.35% (female) in urban area.

The iResearch consulting company released a Chinese working population insight report in 2015, in the research 77% employees dissatisfied with the working schedual, and worried about the conflict between work and family. As reported 82% Chinese companies adopt traditional work arrangements that require employees to work a standard 9 a.m. to 5 p.m(Lai Desheng, 2015).

According to the shortage of work environment, the Chinese multinational companies have to adopt flexible working schedual, provide larger personal space or entertainment activities. Flextime is widely adopted in some western companies nowadays, which involves a "core" time period of the work day(e.g., between 11 a.m. and 3 p.m.), and a "bandwidth" period within which all required hours must worked (e.g., between 5:30 a.m. and 7:30 p.m.)(Gariety et al. 2001) The working time without the "core" hours is the "flexible time", which allows staff to balance

the work and life, to coordinate their work hours with with the schedules of their children and parents.

"Promotion opportunity" leads to the brain drain in Chinese multinational companies

The result of test shows that promotion opportunity is one of the repulsion factor, which is corresponded with the argument by other researchers. The previous literature emphasized that lack of promotion opportunity is one of the factors influencing outflow of high skilled workers from Chinese MNCs to foreign countries. (Wei Lin and Xiangqian Zhang, 2013)

Guanxi is a social and economic tradition in China as a relationship oriented phenomenon. In the workplace, guanxi is somewhat like 'sucking up to the boss,' and it's usual to see figures elevated beyond their level of competence due to favorable relationships with their bosses. (Alvin M. Chan, 2012) This may be more obvious in state-owned enterprises than private businesses in China.

Promotion opportunity in Chinese companies is decided by the recommendation of managers, and the standards for the recommendation system is employees' grades of performance, attendance and other indicators strongly influenced by Guanxi.(Chu Xiaoping, 2002)

Nowadays, there are some Chinese multinational corporates still exist the phenomenon that a lot of relatives and acquaintances are employed. It have a great influence on employees' promotion and career development(Alvin M. Chan, 2012). There is an investigation shows that in the management level, 59.31% of the stuff have special relationship with companies' owner. They are relatives, friends or classmates of companies' owner or acquaintances of companies' owner. 89.74% of the CFOs are acquaintances of managers or CEOs in Chinese private companies. Only some employees from technical positions were selected from the social

recruitment(Zhou Lingxiao,2006). Moreover, an scholar Chu Xiaoping investigated that there are 24.8% of companies' owners said they prefer to run company with their parents, there are 26.6% of respondents are prefer to run company with their brothers, there are 18.4% of respondents are prefer to run company with their sons. It means that most of companies' owners are prefer promote their relatives for helping them to run the company (Chu Xiaoping, 2002).

As the phenomenon of Guanxi goes deep, the centralization of manager level will have a negative influence on employees' promotion or even career development since the employee will lose the right of decision making and bright future of career. Chinese multinational companies should adopt the promotion system according to the KPI, use the SMART criteria, which letters are refer to specific , measurable , attainable , relevant , time-bound; as well as avoid the subjective grades related to the Guanxi.

Why "living conditions" lead to the brain drain in Chinese multinational companies?

The result of test shows that living condition is one of the repulsion factor, which is corresponded with the argument by other researchers. In the literature review part, living condition is one of the importamt factors causing brain drain from China.(Ni Pengfei, 2010; Zhou Hongjian&Sun Yehong, 2012; Zheng Yan, 2013)

The investigation of Center of China and Globalization(CCG) showed that 70% immigrants agreed that the worsening air condition and insufficient medical resources is an important push factor, which made them decide to immigrate to developed countries. There are several reasons why HRs think living condition leads to brain drain in Chinese multinational companies.

First of all, nowadays, fog and haze have become an important environmental and development obstacle in China. According to the 2013 Beijing municipal health statistics, lung cancer is the highest percentage in the city's leading cause of death. Respiratory disease is the

fourth leading cause of death and the third cause of hospitalization in Beijing. In 2013, 20.68 million people were treated for emergency treatment for respiratory diseases in Beijing, direct medical cost (including registration, diagnosis and medical expenses, etc.) reached up to 2.58 billion yuan.(Cao & Han, 2015) and the indirect economic losses reached up to 3.12 billion yuan. (Table 12)

Table 12. 2010-2013 Indirect economic losses caused by fog and haze (Billion Yuan)				
Year	2010	2011	2012	2013
Indirect economic losses	2.85	2.93	2.98	3.12

Source: Database of World Health Organization

Secondly, the lack of medical resources doesn't satisfy the talents. WHO clearly put forward, in 2010 the total medical expense of low-income countries should reach 5% ~ 7% of GDP, while China was just reached the 5%, which means that investment in health in China is really insufficient.（Deng Feng et al., 2014）The report of World Health Statistics 2013 also showed that physician density in China was very low, every 10,000 people shared 14.6 physicians, the density is even lower than Russia and Brazil, which is 43.1 and 17.6 in 2012.(Deng Feng, Lu Juhong et al., 2014)

Moreover, high housing price has been an important factor in reducing the quality of people's living conditions in recent years in China. Let's take first-tier cities as an example to analyze housing price, because according to a survey by the Chinese academy of social sciences, more than 60% Chinese multinational companies are headquartered in first-tier cities(Shanghai, Beijing, Shenzhen, Guanzhou). The housing price increased from 37167 yuan per squre meter up to 54149 yuan from 2015 to Feb. 2017, and in 2017 the housing price in Shenzhen rise about 70% compared with the price in 2016. During the whole year of 2016, housing price increased about

45% in first-tier cities.(Dong Xin, 2016)

Aiming to ameliorate talents' attitude to living conditions, Chinese multinational companies should pay more attention on health conditions of employees, provide various allowance, such as medical subsidies, health checkup, at the same time pay more attention on housing issues, provide housing allowances or provide housing provision to talented employees.

Why "compensation" leads to the talent loss overseas in Chinese multinational companies?

Most of the researches have emphasise the shortage of compensation in Chinses companies, even in the multinational companies, is one of the dissatisfaction of talented employees in the literature review part.

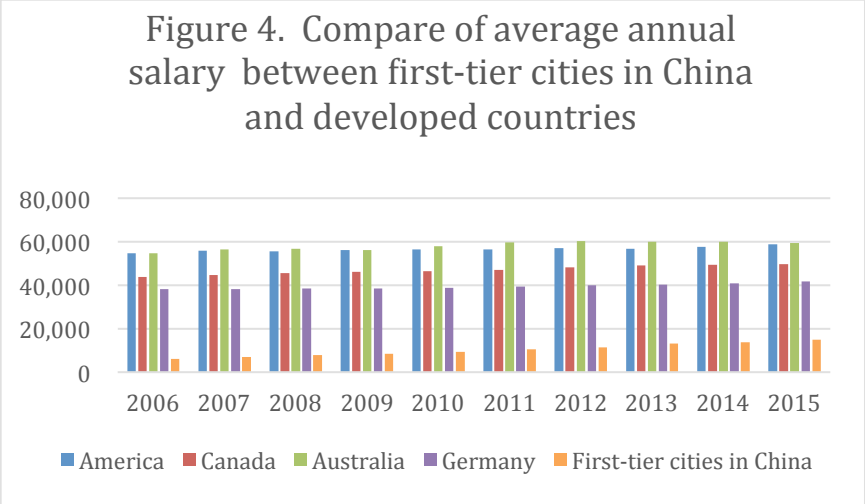
Compensation is always regarded as the main financial reason for causing brain drain in most researches about infuential factors of talent mobility. Compensation consists basic salary, various benefits, such as health insurances, dividends, various allowance, like housing, travel, meal; and the non-monetary components, such as vacation. (Collings,D.G. 2014)

Due to the influence of the traditional distribution system (socialist distribution system, egalitarianism) and the developed degree in China, the compensation system of Chinese multinational enterprises is not very reasonable. This situation is mainly manifested in the following aspects:

(1) The basic pay levels lack of external equity. Especially, the basic pay of Chinese multinational enterprises is generally low compared with non-Chinese enterprises.(Liu Yanli, 2011) In 2015, the annual salary in fastest developed cities of China is $15022, while the average annual salary level in America, Canada, Australia, Germany are $58714, $49590, $59407, $41716.2 The average annual wages are nearly 3 times more than wages in first-tier cities of

[2] Sources: OECD Database: Average wages; The National Bureau of Statistics of China

China. Based on Herzberg's motivation-hygiene theory, basic salary belongs to hygiene factors, if an employee is not satisfied with hygiene factor, this will seriously affect employees work enthusiasm, can lead to dissatisfaction with companies.(Herzberg F., 1968) So low base wages pay is a very important reason for the outward talent mobility in Chinese multinational companies.



Source: The National Bureau of Statistics of China

(2) There is a lack of internal fairness in compensation levels in Chinese companies. Under the influence of the traditional distribution system, there is also the idea of a serious egalitarianism phenomenon in China. As many researches emphasized, there is only a small compensation gap between ordinary employee and talented people. (Liu Yanli, 2011; Ma Jianmin et al. 2014) In specific, because China is a socialist country, the government has called on state-owned multinational enterprises to focus on reducing the compensation gap between managers and ordinary employees in the process of compensation reform in Chinese state-owned companies. This phenomenon did not reflect that, companies pay enough attention on talents' compensation, and this situation will affect the enthusiasm of enterprise talent. Thus, the dissatisfaction of compensation leads brain drain from these Chinese companies to foreign countires.

(3) There is lack of diversity of compensation . There are some Chinese companies, especially states-owned companies implemented the form of a "salary pay + bonus" as compensation system, however, most Chinese multinational companies use the compensation structure as “basic salary + bonus + subsidy”. There is a lot of inadequacy compared to the compensation of United States, including basic wages, bonus, welfare plan and stock income.(He Dongyi&Guangdong, 2011) This unsound compensation system is hard to retain talents in Chinese multinational companies .

Therefore, in order to improve the compensation situation, Chinese MNCs should provide higher basic wages for talented employees; provide more compensations for talented employees different from ordinary employees; increase the diversity of compensation to satisfy talented employees.

Why “Globalization” is insignificant factor causing talent loss from Chinese MNCs to foreign countries?

According to the theoretical factors cuasing talent loss overseas from Chinese MNCs, globalization of China promoted the outflow of Chinese talents(Liu, B.& L. Peng, 2015). But the test of our thesis didn’t support the previous findings, and show that “globalization” is insignificant influential factor causing talent loss in Chinese MNCs. The reasons is discussed as following:

Globalization and the entry to WTO has increased the degree of openness of China. Economic globalization has deepened the degree of interdependence and mutual penetration of the countries in the world. China has a high level of foreign trade dependence along the “reform and opening-up” strategy, reached 40.672% in 2015 (World Bank national accounts data). Between 2004 and 2013, China's OFDI rose 13.7 times from $45 billion to $613 billion. In 2016,

China's direct investment in North America soared 189% to $48bn, with 94% of those in the U.S. Direct investment in Europe also jumped by 90% to $46bn. (OECD National Accounts data)

Because of the increase of OFDI, Chinese multinational companies provide huge amount of expatriation opportunities for talented employees to work temporarily in various countries. This kind of expatriation opportunity attracts and retain talented employees working in Chinese MNCs. According to the report of the ministry of commerce of China, the destination of Chinese business expatriates are 41% Asia, 13% North America, 7% Oceania and 18% Europe in 2013.(Ni Pengfei, 2013) According to Expatriation Report of PwC China, talented employees in Chinese MNCs believe that giving an international assignment opportunity is an importan attraction to stay in companies, totally 75% employees said it was an important factor to attract and retain them.(Zheng Yan, 2013)

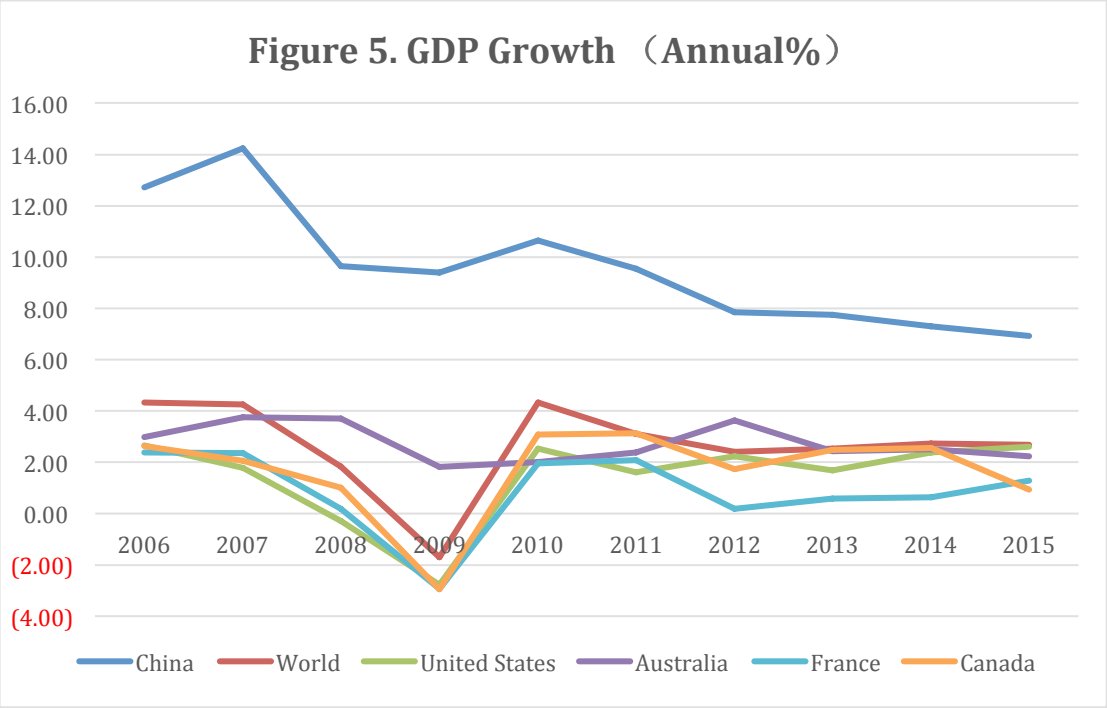
In conclusion, the results of the test show that, all the 4 factors "compensation, living condition, working environment and promotion opportunity" lead to the talent loss in Chinese multionational companies. What's more, the study shows that the work environment is the strongest repulsion factor, since the mean difference is 0.807, which is larger than any other factors. This finding is very different from the argument of previous literature review, which emphasized "compensation" is the strongest repulsion factor.

Discussion 2. "States Economic Development", "R&D investment" "States Policies" are the significant attraction factor attracting overseas talents back to Chinese MNCs.

Why "State economic development" attracts overseas talents in Chinese multinational companies?

Corresponded with previous argument that "states economic development" is the most significant repulsion factor, our study shows the states economic development is the most significant factor attracting talents. Most of the researchers stressed that the economic development is the most significant reason to attract overseas talents to developing countries.(Gao Na, 2014)

The economic development of China is steady growing in recent years. Although the speed of GDP growth now is not as high as years before, China still remains the fastest-growing G-20 nation, even though the Asian economy is no longer expanding at the pace it did a few years ago.(Hao Yanli, 2017) China's economy grew by 6.9% in 2015, which is higher than average world development level, especially, higher than the developed countries.(OECD) The fast growth of GDP shows to the oversea talented individuals that economic development of China will bring them opportunities and benefits during the career development process.



Sources: OECD Database, National Bureau of Statistics of China

Why "state policies" attract overseas talents in Chinese multinational companies?

The country policies always play an important role in attracting talent return back to achieve brain circulation.(Liu Xiaocan et al. 2014) Many years before, China's government worried about the "brain drain", therefore, at the beginning of 1992, government started attract overseas talents back to China.

After 2008, China initiated "the Recruitment Program of Global Experts", also known as "the Thousand Talents Plan", which plan will spend 5 to 10 years, in accordance with the national development strategy objectives and requirements, in the national key innovation projects and multinational enterprises. Under this program, a large amount of 500,000 RMB shall be granted to every talent and they will also get research subsidies, varying from 1 million to 3 million RMB, as well as working conditions and welfare.

Till 2013, the plan has attracted more than 4,180 high-level innovative entrepreneurial talents. The candidates come from well-known universities, research institutions and multinational enterprises in the developed countries of the United States, Britain, Germany, Japan and Canada. (Gao Ziping, 2012)

After 2008, first-tier cities and main provinces in response to "The Thousand Talent Plan" initiated local talents attraction plans. For example, in April 2009, Beijing initiated special plan "Beijing overseas talent accumulation project", which has already attracted 897 top-level talents.(Gao Ziping, 2012)

Tilll now, the talents attraction policies in China have the effect of eliminating the barriers of brain circulation, and successfully attracted huge amount of talents come back to work in Chinese multinational companies.

Why "R&D investment" attract overseas talents in Chinese multinational companies?

R&D investment is a key factor attracting oversea talent back to work in Chinese

enterprises, and R&D investment of government and investment of companies are the influential items attracting overseas talents in the Chinese multinational companies.(Hao Yanli, 2017) There are some evidences show how excellent the R&D development is in Chinese multinational companies to attract overseas talents:

According to the 2016 R&D Funding Forecast sponsored by Industrial Research Institute, the R&D investment of Chinese government has been increasing extremely in 2016, increased 6.3% reached up to $396 billion, compared with U.S. R&D investment(3.4% growth)(Ed Bernstein, 2016).

Moreover, except the government, the Chinese multinational companies also increased the R&D expense in recent years. The 2016 EU Industrial R&D Investment Scoreboard highlighted Huawei as one of the Chinese multinational companies ranked eighth around the world. US R&D investment accounted for 38.6% of the world, followed by Japan, Germany and China, Chinese enterprises increased by 24.7%, compared with the R&D investment in 2015. The Chinese MNCs' R&D investment took the global proportion of 5.9% from the previous year 2015 increased to 7.2 % in 2016(Ed Bernstein, 2016).

In order to attract more overseas talents coming back and finding jobs, Chinese multinational companies should maintain sustained and steady growth of R&D investment, as well as increase the research projects and research centers or labs.

Therefore, the study confirms that the 3 factors "R&D, States policies and states economic development" lead to the talent attraction in Chinese multionational companies. What's more, the study shows that the "policies" is the weakest attraction factor, since the significant is 0.042, which is large bigger than the significant of other factors(both R&D and Economic Development's significance are smaller than 0.001).

Discussion 3.

Repulsion factors causing talent loss from Chinese companies to foreign countries	*Attraction factors attracting oversea talents to work in Chinese companies*
Compensation	States Economic Development
Promotion Opportunity	States Policies of talent attraction
Working Environment	The R&D investment
Living Conditions	

According to the number of investigated influential factors, the number of repulsion factors is more than attraction factors. As analyzed of the significant influential power of all the factors by t test, the study shows that there are 4 factors have significant repulsion effect on talent losses from Chinese MNCs to foreign countries; while there are only 3 factors have the attractive effect on talents attraction to Chinese MNCs. Therefore, we could say that repulsion factors dominate among all the influential factors(repulsion and attraction) of global talent mobility in Chinese MNCs. This argument didn't be mentioned in the previous researches.

Repulsion factors are more related to organizational environment, which are internal factors; while attraction factors are more related to external government, GDP and policies. According to the result of repulsion factors, "compensation", "promotion opportunity", "working environment" are all the internal factors, which are related to the situation of the companies, only "living condition" is a social environment factor. According to the result of attraction factors, "states economic development", "states policies" and "R&D investment" are all related to states level

factors.

This finding shows that changing the talents losses situation is the Chinese multinational companies' responsibilities. What's more, based on the type of all the factors, we found that the best way for Chinese multinational companies to deal with the talents losses during the global talent mobility is to take actions to improve the organizational level factors.

The trend of "the amount of loosed talents is larger than the amount of attracted overseas talents in Chinese multinational companies" is supported by the fact that repulsion factors dominate among all the influential factors.

There are 4 significant repulsion factors and 3 significant attraction factors attrctinng overseas talents back to Chinese MNCs. This non-equilibration of attraction and repulsion factors leads the stronger repulsion effect, which inevitable leads to the trend that talent loss is more than talent attraction.

Discussion 4. Why male talented employees are more likely to work in foreign countries rather than females?

Firstly, the objective demographic reason that the amount of male employees is larger than female employees in Chinese companies caused this trend. China's one-child policy, which began in the 1980s, has left China's gender imbalance. According to the population census of Chinese government in 2014, in terms of gender structure of China, the number of men in the population is 0.7 billion, the female population is 0.67 billion, and the total sex ratio is 105.06 (100 for women)(Jiang Jiajiang, 2015).

Secondly, women's attention to the social culture atmosphere is much higher than men. Females usually pay more attention on inheritance of traditional culture and the spiritual and cultural ties, therfore, female high-skilled employees are less likely than males to leave their

cultural society and immigrate to other countries. According to Gao Ziping's (2012) research, there are 27.1% female high-skilled employees from 176 Chinese companies are willing to immigrate to more developed countries, however, 36.8% males show this aspiration.

The rest reasons are extremly related to repulsion factors which we tested before. In Chinese society, there is a phenomenon that males usually take more stress, which is existing in most Asian countries. The scholar Gu Hui even investigated that male talented employees take more stress from financial, working, social and family aspects(Gu Hui, 2013).

Work Environment----"Working overtime" is a special enterprise culture in Chinese and other East Asian companies, a survey intestigated with more than 60% employees pointed out they have to work extra time on weekdays and 40% having to do so on the weekends in 2015(Jiang Jiajiang, 2015). According to an investigation of 3264 employees in Chinese companies, the author argued than the average working minutes per day for male employees in China is 510.5 min, for female employees is 476 min, this leads to proportion of home-work conflict for males (61.9%) higher than female employees (52.3%)(Jiang Jiajiang, 2015). According to the statistics of government, in 2009, Chinese employees work more than 44 hours per week, which is higher than the maximum working time stipulated by the state, in specific, the statistics also pointed out that male employees work longer than females(Lai Desheng et al. 2015)

Promotion Opportunity----In China, women's competitive advantage has been gradually revealed in their careers, women's income growth in the past 20 years is 105 times that of men, and the ratio of women among the senior leadership is also rising year after year, and the average proportion of females in the senior leadership in China is as high as 49.9%, compared with the data in Asia----39.0%(Wang Chen, 2010). What's more, the average age of female managers is

younger than the age of male managers. Therefore, the male talents faced not only financial stresses these years, but also meet the promotion problems because of the higher competitiveness of females.

Living condtion and compensation----The extravagant housing prices and incomes continuee the pressure on male talented employees in China. According to the tranditional marriage custom, the males take the housing buying pressure in China. Dong Xin (2016) emphasized in his research that the Housing Price-to-Income Ratio (PIR) have heavy positive effect on migration intentions in China, and he investigated the PIR in China is 22.35, which is extremly higher than PIR in developing countries's reasonable number(4—6).(Dong Xin, 2016) And this leads to high intention for Chinese high-skilled workers, especially males, to migrate to other countries.

Therefore, the dissatisfaction of compensation, working environment, promotion and living conditions are obviously the repulsion factors leading more male talented employees to find job in foreign countries.

Conclusion

Of concern to the factors and trends of global talent mobility in Chinese multinational companies, we figured out the conclusion of the research questions: This study aimed to investigate what are the repulsion factors leading talent loss and attraction factors of attracting overseas talents during the global talent mobility process in Chinese multinational companies; as well as to investigate what are the trends of global talent mobility in Chinese MNCs.

To solve the research questions, we summarized the relevant literature review of China, then found out the repulsion factors and attraction factors of talents during global talent mobility may be influential in Chinese MNCs, which a lot of scholars discussed before: (1) "globalization", "living conditions", "compensations", "working environments" and "promotion opportunity" are considered as repulsion factors to investigate. (2) "state economic development", "state policies" and "R&D investment" are considered as attraction factors attracting overseas talents to investigate in this research.

After using one sample t test to analyze the data of questionnaires answered by 50 HRs of Chinese multinational companies, we confirmed that "living conditions", "compensations", "working environments" and "promotion opportunity" are the repulsion factors leading talent loss in Chinese MNCs, but the result of "globalization" didn't support the previous argument, the study emphasized that "globalization" is insignificant repulsion factor of global talent mobility in Chinese MNCs; and we also confirmed that "state economic development", "state policies" and "R&D investment" are the attraction factors attracting overseas talents.

Another controversial part between this study and previous researches is that the study shows that "working environment" is the strongest repulsion factor leading to the talent loss in Chinese multinational companies, which is different from the argument of previous researches.

According to the literature review, most researches emphasized “compensation” as the financial factor is the strongest power leading talent loss, however, in this thesis “compensation” is just the third powerful repulsion factor, according to the agreement degree of respondents.

According to the number of investigated influential factors, the number of repulsion factors is 4, which is more than the number of attraction factors(only 3). This discover strongly supports the investigated trend “talent loss is more than talent attraction in Chinese MNCs”.

Repulsion factors are more related to organizational environment, which are internal factors, which companies can take action to improve the situation; while attraction factors are more related to external government, GDP and policies. This finding shows that it is the Chinese multinational companies’ responsibilities to change the talents losses situation in the aspects of “compensation”, “work environment” and “promotion opportunity”. Therefore, we discussed amount of measures what companies should do as managerial implication.

Moreover, we figured out the amount of talen loss is larger than the amount of talent attraction in Chinese multinational companies, and the amount of male talent loss is larger than the amount of female talent loss in Chinese multinational companies.

The investigated factors inevitable support the trends of global talent mobiliy in Chinese multinational companies. The number of repulsion factors larger than the number of attraction factors inevitable leads to the trend that talent loss is more than talent attraction.

Based on the Chinese social phenomenon that males usually take more stress from financial, working, social and family aspects, the dissatisfaction of compensation, working environment, promotion and living conditions are obviously the repulsion factors leading more male talented employees to find job in foreign countries(Gu Hui, 2013).

Managerial Implications

There is dire need of how the Chinese multinational companies should do to retain talents by preventing talent loss, as well as attracting overseas talents, according to the repulsion and attraction factors.

- Chinese MNCs should provide higher basic wages for talented employees; provide more compensation for talented employees different from ordinary employees; increase the diversity of compensation to satisfy talented employees.
- Chinese multinational companies should adopt the promotion system according to the KPI, use the SMART criteria, which letters are refer to specific , measurable , attainable , relevant , time-bound; as well as avoid the subjective grades related to the Guanxi.
- Chinese multinational companies have to adopt flexible working schedule, such as "flexitime", provide larger personal space or entertainment activities.
- Chinese multinational companies should pay more attention on health conditions of employees, provide various allowances, such as medical subsidies, health checkup, at the same time pay more attention on housing issues, provide housing allowances or provide housing provision to talented employees.
- Chinese multinational companies should maintain sustained and steady growth of R&D investment, as well as increase the research projects and research centers or labs.

Additionally, to prevent the trend that the amount of male talents loss is larger than the amount of females talented employees loss, Chinese MNCs should try to

- Provide training for male employees of time management skills, in order to shorten working time, improve work efficiency， reduce conflicts between work and families, eliminate the dissatisfaction and stress on working time.

- Eliminate “work overtime culture” in Chinese companies, make sure the rest time and weekends for employees, improve work efficiency， reduce companies’ cost.

Significance of the research

The research reveals the repulsion factors leading talent loss from Chinese MNCs are “living condition”, ”promotion opportunity”, ”work environment” and “compensation”; “globalization” has insignificant effect on talent loss. And the research also reveals “states economic development”, ”states policies” and “R&D investment” are the attraction factors. What’s more, we found that repulsion factors dominate among all the influential factors of global talent mobility in Chinese multinational companies; repulsion factors are more related to organizational environment, which companies can take action to improve the situation, while attraction factors are more related to external government, GDP and policies. Moreover, the research provides suggestions for the Chinese multinational companies of what strategies they should take to prevent and reverse the talent loss in Chinese MNCs.

Limitations of research

However, there are a number of ways this field of research could be progressed. This study focused on the answer of HRs of Chinese multinational companies, but future studies could target talented employees working in Chinese multinational companies or overseas talents who resigned from Chinese multinational companies. Further studies could contain interviews or follow up questions after the questionnaire to gain a greater understanding of the responses.

The study found out that the reasons why males employees are more likely to migrate to developed countries are related to the repulsion factors, which means male talented employees

faced more financial, working schedule, promotion and living pressure than females. The further researches could try to use independent t test analysis to compare size of influence of repulsion factors on female and male talented employees.

Limited by the size of the sample, this study didn't analysis the characteristics of repulsion factors, attraction factors and trends of galobal talent mobility in different industries, so researches could be done in the furture to expand sample, use independent t test to find out these characteristics.

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Appendix

Questionnaires

Company's profile:	Please fill in or select appropriate response
1. Industry	
2. Headquarters location (city in China)	
3. Number of employees	

Repulsion factors influencing on global talent drain in your company: Please rate agreement of following factors drive the brain drain in your organization today	1=Strongly attraction to Chinese MNCs				7= Strongly repulsion overseas from Chinese MNCs		
Living conditions							
The shortage of medical resources in China	1	2	3	4	5	6	7
The worsening of environment(air pollution)	1	2	3	4	5	6	7
The extravagant housing prices in China	1	2	3	4	5	6	7
Compensation							
Uncompetitive wages in Chinese MNCs compared with developed countries	1	2	3	4	5	6	7
The lack of compensation gap between talented employees and ordinary employees	1	2	3	4	5	6	7
The shortages of diversity of compensations, such as lack of insurances, various allowance(housing, travel, meal) benefits (medical, vacation, leaves, retirement, dividends)	1	2	3	4	5	6	7
Promotion opportunity							
Lack of transparent standards of promotion.	1	2	3	4	5	6	7
Promotion systems are age and relationship orientation in some extent.	1	2	3	4	5	6	7
KPI is not a key factor for promotion.	1	2	3	4	5	6	7
Working environments							
Lack of comfortable working environment.	1	2	3	4	5	6	7
Lack of sufficient resources and relax during the daily work.	1	2	3	4	5	6	7
Lack of flexible working schedules	1	2	3	4	5	6	7

Globalization							
Economic globalization	1	2	3	4	5	6	7
Political globalization	1	2	3	4	5	6	7
Cultural globalization	1	2	3	4	5	6	7

Attraction factors influencing on global talent attraction in your company: Please rate agreement of following factors drive the brain circulation in your organization today	1=Strongly attraction to Chinese MNCs					7= Strongly repulsion overseas from Chinese MNCs
State economic development of China						
The high speed of economic growth of China	1	2	3	4	5	6	7
The GDP of China	1	2	3	4	5	6	7
State policies attracting oversea talent							
The Thousand Talents Plan attracts oversea talents(Chinese and non-Chinese) for our company.	1	2	3	4	5	6	7
The preferential policies of brain circulation in fiirst-tier cities and provinces of China.	1	2	3	4	5	6	7
The R&D investment							
The large amount of expense of R&D of government attracts oversea talents.	1	2	3	4	5	6	7
The increase of research and development institutions in China	1	2	3	4	5	6	7
The increase of R&D investment of our company attracts more talents from foreign countirs.	1	2	3	4	5	6	7
The more frequent the research activities in our company, the more oversea talents our company gains.	1	2	3	4	5	6	7

Trends of global talent mobility in your company: Please rate agreement of following factors drive the global talent mobility in your organization today	1=Strongly disagree					7= Strongly agree
1. The amount of talent loss overseas is larger than the amount of oversea talent attraction in our company.	1	2	3	4	5	6	7
2. The amount of male talent loss overseas is more than	1	2	3	4	5	6	7

female talent loss from our companies.							
3. The married employees are more likely to resign from our company and find job in foreign countries rather than unmarried employees.	1	2	3	4	5	6	7